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# High Throughput Screening of a GlaxoSmithKline Protein Kinase Inhibitor Set Identifies an Inhibitor of Human Cytomegalovirus Replication that Prevents CREB and Histone H3 Post-Translational Modification

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| Abstract:             | To identify new compounds with anti-human cytomegalovirus (HCMV) activity and new anti-HCMV targets, we developed a high throughput strategy to screen a GlaxoSmithKline (GSK) Published Kinase Inhibitor Set (PKIS). This collection contains a range of extensively characterized compounds grouped into chemical families (chemotypes). From our screen we identified compounds within chemotypes that impede HCMV replication and identified kinase proteins associated with inhibition of HCMV replication that are potential novel anti-HCMV targets. We focused our study on a top "hit" in our screen, SB-734117, which we found inhibits productive replication of several HCMV strains. Kinase selectivity data indicated that SB-734117 exhibits polypharmacology and is an inhibitor of several proteins from the AGC and CMCG kinase groups. Using western blotting we found that SB-734711 inhibited accumulation of HCMV immediate-early proteins, phosphorylation of cellular proteins involved in immediate-early protein production (CREB and histone H3) and histone H3 lysine 36 trimethylation (H3K36me3). Therefore, we identify SB-734117 as a novel anti-HCMV compound and find that inhibition of AGC and CMCG kinase proteins during productive HCMV replication is associated with inhibition of viral protein production and prevents post-translational modification of cellular factors associated with viral protein production. |

| 1  | STANDARD RESEARCH ARTICLE   |
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| 3  | High Throughput Screening of a GlaxoSmithKline Protein Kinase Inhibitor Set   |
| 4  | Identifies an Inhibitor of Human Cytomegalovirus Replication that Prevents  |
| 5  | CREB and Histone H3 Post-Translational Modification   |
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#### **ABSTRACT**

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To identify new compounds with anti-human cytomegalovirus (HCMV) activity and new anti-HCMV targets, we developed a high throughput strategy to screen a GlaxoSmithKline (GSK) Published Kinase Inhibitor Set (PKIS). This collection contains a range of extensively characterized compounds grouped into chemical families (chemotypes). From our screen we identified compounds within chemotypes that impede HCMV protein production and identified kinase proteins associated with inhibition of HCMV protein production that are potential novel anti-HCMV targets. We focused our study on a top "hit" in our screen, SB-734117, which we found inhibits productive replication of several HCMV strains. Kinase selectivity data indicated that SB-734117 exhibits polypharmacology and is an inhibitor of several proteins from the AGC and CMCG kinase groups. Using western blotting we found that SB-734711 inhibited accumulation of HCMV immediate-early proteins, phosphorylation of cellular proteins involved in immediate-early protein production (CREB and histone H3) and histone H3 lysine 36 trimethylation (H3K36me3). Therefore, we identify SB-734117 as a novel anti-HCMV compound and find that inhibition of AGC and CMCG kinase proteins during productive HCMV replication is associated with inhibition of viral protein production and prevents post-translational modification of cellular factors associated with viral protein production.

#### INTRODUCTION

Disease associated with human cytomegalovirus (HCMV) infection affects a range of immunodeficient individuals [1]. As yet, there is no widely available vaccine against HCMV [2] and disease management largely rests on the use of anti-HCMV drugs [1, 3]. The most widely used anti-HCMV drugs (including the frontline drug ganciclovir) target the viral DNA polymerase, thereby inhibiting HCMV replication [3]. However, there are drawbacks to the use of ganciclovir and other currently available anti-HCMV drugs, including the development of drug resistant virus [3]. Furthermore, HCMV not only undergoes productive replication but can also enter a latent state from which the virus can reactivate. Currently, there is no effective treatment to clear latent HCMV infection.

Several novel anti-HCMV drugs are under development [1, 3, 4]. One strategy to expand the range of anti-HCMV drugs available is to identify existing compounds with hitherto unappreciated anti-HCMV activity. A large number of currently available compounds inhibit protein kinases in each of the groups that comprise the human kinome. Protein kinases are involved in many aspects of HCMV replication and pathogenesis, including intracellular signaling that results in transcription from the HCMV major immediate early promoter (MIEP), which stimulates a transcriptional cascade (*immediate-early* to *early* to *late* gene transcription) required for productive HCMV replication and reactivation from latency [1]. Therefore, protein kinase inhibitors could inhibit productive HCMV replication or reactivation from latency and a number of kinase inhibitors with

anti-HCMV activity have been identified [3]. Furthermore, it is possible that the full complement of protein kinases that are required for HCMV replication have yet to be identified. Therefore, kinase inhibitors could be used as chemical probes to identify kinase proteins required for HCMV replication, many of which could be novel anti-HCMV drug targets. However, an important consideration when using kinase inhibitors is that compounds targeting the conserved ATP-binding site of a kinase protein can display polypharmacology and are capable of inhibiting several kinase proteins or proteins outside the kinome, such as G-protein coupled receptors (GPCRs) [5-7]. Therefore, knowledge of kinase selectivity is important when discussing the use of kinase inhibitors as drugs or chemical probes [5].

We utilized a high throughput screening methodology to assess the ability of compounds within a GlaxoSmithKline (GSK) Published Kinase Inhibitor Set (PKIS) [8] to inhibit HCMV protein production. This compound library contained a range of extensively characterized compounds organized into structurally related collections of compound families (chemotypes) [7, 8]. Known characteristics of compounds within this GSK PKIS collection include kinase selectivity, compound structures and off-targets effects. Therefore, screening of this compound library allowed identification of both compounds and chemotypes with anti-HCMV activity, identification of novel anti-HCMV drug targets and permitted the on and off-targets effects of compounds identified in the screening process to be considered. These data lead to investigation of the anti-HCMV activity of a top "hit" in our screen, SB-734117.

#### **RESULTS**

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High throughput screening of a GSK PKIS library to identify protein kinase inhibitors with anti-HCMV activity. To identify compounds with anti-HCMV activity we utilized a high throughput screening methodology (Fig. 1(a)), similar to the approach that we have previously used to screen siRNAs in HCMV infected cells [9]. Briefly, high passage HCMV strain AD169 and compounds from the GSK PIKS collection (listed in Table S1) were added to duplicate 384-well plates seeded with human foreskin fibroblast (HFF) cells. As negative and positive controls for compound treatment several wells in each plate were treated with either DMSO or heparan sulphate (a small molecule that inhibits HCMV entry into cells [10]), respectively. At 72 hours post infection (h.p.i.) cells were stained with Hoescht 33342 to detect nuclear DNA and CellMask to detect the area of the cell, plus were treated with antibodies to detect the cytoplasmic HCMV antigen pp28. An automated microscopy system was then used to assay both the number of cells in each well and the number of infected cells in each well expressing pp28. An image of infected cells treated as described above and captured using automated microscopy is shown in Fig. 1(b).

The mean number of cells in each well per plate was determined. Where the number of cells in any well was less than 2-fold below the mean number of cells of the plate, the compound in that well was judged to be cytotoxic (listed by chemotype in Table 1 and by compound in Table S2). Data from the remaining wells on duplicate plates were combined and converted to a z-score (the number

of standard deviations from the mean of the data [11, 12]) to demonstrate the increase (positive z-score) or decrease (negative z-score) in the number of pp28 positive cells in presence of each compound (shown in Fig. 1(c), listed by chemotype in Table 1 and by compound in Table S3).

Analysis of cytotoxic compounds. We first investigated what compounds within chemotypes were judged to be cytotoxic. Approximately 40-50% of compounds in the benzimidazole N-thiophene, 2H-3 pyrimidinyl pyrazolopyridazine, 3-amino pyrazolopyridines and 6-phenyl isoquinolines chemotypes contained compounds judged to be cytotoxic to HCMV infected cells (Table 1 and Table S2). Therefore, compounds from these chemotypes are generally not suitable for further use.

We then utilized kinase selectivity data to investigate which kinase proteins were inhibited by each compound judged to be cytotoxic (Table S4). Kinase selectivity data [7] lists the ability of each compound to inhibit a panel of 224 kinase proteins from several protein groups of the human kinome (including TK, STE, AGC, S-T-PK, CAMK and CMCG groups). We found that all cytotoxic benzimidazole N-thiophenes were potent inhibitors of PLK-1, whose inhibition can lead to apoptosis, and nearly all other cytotoxic compounds from a number of chemotypes were potent inhibitors of a range of CDK proteins, which are involved in regulation of the cell cycle. In our screen cytotoxicity was judged by the number of cells detected in each well of the screening plate. Therefore, we concluded that compounds were generally judged to be cytotoxic due to

apoptosis associated with inhibition of PLK-1 or due to lack of cell division associated with inhibition of CDK function.

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Analysis of compounds assigned z-scores. Next, we analyzed those compounds assigned z-scores to determine which compounds and chemotypes should be considered for further study as anti-HCMV compounds and chemical probes. We found that nearly all chemotypes contained compounds that had both positive and negative effects on pp28 production. Notably, however, the 2-aryl 3pyridimidinyl pyrazolopyridazine and furopyrimidine chemotypes and the 3-vinyl pyridine, 2,4-diamino pyrimidine, maleimide, phenyl carboxamide and indazole-5carboxamide chemotypes contained a large number of compounds with negative and positive effects on pp28 production, respectively (Tables 1 and S3). We sought to further characterize the results of our screen and judged any compound with a z-score between 1 to -1 to have little or no effect on pp28 production, whereas compounds with z-scores of -1 to -2 and 1 to 2 had modest negative or positive effects on pp28 production, respectively. Thusly, compounds with z-scores of less than -2 or more than 2 had the greatest negative or positive effect on pp28 production, respectively. Therefore, three compounds (GW575808A, GW874091X and GW627512B) from three different chemotypes (2,4-diamino pyrimidines, imidazotriazines, 2-amino oxazoles, respectively) had strong positive effects on pp28 production, while four compounds (GW297361X, SB-734117, SB-220025-R and GW795493X) from four chemotypes (oxindoles, furazan benzimidazoles, 4-pyrimidinyl ortho-aryl azoles, furopyrimidines, respectively) had strong negative effects on pp28 production (Figs. 1(c) and 1(d)).

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Examination of kinase protein inhibition by compounds assigned zscores. We then examined kinase selectivity data of compounds assigned zscores (Table S5). The data from Table S5 is presented in Figure 2 as a "heatmap" of kinase inhibition. Nearly all compounds assigned z-scores exhibited polypharmacology and could inhibit more than one kinase protein. Consistent with our analysis of compounds judged to be cytotoxic (Table S2), we found that less than 5% of all compounds either potently inhibited PLK-1 or were potent inhibitors of several different CDK proteins (Table S5). Compounds with positive or negative z-scores were inhibitors of a wide range of kinase proteins in the TK kinase group (Fig. 2 and Table S5). Therefore, inhibition of TK kinases alone was unlikely to positivity or negatively influence pp28 production. However, a number of kinases in the STE (including MAP4K4 and MNK), CAMK (including PRKD1, PRKD2 and PRKD3) and CMCG (including CLK2, HIPK1, HIPK4, DYRK1A, DYRK1B, DYRK2) kinase groups were inhibited by compounds assigned zscores of less than -1 from 8, 4 and 3 different chemotypes, respectively (Figs. 2(a)-(c), respectively, and Table S5). Therefore, these kinase proteins, alone or in combination, were likely to be important for HCMV replication and could represent future anti-HCMV drug targets. A number of compounds from two different chemotypes that inhibited kinases in AGC kinase family (including PRKG1, PRKG2, PRKX, PKA, ROCK1, ROCK2) were assigned z-scores over 1

(Fig. 2(d)). Therefore, these kinase proteins, alone or in combination, were likely to be inhibitory to HCMV replication. Compounds targeting these kinase proteins are likely to be off little value as anti-HCMV drugs.

Compounds assigned z-scores of less than -2 (GW297361X, SB-734117, SB-220025-R and GW795493X) each had a distinct kinase selectivity profile (Fig. 2 and Table S5). Therefore, it was likely each compound inhibited pp28 production by a different mechanism. Each was a potent inhibitor of several kinase proteins from several groups, except for SB-220025-R, which was a potent inhibitor of only 2 kinase proteins: CK1a and p38 $\alpha$  (Fig. 2 and Table S5).

Kinase inhibition of compounds assigned z-scores of greater than 2 was also examined. GW575808A and GW627512B had similar kinase selectivity profiles and were inhibitors of several TK and S-T-PK group kinases (Fig. 2 and Table S5). As inhibition of these TK and S-T-PK kinases can result in either positive or negative z-scores (Fig. 2 and Table S5), it was unlikely that inhibition of these TK and S-T-PK kinase proteins had a direct effect on pp28 production. Moreover, we found that GW874091X was not a potent inhibitor of any kinase assayed (Fig. 2 and Table S5). Therefore, GW874091X was either an inhibitor of kinase proteins not assayed in the kinase selectivity data or exerted an effect on pp28 production that did not involve inhibition of cellular kinase proteins. It, therefore, remains unclear from this analysis which kinase proteins should not be targeted in the development of future anti-HCMV drugs.

We further considered the polypharmacology of compounds tested in our screen. It has been reported that ATP-competitive kinase inhibitors can inhibit the

function of proteins other than kinases, including aminergic GPCRs [6]. GPCR agonism and antagonism of the compounds in the GSK PKIS collection has been investigated elsewhere [7]. No compound within the GSK PKIS collection is a GPCR agonist, but several are GPCR antagonists [7]. However, we observed no correlation between compounds judged to be cytotoxic, compounds assigned a z-score and GPCR antagonism (data not shown).

Inhibition of HCMV replication by SB-734117. We chose to focus our studies on SB-734117, a compound from the furazan benzimidazole chemotype that had a low z-score in our screen (Figs. 1(c) and 1(d)). First, we used viral yield reduction assays to assess the ability of SB-734117 to inhibit replication of HCMV strain AD169 compared to the frontline anti-HCMV drug ganciclovir (GCV) (Table 2, experiment 1) at up to 96 h.p.i. The 50% effective dose (ED50) of both SB-734117 and GCV was 0.5μM, indicating that SB-734117 inhibit AD169 replication as efficiently as the current frontline anti-HCMV drug. To complement and confirm this data we analyzed AD169 replication over time and found an approximately 2-fold decrease in AD169 replication from 72-96 h.p.i. in the presence of 1μM SB-734117 (Fig. 3(a)).

We also found that SB-734117 could inhibit replication of a ganciclovir resistant virus (AD169-P53) and a low passage HCMV strain (Merlin(RCMVR1111)), whose genomic content is similar to a clinical sample [13], at low or sub-micromolar ED50 values (Table 2, experiments 2 and 3,

respectively) at up to 96 h.p.i.. Therefore, SB-734117 was an effective inhibitor of different HCMV strains.

To ensure that the anti-HCMV activity of SB-734117 was not due to cellular cytotoxicity we used an MTT dye-uptake assay to assess cell viability and cell division in uninfected cells in the presence of SB-734117. We found that the 50% cellular cytotoxicity (CC50) of SB-734117 after 96 hours treatment with SB-734117 was greater than  $10\mu M$  (data not shown). Thus, the CC50 values in uninfected cells were greater than  $10\mu M$  at the ED50 values for all HCMV strains tested. Therefore, inhibition of HCMV replication by SB-734117 observed in experiments shown in Table 2, or in the other experiments presented here, was unlikely to be the result of cellular cytotoxicity or inhibition of cell division.

Examination of HCMV immediate early protein and mRNA production in HCMV infected cells treated with SB-734117. We next sought to understand how HCMV replication was inhibited by SB-734117. Therefore, western blotting was used to analyze the accumulation of HCMV proteins in the presence or absence of SB-734117 (Fig. 3(b)). Compared to treatment of infected cells with DMSO (Fig. 3(b), lanes 2-4), the treatment of infected cells with SB-734117 (Fig. 3(b), lanes 5-7) reduced the accumulation of immediate early proteins IE1 and IE2, and IE2 proteins expressed late in infection (IE2-60 and IE2-40 [14]). In this and subsequent western blots the amount of  $\beta$ -actin in each sample was also assayed, which demonstrated equivalent loading of samples in each lane.

| We then quantified the relative density of the western blotting bands                      |
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| shown in Fig. 3(b), by determining the band intensity of bands corresponding to            |
| viral proteins relative to the intensity of the $\beta$ -actin band in the same lane (Fig. |
| 3(c)). We found an approximately 2-4 fold decrease in the accumulation of IE1 in           |
| the presence of 1 $\mu M$ SB-734117, which is consistent with an ED50 of 0.5-1 $\mu M$     |
| shown in Table 2. The loss of IE2 protein production (approximately 2- to 20-fold,         |
| depending on which antibody was used (Fig. 3(c))) was greater than IE1.                    |
| Consistent with loss of IE protein production and our screening results, we also           |
| observed using western blotting that treatment of cells with SB-734117 resulted            |
| reduced accumulation of the HCMV early and late proteins UL44 and pp28,                    |
| respectively, compared to infected cells treated with DMSO (data not shown). To            |
| compliment these findings we assayed for differences in IE1 and IE2 mRNA                   |
| expression in infected cells treated with SB-734117 compared to infected cells             |
| treated with DMSO using quantitative PCR against the two major IE RNA species              |
| (Fig. 3(d)). This analysis revealed that no obvious defect in IE1 mRNA levels was          |
| evident in the presence of SB-734117. The analysis of IE2 mRNA again did not               |
| show any overt phenotype although typically a 2 fold reduction in IE2 mRNA was             |
| observed in SB-734117 treated cells when compared with DMSO control.                       |
| However, taken together the data suggest that the decrease in IE1 and IE2                  |
| protein production shown in Figs. 3(b) and 3(c) was unlikely to be the result of           |
| decreased IE gene expression.  |

Our studies thus far could not rule out that SB-734117 impacted events occurring prior to IE gene expression. Thus we addressed whether the presence

of SB-734117 may affect virus entry into the cell or translocation of the HCMV genome to the nucleus. Pre-exposure of cells to SB-734117 before infection or incubation of virus with SB-734117 before infection did not increase the inhibitory effects of the compound (data not shown). However, when we treated AD169 infected HFF cells with 1μM SB-734117 at 24 h.p.i. we found a 2-fold decrease in HCMV replication at 120 h.p.i., compared to infected cells treated with DMSO at 24 h.p.i. (Fig. 4(a)). Quantitative analysis of western blotting of infected cells treated as described above (Figs 4(a) and 4(b)) showed that, similar to data presented in Fig. 3, treatment of infected cells with SB-734117 resulted in approximately 2-fold decrease in IE2 protein production depending on which antibody was used. However, there was no obvious decrease in production of IE1 protein.

Therefore, SB-734117 had no obvious effect on cells or virus before infection, but could inhibit HCMV replication after entry of the HCMV genome and did so by reducing IE2 protein production. Thus, SB-734117 may not inhibit events during infection before expression of IE proteins, but could have inhibitory effects on HCMV replication after the initiation of IE protein production.

Inhibition of AGC and CMCG kinase proteins by SB-734711. Next, we investigated what kinases proteins are inhibited by SB-734117. SB-734117 has been reported to inhibit MSK1 [15]. However, using the kinase selectivity data shown in Fig. 2 and Table S5, we found that at SB-734117 inhibits several AGC kinase group proteins, including MSK1 (MSK1, MSK2, RSK1, RSK2, RSK3,

| p70S6K1, PCK-η, PRKG2, ROCK1, ROCK2), and several CMCG kinase group               |
|---|
| proteins (GSK3A, GSK3B, DYRK1A and DYRK1B). However, in our screen                |
| potent and selective inhibitors of GSK3A and GSK3B had no obvious negative        |
| effect on pp28 production (Table S5) and compounds with either positive or        |
| negative z-scores were potent inhibitors of PKC-η, PRKG2, ROCK1 and ROCK2         |
| (Table S5). Therefore, inhibition of these kinases proteins may not be related to |
| inhibition of pp28 production. Rather, analysis of SB-734117 kinase selectivity   |
| data compared to other assigned z-scores argued that potent inhibition of MSK1,   |
| MSK2, RSK1, RSK2, RSK3, p70S6K1, DYRK1A and DYRK1B was related to                 |
| inhibition of pp28 production.  |

A kinase inhibitor that is structurally unrelated to SB-734117, H-89, inhibits a similar range of AGC and CMCG kinase proteins [16]. We found that H-89 inhibited productive HCMV replication and immediate-early protein production (data not shown). Therefore, inhibition of AGC and CMCG kinase proteins, not an unknown function of SB-734117, is likely to be responsible for the observed defects in HCMV replication and protein production. Furthermore, using western blotting [17], we found that SB-734117 did not inhibit autophosphorylation of the HCMV encoded kinase UL97 (data not shown). Therefore, the anti-HCMV effects of SB-734117 were unlikely to be due to inhibition of UL97.

Analysis of CREB and histone H3 phosphorylation in HCMV infected cells. We then considered how inhibition of AGC and CMCG kinase proteins by SB-734114 would affect post-translational modification of cellular proteins

thought to be involved in HCMV replication. We focused our investigation on phosphorylation of the cellular transcription factor CREB and histone H3.

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CREB is thought to directly or indirectly facilitate transcription from the MIEP [18, 19] and other viral promoters [20] during productive HCMV replication and it has been reported that phosphorylation of CREB at serine residue 133 (CREB-Ser133) by MSK1 is involved in promoting changes to chromatin required for activation of the MIEP during HCMV reactivation from latency [21]. In preliminary experiments we could not detect either total cellular CREB or CREB-Ser133 before 72 h.p.i. using western blotting (data not shown). However, both proteins could only be detected at 72 h.p.i. when we increased the amount of cell lysate assayed (see Materials & Methods). Therefore, we used western blotting to assay total cellular CREB and CREB-Ser133 phosphorylation in HCMV infected cells treated with either DMSO or SB-734117 at 72 h.p.i. (Fig. 5(a)). We observed a decrease in accumulation of CREB-Ser133 and an increase in the accumulation of CREB in the presence of SB-734117 (Fig. 5(a), lane 5), compared to infected cells treated with DMSO (Fig. 5(a), lane 3). Analysis of relative band intensities (Fig. 5(b)), indicated that there was approximately a 2fold decrease in CREB-Ser133 in infected cells treated with SB-734117, compared to those treated with DMSO and a modest increase in CREB. The 2fold decrease in the accumulation of CREB-Ser133 in the presence of 1µM SB-734117 was consistent with the observed ED50 of 0.5-1 µM and 2-4 fold decrease in production of immediate-early HCMV protein production (Table 2 and Fig. 3). Therefore, the effect of SB-734117 on HCMV replication correlated with a loss of CREB-Ser133 phosphorylation. Similar observations were made when infected cells were treated with H89 (data not shown), indicating the AGC and CMCG kinase proteins were involved in phosphorylation of CREB.

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Phosphorylation of histone H3 by MSK1 or another kinase, IKK $\alpha\square$  is required for binding of transcription factors to DNA in uninfected cells [22, 23]. We have previously demonstrated that phosphorylation of histone H3 at serine residue 10 (H3S10p) by IKK $\alpha$  is associated with immediate-early protein production during productive HCMV replication [17]. Also, it has been demonstrated that H3S10 phosphorylation by MSK1 is associated with immediate-early gene expression during reactivation of HCMV from latency [21]. We decided to assay H3S10 phosphorylation in the presence of SB-734117. Using western blotting we analyzed accumulation of H3 and H3S10 phosphorylation in uninfected HFF cells (Fig. 5(c), lane 1) and AD169 infected HFF cells treated with either DMSO or SB-734117 (Fig. 5(c), lanes 2-4 and 5-7, respectively, at 24-72 h.p.i.). Similar levels of H3 were found in each sample, however, over time we observed a decrease in H3S10p in infected cells treated with SB-734117 to near undetectable levels, compared to infected cells treated with DMSO. Therefore, inhibition of H3S10 phosphorylation during productive HCMV replication may have contributed to the anti-HCMV activity of SB-734117. Similar results were found when infected cells were treated with H89 (data not shown), indicating that AGC and CMCG kinase proteins were involved in phosphorylation of H3S10.

Phosphorylation of histone H3 at serine residue 28 (H3S28) by MSK1 is also known to be associated with gene expression in uninfected cells [22]. We also used western blotting to investigate H3S28 phosphorylation during HCMV replication. However, we could not detect H3S28p in either uninfected HFF cells, AD169 infected HFF treated with either DMSO or SB-734117, or uninfected HFF cells treated with either anisomycin, which can stimulate H3S28 phosphorylation, or phosphatase inhibitor okadaic acid, which can prevent dephosphorylation of histones (data not shown). Therefore, we suggest that inhibition of H3S28 phosphorylation did not contribute to the anti-HCMV activity of SB-734117.

Analysis of histone H3 post-translational modifications in HCMV infected cells. H3S10 phosphorylation by either MSK1 or IKK $\alpha$  is associated with the presence of acetyl modifications of H3, including at acetylation (ac) of lysine 14 (H3K14ac) [24-26]. There is a relationship during transcriptional activation between the presence of H3S10p and H3K14ac and the association of transcription factors with DNA [23, 27]. As the presence of H3K14ac is associated with transcriptional activation in HCMV infected cells [28], H3K14ac may be required for HCMV replication. We have previously demonstrated that during HCMV replication inhibition or depletion of IKK $\alpha$  leads to loss of total cellular H3S10 phosphorylation, but not loss of total cellular H3K14ac [17]. Thus, we assayed whether treatment of HCMV infected cells by SB-734117 would lead to loss of H3S10p or H3K14ac. We used western blotting to assay total cellular levels of H3, H3S10p and acetylation of H3 on a number of commonly studied H3

lysine residues including K14 (H3K9ac, H3K14ac, H3K18ac, H3K27ac) in either uninfected HFF cells (Fig. 5(c), lane 1) or HFF cells infected with HCMV and treated with either DMSO or SB-734117 (Fig. 5(c), lanes 2-4 and 5-7, respectively). Treatment of infected cells with SB-734117 had a slight effect (less than 2-fold (data not shown)) on accumulation of H3K14ac and no detectable effect on detection of H3K9ac, H3K18ac, or H3K27ac. Therefore, treatment of infected cells with SB-734117 was associated with loss of total cellular H3S10p, but not loss of the total cellular H3 acetylation modifications we assayed, including H3K14ac.

The relationship between H3S10p and dimethylation (me2) and trimethylation (me3) of H3 and H3 phosphorylation is not well characterized, but it has been reported that in a murine model there is a relationship between the presence of H3S10p and the presence of H3K36me3 [29] and in *Drosophila melanogaster* loss of the MSK1/2 homologue JIL-1 results in loss of H3S10p, H3 acetylation and H3 methylation, including H3K36me3 [30]. Therefore, we asked if loss of total cellular H3S10p in HCMV infected cells was associated with me2 and me3 modification of H3 lysine residues. Western blotting was used to assay the presence of H3 and H3S10p, plus me2 (H3K4me2, H3K27me2, H3K36me2) or me3 (H3K4me3, H3K9me3, H3K27me3, H3K36me3) modifications of H3 in uninfected HFF cells (lane 1, Figs. 5(d) and 5(e), respectively) or HFF cells infected with HCMV and treated with either DMSO or SB-734117 (lanes 2-4 and 5-7, Figs. 5(d) and 5(e), respectively). We observed that SB-734117 had no effect on total cellular accumulation of any me2 modification of H3 (Fig. 5(d)) or

accumulation of H3K4me3, H3K9me3 or H3K27me3 (Fig. 5(e)). However, we observed a near total loss of detectable H3K36me3 over time in infected cells treated with SB-734117 (Fig. 5(e), lane 7) compared to infected cells treated with DMSO (Fig. 5(e), lane 4). Similarly, a near total loss of detectable H3K36me3 was observed in infected cells treated with H89 (data not shown), suggesting that loss of H3K36me3 is related to inhibition of AGC and CMCG kinase proteins. Thus, inhibition of H3K36me3 was associated with loss of total cellular H3S10p and was likely the result of inhibition of AGC and CMCG kinase proteins inhibited by SB-734117. Loss of both total cellular H3S10p and total cellular H3K36me3 may have contributed to the anti-HCMV activity of SB-734117.

Investigation of HCMV MIEP transcriptional activation. Loss of CREB and H3S10 phosphorylation (Figs. 5(a)-(e)) suggested that SB-734117 acted by inhibiting activation of the HCMV MIEP. However, our analysis of IE1 and IE2 gene expression (Fig. 3(d)) indicated that transcription from the MEIP was not obviously compromised in the presence of SB-734117. To investigate this in more detail we utilized chromatin immunoprecipitation (ChIP) to assay the presence of H3K14ac, a marker of MIEP transcriptional activation [28], at the MIEP in the presence of either DMSO or SB-734117 (Fig. 6). The data showed that no overt impact on H3K14ac at the MIEP between 24-72hpi in DMSO or SB-734117 treated cells. Indeed, we noted that SB-734117 treated cells actually showing higher levels of H3K14ac at the MIEP at late times post infection when compared to control. Therefore, in agreement with our analysis of IE1 and IE2

| gene expression (Fig. 3(d)), there was no obvious defect in MIEP transcriptional |
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| activation in the presence of SB-734177. Thus, the observed defects in HCMV      |
| immediate-early protein production (Figs 3 and 4) could not be explained by      |
| defects in transcription from the MIEP.  |
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#### DISCUSSION

Our overall analysis of the chemotypes screened indicated that each chemotype contained compounds with anti-HCMV activity, however modest that anti-HCMV activity may have been. As the structure of each compound in each chemotype is known, structure-activity relationships derived from our data could form the basis of future studies in the discovery of compounds with anti-HCMV activity from each chemotype.

Our survey of the GSK PKIS kinase selectivity data argued that several proteins from several kinase groups, alone or in combination, were required for pp28 production. These proteins kinases include those from the STE (including MAP4K4 and MNK), CAMK (including PRKD1, PRKD2 and PRKD3) and CMCG (including CLK2, HIPK1, HIPK4, DYRK1A, DYRK1B, DYRK2) kinase groups. The function of these protein kinases in productive HCMV replication is unclear or unknown. Therefore, it is possible that our data identified novel cellular factors required for productive HCMV replication. However, the polypharmacology of the compounds tested makes it difficult to identify specific kinases required for productive HCMV replication. Thus, each of the aforementioned kinases will have to be tested individually to identify their roles in HCMV infected cells. With this information these kinases could be exploited as novel anti-HCMV drug targets.

We chose to pursue studies of SB-734117 as this compound had one of the greatest negative effects on pp28 production in our screen, with no obvious cytotoxic effects, and was an effective inhibitor of a number of HCMV strains. Moreover, the function of the AGC and CMCG kinase proteins inhibited by SB-734117 in productive HCMV replication was unknown or unclear.

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SB-734117 was originally described as an inhibitor of MSK1 [15]. However, like other MSK1 inhibitors [16], SB-734117 displays polypharmacology and can inhibit several kinases whose roles in productive HCMV replication are unknown or unclear. Thus, to understand how SB-734117 inhibits HCMV replication it will be necessary to understand if a particular kinase or a combination of kinase proteins is required for productive HCMV replication. A truly selective inhibitor of MSK1 has yet to be found. Structure-activity relationships involving SB-734117 and other furazan benzimidazole compounds could be explored to generate compounds with improved anti-HCMV activity and kinase selectivity. However, we could discern no obvious relationship between inhibition of HCMV replication, kinase selectivity and the structures of compounds within the furazan benzimidazole chemotype analyzed here due to the small number of furazan benzimidazole compounds that returned low negative z-scores in our screen (data not shown). An improved compound related to SB-734117 would have value as an anti-HCMV drug, as it would have the potential to inhibit both productive HCMV replication and reactivation of HCMV from latency. Plus, based on our observations, an improved compound should be as effective an inhibitor of HCMV replication as ganciclovir and be able to inhibit replication of ganciclovir resistant HCMV strains.

Perhaps the most intriguing observations we make concern modification of histone H3 in the presence of SB-734117. Previous observations from our

laboratory have indicated that IKK $\alpha$  was required for H3S10 phosphorylation in AD169 infected HFF cells [17], which is consistent with data presented elsewhere indicating that H3S10 is substrate of IKK $\alpha$  [24, 25, 31-33]. We note that inhibition of IKK $\alpha$  results in loss of H3S10p early in HCMV replication (24 h.p.i. onwards) [17], whereas treatment with SB-734117 leads to a loss of H3S10p later in HCMV replication (48-72 h.p.i.). SB-734117 does not inhibit IKK $\alpha$  (Table S5). Therefore, we propose that in HCMV infected cells a mechanism exists wherein IKK $\alpha$  does not phosphorylate H3S10 during treatment with SB-734117. Conversely, kinases inhibited by SB-734117 do not phosphorylate H3S10 when IKK $\alpha$  is inhibited or depleted. This mechanism may ensure appropriate regulation of H3S10 phosphorylation that is necessary for productive HCMV replication.

It has been reported that in uninfected cells from humans and mice loss of H3S10p can lead to loss of H3K14ac [24-26]. However, we did not observe loss of total cellular H3K14ac upon treatment of HCMV infected cells with SB-734117 or in our previous study where inhibition or depletion of IKK $\alpha$  resulted in loss of H3S10p [17]. We speculate, as we have done previously [17], that an as yet unrecognized mechanism exists in HCMV infected cells that maintains total H3K14ac when total H3S10p levels are lowered to near undetectable levels.

We observed that treatment of HCMV infected cells with SB-734117 resulted in loss of H3K36me3. We have previously found that depletion of IKK $\alpha$  in HCMV infected cells leads to loss of H3S10p, but not H3K36me3 [17]. Therefore, the loss of H3K36me3 in HCMV infected cells is related to loss of

H3S10p during inhibition of AGC and CMCG kinases, but not during inhibition of IKKα. This may be related to regulation of H3S10 phosphorylation by different kinases, as we discuss above. We propose that, as in mice and *Drosophila* [29, 30], the presence of H3K36me3 in HCMV infected cells is related to the presence of H3S10p, potentially via phosphorylation of H3 by MSK1. Alternatively, there may be a substrate of kinase proteins inhibited by SB-734117 whose phosphorylation directly or indirectly mediates H3K36 tri-methylation.

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Treatment of HCMV infected cells with SB-734117 impacted on immediate early protein production and caused loss of total cellular levels of posttranslational modification of cellular factors potentially involved in transactivation of the HCMV MIEP. However, in the presence of SB-734117 we did not find obvious defects in activation of transcription from the HCMV MIEP or defects in immediate-early gene transcription. Therefore, the loss of total cellular levels of CREB and H3S10 phosphorylation or H3K36me3 had no direct impact on transcription from the HCMV MIEP. This interpretation would be consistent with previous studies that have shown that the deletion of CREB binding sites from the MIEP has little impact on productive HCMV replication [21, 34]. During reactivation, it is hypothesized the H3S10p is important as it drives the transition of the MIEP from a repressed to active promoter, a mechanism also proposed for HSV reactivation [35] Thus, during productive HCMV replication at high MOI, where the MIEP is associated with active, not repressed, chromatin very early post infection [28], H3S10p may not be essential for transcription. However, it remains possible that H3S10p has a role in the release of Early and Late HCMV

| promoters from repression as infection proceeds. Thus, future challenges will   |
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| include mapping of CREB, H3S10p and H3K36me3 to viral and cellular              |
| promoters to understand in more detail to understand their possible involvement |
| in productive HCMV replication.   |

We propose that the greatest impact of SB-734117 on productive HCMV replication is on production of IE proteins. It will be important to investigate if SB-734117 impacts on additional phosphorylation events that are required for production of both proteins. Post-translational modification of both IE1 and IE2 is not yet completely characterized. Thus, SB-734117 could directly or indirectly inhibit phosphorylation of these proteins, which leads to their loss. Further investigation of IE protein production and the roles of IE post-translational modification are required in order to fully understand the mechanism of action of SB-734117 during productive HCMV replication.

| MATERIALS | & | ME. | ГΗ | OE | S |
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**Compounds.** The GSK PIKS library (version 1) was supplied to the Institute of Chemistry and Chemical Biology-Longwood at Harvard Medical School by GSK. SB-734117 was a kind gift from GlaxoSmithKline. Ganciclovir was obtained from SIGMA. H89 and heparan sulphate were obtained from Calbiochem. All drugs were resuspended in dimethyl sulfoxide (DMSO).

Cells and viruses. Human foreskin fibroblast (HFF) cells (clone Hs29) were obtained from American Type Culture Collection no. CRL-1684 (ATCC, Manassas, VA) and maintained in Dulbeccos Modified Eagles Medium (DMEM) (Gibco) containing 5% fetal bovine serum (FBS) (Gibco), plus penicillin and streptomycin. High passage HCMV strain AD169 was a gift from Don Coen (Harvard Medical School). Low passage strain Merlin R1111 (derived from BACmid pAL1111, which does not express RL13 and UL128)[36] was a gift from Richard Stanton (Cardiff University). Ganciclovir resistant virus AD169-P53 was supplied by the National Institute of Health (NIH) AIDS Reagent Program.

Screening of GSK PKIS collection and analysis of screening data. See supplementary material.

Characterization of compounds within the GSK PKIS collection. See supplementary material.

Viral yield reduction assays. Assays were performed essentially as described in [37]. HFF cells were plated at  $5 \times 10^4$  cells per well in 24-well plates. After overnight incubation, cells were infected with HCMV at a multiplicity of infection (MOI) of 1. After virus adsorption for 1 hour at  $37^{\circ}$ C, cells were washed and incubated with 0.5 ml of media containing DMSO or compounds at a range of concentrations in duplicate. Plates were incubated for 4 days at  $37^{\circ}$ C. Titers were determined by serial dilution of viral supernatant onto HFF monolayers which were covered in DMEM containing 5% FBS, 0.6% methylcellulose and antibiotics. Cultures were incubated for 14 days, cells were stained, with crystal violet and plaques were counted. Data shown represents the mean value of duplicate plaque counts. The final concentration of DMSO in all samples was maintained at <1% (v/v).

MTT cytotoxicity assays. Assays were performed essentially as described [37]. HFF cells were seeded at 1  $\times$  10<sup>4</sup> cells per well into 96-well plates. After overnight incubation to allow cell attachment, cells were treated for the time indicated in the text with at range of concentrations concentrations in duplicate. The highest concentration of compound tested was 10  $\mu$ M. Cell viability was then determined with an MTT assay according to the manufacturer's instructions (GE Healthcare). Data shown represents the mean value of duplicate readings. The final concentration of DMSO in all samples was maintained at <1% (v/v). As a

positive control, in all experiments a 2-fold dilution series of HFF cells starting at  $1 \times 10^4$  cells per well was included. In each experiment we found a linear relationship between the number of cells per well and output from the MTT assay (data not shown).

Western blotting. At time points indicated in the text cells were washed once with PBS and resuspended in 100  $\mu$ l Laemmli buffer containing 5%  $\beta$ -mercaptoethanol. Proteins were separated on 8% or 10% polyacrylamide gels. Typically, a volume of cell lysate corresponding to 1 x 10<sup>4</sup> HFF cells was analyzed, except when blotting for CREB or CREB-Ser133 when a volume of cell lysate corresponding to 5 x 10<sup>5</sup> HFF cells was analyzed. Antibodies used are listed in the supplementary material. Relative band intensity (band intensity relative to  $\beta$ -actin signal in the same lane) was analyzed using ImageJ software, obtained from the National Institutes of Health (USA).

RNA analysis and Quantitative PCR. Quantitative PCR was performed using a SYBR green qPCR kit (Qiagen) and analysed using the ΔΔCT method to compare DMSO versus SB-734117 treated cells. Briefly, cDNA was prepared from RNA extracted from infected cells at timepoints indicated in the Figure. cDNA and no RT controls were amplified in technical duplicates from multiple experiments using a constant primer in exon 3 (UL122-123) and a primer from

| 612 | primers.  |
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| 613 | Exon 3: ACG AGA ACC CCG AGA AAG ATG; exon 4: CGC CAG TGA ATT                    |
| 614 | TCT CTT C; exon 5: CCG GGG AGA GGA GTG TTA GT; 18S for: GTA ACC                 |
| 615 | CGT TGA ACC CCA; 18S rev: CCA TCC AAT CGG TAG TAG CG.                           |
| 616 | qPCR was performed using cycling conditions: 95°C (15s) then 40 cycles of 94°C  |
| 617 | (15s), 55°C (30s) and 72°C (30s).   |
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| 619 | Chromatin immunoprecipitation. All procedures were performed                    |
| 620 | essentially as previously described [21]. Briefly, HFFs were fixed with 1%      |
| 621 | formaldehyde (10 mins) and then enzymatically digested to fragment DNA as       |
| 622 | described by manufacturer (Pierce chromatin preparation kit). DNA associated    |
| 623 | with histones was immunoprecipitated with control serum (Sigma) or anti-acetyl- |
| 624 | histone H3-lysine 14 (1:150 dilution of antibody – see supplementary material). |
| 625 | For detection of the HCMV MIEP, DNA from disrupted nucleosomes was              |
| 626 | precipitated and amplified by SYBR green qPCR kit (Qiagen) using $5'$ - TGG     |
| 627 | GAC TTT CCT ACT TGG (sense) and 5' - CCA GGC GAT CTG ACG GTT (anti-             |
| 628 | sense) primers. Specific immuno-precipitation of sequences was expressed as     |
| 629 | enrichment from Input.  |
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exon 4 (UL123) or exon 5 (UL122). Cellular RNA was amplified using 18S RNA

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### **CONFLICTS OF INTEREST**

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The authors declare no conflicts of interest.

#### **ABBREVIATIONS**

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AGC: containing PKA, PKG, PKC families group, CAMK: calcium/calmodulindependent protein kinase group, CDK: cyclin-dependent kinase, CLK2: cyclindependent kinase-like kinase 2, CK: casein kinase, CMCG: containing CDK, MAPK, GSK3, CLK families group, CREB: cAMP response element-binding protein, GCV: ganciclovir, DYRK: dual-specificity tyrosine phosphorylation-GSK: glycogen synthase HCMV: regulated kinase. kinase, cytomegalovirus, HIPK: homeodomain interacting protein kinase, MAPK4K4: mitogen-activated protein kinase kinase kinase kinase 4, MNK1: MAP kinaseinteracting serine/threonine-protein kinase 1, MSK: mitogen and stress kinase, PCK-n: protein kinase C-n, PLK-1: polo-like kinase 1, PRKD: protein kinase D, **PRKG**: protein kinase, cGMP-Dependent, **PRKX**: protein kinase, x-linked, p70S6K1: ribosomal protein S6 kinase beta-1, ROCK: rho-associated, coiledcoil-containing protein kinase 1, RSK: ribosomal s6 kinase, STE: homologs of yeast Sterile 7, Sterile 11, Sterile 20 kinases group, S-T-PK: serine/threonine protein kinase group, **TK**: tyrosine kinase group, **TKL**: tyrosine kinase-like group.

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## FIGURE LEGENDS

Fig. 1 High throughput screening of the GSK PKIS collection. (a) Diagram of screening process. (b) A representative example of a microscopy image from an Image Express Micro microscope of infected HFF cells treated with Hoecsht 33342 (blue), Deep Red Cell Mask (Red) and primary and secondary antibodies to detect HCMV pp28 (green). The large white box is a magnified image of the area identified by the small white box. (c) Plot of z-scores where each data point represents a single compound. The compounds with highest and lowest z-scores are identified and their z-scores are stated in parentheses. (d) Structures of compounds with z-scores ((i)-(iv)) lower than -2 and ((v)-(vii)) greater than 2.

**Fig. 2 Kinase selectivity of compounds assigned z-scores.** The full list of kinase selectivity data is shown in Table S5. Table S5 is shown here as a "heatmap" of kinase selectivity wherein the potency of each compound at 1 μM concentration against a particular kinase is represented in colour as indicated at the bottom of the figure (less than 0% inhibition – blue, 0-50% inhibition – green, 51-75% inhibition – yellow, 76-90% inhibition – orange, greater than 91% inhibition – red). Each row represents a compound and each column represents the kinase tested. The z-scores of each compound are indicated to the left of the figure. The kinase groups of each kinase tested are indicated above the figure. (a)-(c) Kinase inhibition of compounds with z-scores of less than -1 not found in

compounds with z-scores greater than 1. (d) Kinase inhibition of compounds with z-scores greater than 1 not found in compounds with z-scores of less than -1.

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Fig. 3 Analysis of HCMV replication and protein production in infected HFF cells treated with DMSO or SB-734117 at the time of infection. (a) HFF cells were infected at MOI1 with AD169 then treated with 1µM SB-734117 or the equivalent volume of DMSO. Viral titre (plague forming units (p.f.u.)/ml)) was determined at the indicated time points (hours post infection (h.p.i.)). Data points and error bars represent the mean and standard deviation, respectively, from three experiments. (b) HFF cells were infected with AD169 at an MOI of 1, then treated with either 1µM SB-734117 or the equivalent volume of DMSO. Cell lysates were prepared for western blotting at the time points (hours post infection (h.p.i.)) indicated above the figure. Uninfected cells harvested at the time of infection are shown as 0 h.p.i.. Proteins recognized by the antibodies used are indicated to the right of each figure. The positions of molecular mass markers (kDa) are indicated to the left of each figure. (c) Relative band intensity of immediate-early protein bands relative to β-actin signal in the same lane in Figure 3A, as quantified using ImageJ. Band intensities of 0-1, 1-2 and greater than 2 are highlighted in light grey, dark grey and black, respectively. (d) HFF cells were infected at MOI1 with AD169 then treated with 1µM SB-734117 or the equivalent volume of DMSO. Samples were prepared for quantitative PCR analysis of IE1 and IE2 mRNA expression, respectively, at the time points indicated in the figures. Data and error bars represent the mean and standard

| method.                       |               |                  |                       |
|-------------------------------|---------------|------------------|-----------------------|
| in gene expression relative   | to DMSO is s  | shown for each t | imepoint using ∆∆CT   |
| deviation of three PCR replic | ates from eac | ch sample, respe | ctively (n=2). Change |

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Fig. 4 Analysis of HCMV replication and protein production in infected HFF cells treated with DMSO or SB-734117 at 24 hours post infection. (a) HFF cells were infected at MOI1 with AD169 then treated with 1µM SB-734117 or the equivalent volume of DMSO at 24 hours post infection. Viral titre (plaque forming units (p.f.u.)/ml)) was determined at 120 hours post infection (h.p.i.). (b) HFF cells were infected with AD169 at an MOI of 1, then treated with either 1µM SB-734117 or the equivalent volume of DMSO at 24 hours post infection. Cell lysates were prepared for western blotting at the time points (hours post infection (h.p.i.)) indicated above the figure. Infected cells harvested at 24 h.p.i. that were not treated with either SB-734117 or DMSO were also assayed. Proteins recognized by the antibodies used are indicated to the right of each figure. The positions of molecular mass markers (kDa) are indicated to the left of each figure. (c) Relative band intensity of immediate-early protein bands relative to  $\beta$ -actin signal in the same lane in Figure 3A, as quantified using ImageJ. Band intensities of 0-1, 1-2 and greater than 2 are highlighted in light grey, dark grey and black, respectively.

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Fig. 5 Inhibition of phosphorylation of cellular proteins by SB-734117 ((a), (c)-(3)) HFF cells were infected with AD169 at an MOI of 1, then treated with

either 1 $\mu$ M SB-734117 or the equivalent volume of DMSO (as indicated above each Figure). Cell lysates were prepared for western blotting at (a) 72 h.p.i. or ((c)-(e)) as indicated above the figure. Uninfected cells harvested at the time of infection are shown as 0 h.p.i. in (c)-(e). In (a) no lysate was analyzed in lanes 2 and 4. Proteins recognized by the antibodies used are indicated to the right of each figure. The positions of molecular mass markers (kDa) are indicated to the left of each figure. (b) Relative band intensity of CREB and CREB-Ser133 bands relative to  $\beta$ -actin signal in the same lane in Fig. 4(a), as quantified using ImageJ. Band intensities of 0-1, 1-2 and greater than 2 are highlighted in light grey, dark grey and black, respectively.

Fig. 6 H3K14ac at the MIEP is unaffected in SB-734117 treated cells. DNA was immune-precipitated from infected cells (24-72hpi) treated with either DMSO or SB-734117 using an anti-H3K14ac antibody (K14) or isotype control (C), then amplified in an MIEP qPCR. Enrichment of MIEP sequences was expressed relative to amplification in Input sample. Data and error bars represent the mean and standard deviation of three PCR replicates from each sample, respectively

## **TABLES**

872 Table 1

| Chemotype                                  | Total no. of compounds in chemotype | No. of compounds excluded due to cytotoxicity | No. of compounds assigned z-scores. |
|--|-------------------------------------|---|-------------------------------------|
| 4-pyrimidinyl ortho-aryl azoles            | 31                                  | 0   | 31                                  |
| Oxindoles                                  | 30                                  | 3   | 27                                  |
| Furazan benzimidazoles                     | 25                                  | 1   | 24                                  |
| 4-anilino quinazolines and related         | 25                                  | 0   | 25                                  |
| Benzimidazole N-thiophenes                 | 21                                  | 9   | 12                                  |
| 4-pyridyl ortho-aryl azoles                | 18                                  | 0   | 18                                  |
| 2H-3 pyrimidinyl pyrazolopyridazines       | 16                                  | 7   | 9                                   |
| 2-amino oxazoles                           | 15                                  | 0   | 15                                  |
| 4-hydrazinly pyrazolopyrimidines           | 15                                  | 0   | 15                                  |
| 2,4-dianilino pyrrolopyrimidines           | 15                                  | 1   | 14                                  |
| Biaryl amides                              | 14                                  | 0   | 14                                  |
| 3-vinyl pyridines                          | 13                                  | 0   | 13                                  |
| Anilino thienopyrimidines                  | 12                                  | 0   | 12                                  |
| Benzimidazolyl diaryl ureas                | 12                                  | 2   | 10                                  |
| 2-aryl 3-pyridimidinyl pyrazolopyridazines | 12                                  | 0   | 12                                  |
| 2,4-diamino pyrimidines                    | 12                                  | 0   | 12                                  |
| Maleimide                                  | 11                                  | 0   | 11                                  |
| Furopyrimidines and related                | 9                                   | 0   | 9                                   |
| Indazole-3-carboxamides                    | 7                                   | 1   | 6                                   |
| 3-amino pyrazolopyridines                  | 7                                   | 3   | 4                                   |
| 2-pyridinyl imidazoles and related         | 7                                   | 0   | 7                                   |
| 4-anilino 5-alkynyl pyrimidines            | 7                                   | 0   | 7                                   |
| 3-cyano thiophenes                         | 6                                   | 2   | 4                                   |
| Phenyl carboxamides                        | 6                                   | 0   | 6                                   |
| Indazole-5-carboxamides                    | 6                                   | 0   | 6                                   |
| 3-amino pyrazolopyridazines                | 4                                   | 1   | 3                                   |
| 3-amino pyrazoles                          | 3                                   | 0   | 3                                   |
| Imidazotriazine                            | 3                                   | 0   | 3                                   |
| 4-anilino quinolones                       | 2                                   | 0   | 2                                   |
| 6-phenyl isoquinolines                     | 2                                   | 1   | 1                                   |
| 3-benzyl pyrimidines                       | 1                                   | 0   | 1                                   |

## 877 Table 2

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| Experiment | Viral Strain     | Compound         | ED50* (μM) |
|------------|------------------|------------------|------------|
| 1          | AD169            | SB-734117        | 0.5        |
|            | AD169            | GCV <sup>†</sup> | 0.5        |
| 2          | AD169            | SB-734117        | 0.4        |
|            | AD169-P53        | SB-734117        | 1.3        |
| 3          | AD169            | SB-734117        | 1          |
|            | Merlin(RCMV1111) | SB-734117        | 2          |

\*50% effective dose

880 <sup>†</sup>Ganciclovir

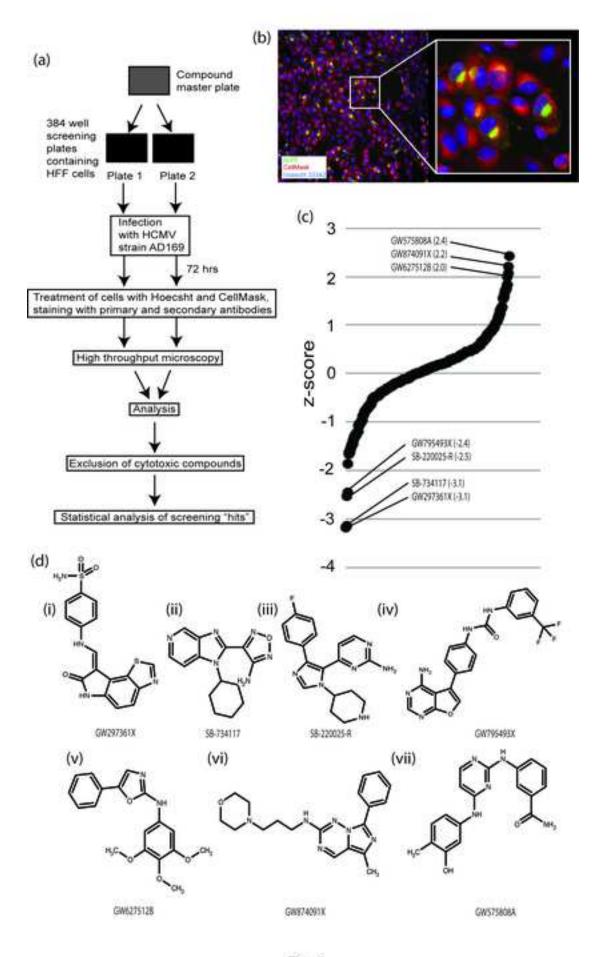


Fig. 1

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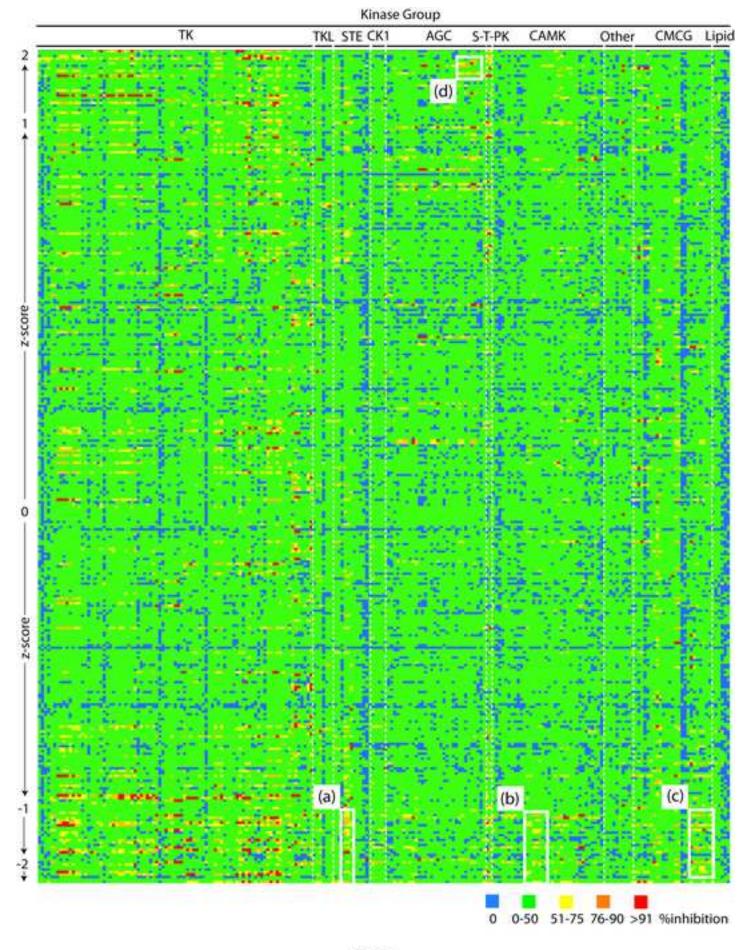


Fig. 2

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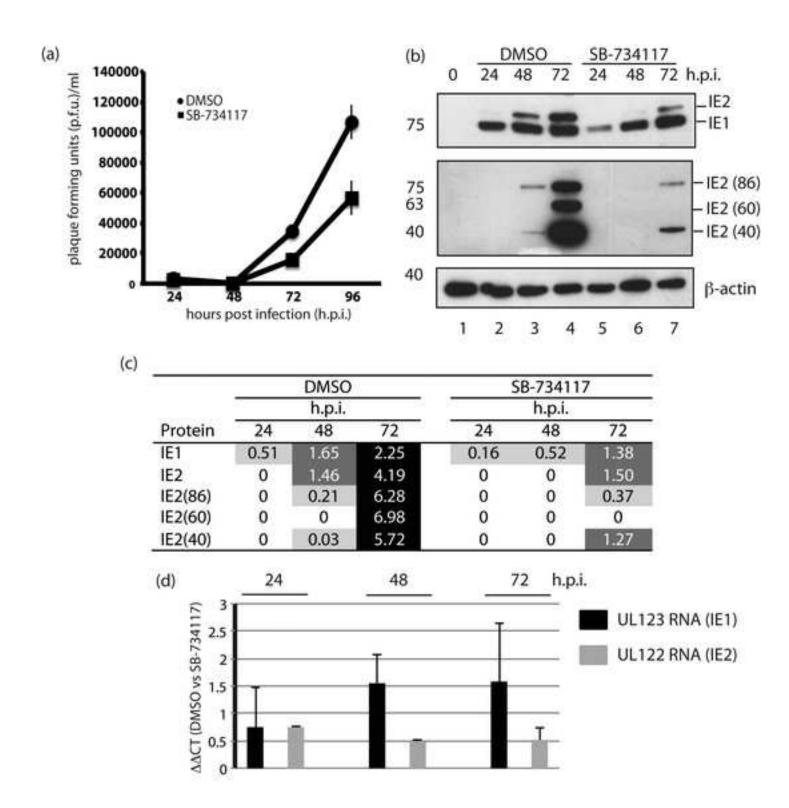
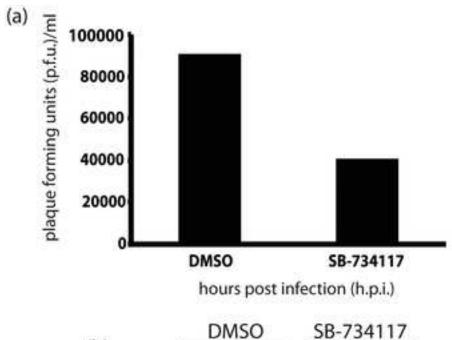
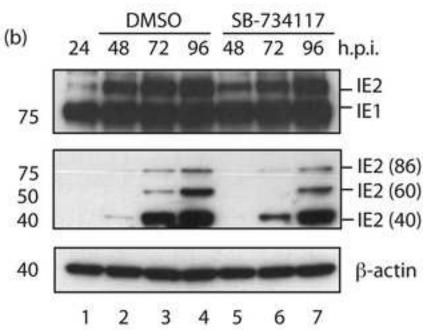


Fig. 3
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|         |        |      | <b>DMSO</b> | ý<br>S | SI       | B-73411 | 17   |
|---------|--------|------|-------------|--------|----------|---------|------|
|         | h.p.i. |      | h.p.i.      |        | <u>.</u> | h.p.i.  |      |
| Protein | 24     | 24   | 48          | 72     | 24       | 48      | 72   |
| IE1     | 1.10   | 1.10 | 1.00        | 1.02   | 1.02     | 0.81    | 0.87 |
| IE2     | 0.11   | 0.81 | 1.32        | 1.08   | 0.62     | 1.32    | 1.74 |
| IE2(86) | 0      | 0    | 1.10        | 2.06   | 0        | 0.61    | 2.64 |
| IE2(60) | 0      | 0    | 0.23        | 3.66   | 0        | 0       | 2.92 |
| IE2(40) | 0      | 0.09 | 1.86        | 2.06   | 0        | 0.90    | 2.14 |

Fig. 4

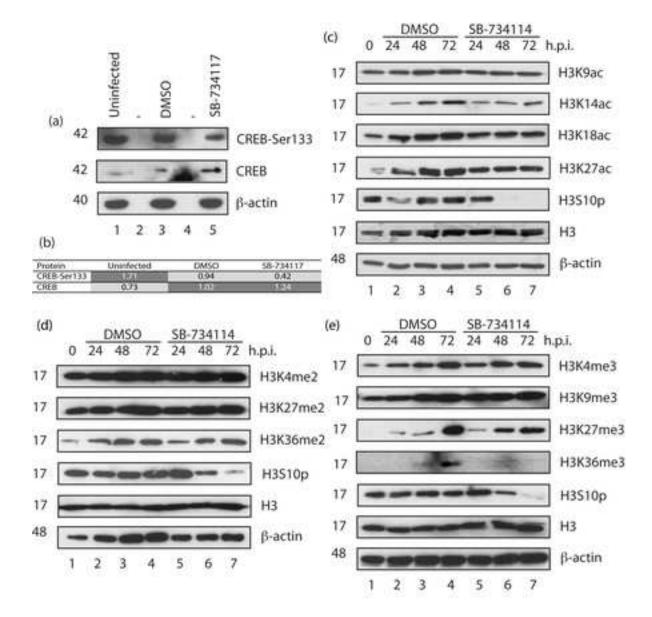


Fig. 5

Figure 5

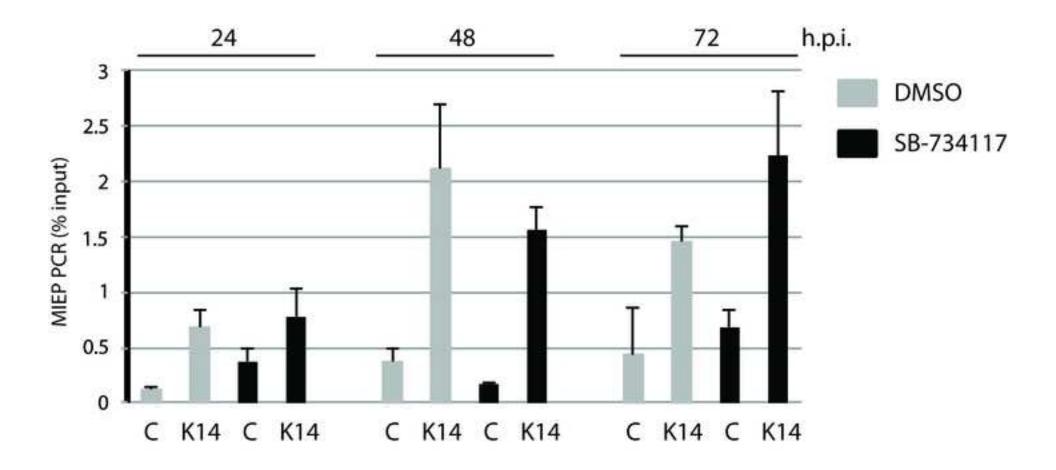


Fig. 6

SUPPLEMENTARY MATERIAL

High Throughput Screening of a GlaxoSmithKline Protein Kinase Inhibitor Set

Identifies an Inhibitor of Human Cytomegalovirus Replication that Prevents

CREB and Histone H3 Post-Translational Modification

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Compound treatment and infection of cells for high throughput screening.

The GSK PKIS library [1] (stock concentration of 3.3 mM of each compound in

DMSO) was screened in duplicate. Twenty four hours before infection 2000 HFF

cells were seeded in each well of each Corning 384 plate. Unless stated

otherwise, liquid was added to wells using a WellMate apparatus. At the time of

infection, media was removed with a suction manifold and 30 µl of complete

media was added to each well. Compounds were added to the plate containing

HFF cells using a 100 nl pin transfer on a liquid handling robot. Negative and

positive controls (water+0.3% DMSO or heparin sulfate (5 μg/ml) + 0.3% DMSO,

respectively) were added to plates by hand (12 wells of each). Cells were then

infected with HCMV strain AD169 (MOI 1) in a total volume of 5 μl. Thus, the final

concentration of compound in each well was 9.4 µM. Infected cells were

incubated for 72 hours at 37°C, then prepared for analysis.

Preparation of screening plates for high throughput microscopy analysis.

Cell culture media was removed from infected cells and replaced with 20  $\mu$ l

Hoecsht 33342 (SIGMA) diluted in PBS to a final concentration of 10 μg/ml. After

incubation for 1 hour at 37°C, 20 μl of Deep Red Cell Mask (Invitrogen) (diluted in

PBS to a concentration of 5 µg/ml) was added to each well. Cells were incubated

for a further 5 min at 37°C. Cells were then fixed by removing PBS containing

Hoescht and Cell Mask and adding 50 µl of 3.5%Formaldyhyde (SIGMA) in PBS

to each well. After incubating at room temperature for 10 min, fixative was

removed and 50 µl of PBS containing 0.5% TritonX-100 was added per well to

permeablize cells. After 10 min incubation at room temperature, PBS containing

detergent was removed, and cells was washed once with PBS. PBS was

removed and replaced with 20 µl MAb P207 recognizing pp28 (Virusys) (dilution

1:1000) and anti-mouse secondary antibody conjugated to flurophore Alexa488

(Molecular Probes) (dilution 1:1000). Plates were incubated at 37°C for 1 hour.

After incubation, PBS containing antibodies was removed and replaced with 50 µl

of PBS. Plates were then analyzed using automated microscopy for the presence

of pp28 protein.

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Microscopy analysis of screening plates. Infected cells stained with antibody

to detect pp28 were imaged on an Image Express Micro (IXM) microscope

(Molecular Devices) at 10x magnification to detect 3 wavelengths; 488 nm to

detect antibody recognizing pp28, 568nm to detect Deep Red CellMask and 350

nm to detect Hoescht 33342 stain bound to nuclear DNA. Three images were

captured from each wavelength in each well of the 384-well plate. The number of

cells positive at all 3 wavelengths and percentage of pp28 positive cells in each

well was determined using the Metamorph Multiwavelength Cell Scoring software

(Molecular Devices). Typically, approximately 60% of cells were infected in wells

treated with negative control, DMSO (data not shown).

Analysis of screening results. To assess the quality of data that could be

returned from the screening protocol we calculated the Z'-factor [2, 3] derived

from the positive (heparan sulphate treated infected cells) and negative (DMSO

treated infected cells) control wells. The screening controls returned Z'-factors of

greater than or equal to 0.5, indicating a robust separation of difference in the

data derived from positive and negative controls (data not shown). Thus, the

screening protocol could be reliably used to screen the compound collection.

After screening of the compound collection, data was discarded from any

well in which the number of cells stained with Hoescht 33342 fell below 2-fold of

the mean of the number of cells in each well of the plate. The data from the

remaining wells from each plate was converted to a z-score (the number of

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standard deviations from the mean of the data [2, 3]) and the average z-score

from data in duplicate plates was determined. Images chosen at random were

visually inspected throughout image capture and analysis to ensure raw data was

consistent with z-scores.

Characterization of compounds within the GSK PKIS collection.

Characterization of compounds has been reported by Elkins and co-workers [4].

Kinase profiling was previously performed by using the Nanosyn microfluidics

capillary electrophoresis technology (based on the change in electrophoretic

mobility of a substrate upon phosphorylation) to determine each compounds

ability to inhibit a panel of 224 recombinant kinase proteins. GPCR screening

using calcium mobility assays was carried out as previously described [4]. The

structure of each compound is available at ChEMBL

(https://www.ebi.ac.uk/chembl/) [1].

Primary and secondary antibodies used in western blotting. Membranes

were probed with antibodies recognizing IE1/2, UL44, pp28, UL84 (all Virusys,

1:1000 dilution), IE2 proteins (clone 5A8.2, Millipore, 1:1000 dilution),  $\beta$ -actin

(SIGMA, 1:5000 dilution), CREB (product no. 06-863) or CREB-Ser133 (product

no. 06-519) (both Millipore, 1:500 dilution). Antibody recognizing UL97 [5] was a

kind gift from Donald Coen (Harvard Medical School, USA), respectively. All

antibodies recognizing histone proteins were obtained from Cell Signaling

Technology (products #9927, #9847, #9783) and used as per suppliers

instructions. All primary antibodies were detected using anti-mouse- or anti-

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rabbit-horseradish peroxidase (HRP) conjugated antibodies (Millipore and Cell

Signaling Technology, respectively). Chemiluminescence solution (GE

Healthcare) was used in each case to detect secondary antibodies using film.

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Nature methods. 2009;6:569-575.

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Use in Evaluation and Validation of High Throughput Screening Assays. Journal

of biomolecular screening, 1999;4:67-73.

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a complex with the tegument phosphoprotein pp65. J Virol. 2007;81:10659-

10668.

Table S1. Compounds in GSK PKIS collection.

| COMPOUND    | СНЕМОТУРЕ                             | SMILES            | ORIGINAL TARGET |
|-------------|---------------------------------------|-------------------|-----------------|
| GI261520A   | 04:4-anilino_quinazolines_and_related | CI.COc1ccc2ncnc(l |                 |
| GR105659X   | 02:Oxindoles                          | Oc1ccc2c(CC\C2=   |                 |
| GR269666A   | 04:4-anilino_quinazolines_and_related | Cl.C(c1nc2ccc(Nc3 |                 |
| GSK1000163A | 03:Furazan benzimidazoles             | CCn1c(nc2c(nc(CN  |                 |
| GSK1007102B | 03:Furazan_benzimidazoles             | OC(=O)C(F)(F)F.C  |                 |
| GSK1023156A | 05:Benzimidazole_N-thiophenes         | NC(=0)c1sc(cc100  |                 |
| GSK1030058A | 05:Benzimidazole_N-thiophenes         | COC(=O)c1sc(cc10  |                 |
| GSK1030059A | 05:Benzimidazole_N-thiophenes         | COc1cc2ncn(-c3cc  |                 |
| GSK1030061A | 05:Benzimidazole_N-thiophenes         | CNC(=O)c1sc(cc10  |                 |
| GSK1030062A | 05:Benzimidazole_N-thiophenes         | COc1cc2ncn(-c3cc  |                 |
| GSK1173862A | 10:2,4-dianilino_pyrrolopyrimidines   | CCCN1CCCC(C1)     |                 |
| GSK1220512A | 10:2,4-dianilino_pyrrolopyrimidines   | COc1cc(ccc1Nc1nc  |                 |
| GSK1326255A | 10:2,4-dianilino_pyrrolopyrimidines   | CCCN1CCC(CC1)     |                 |
| GSK1392956A | 10:2,4-dianilino_pyrrolopyrimidines   | COc1cc(ccc1Nc1nc  |                 |
| GSK1511931A | 10:2,4-dianilino_pyrrolopyrimidines   | COc1cc(ccc1Nc1nc  |                 |
| GSK1713088A | 10:2,4-dianilino_pyrrolopyrimidines   | CCCN1CCC(CC1)     |                 |
| GSK1751853A | 10:2,4-dianilino_pyrrolopyrimidines   | COc1cc2CCN(C(=    |                 |
| GSK180736A  | 25:Indazole-5-carboxamides            | CC1=C(C(NC(=O))   |                 |
| GSK1819799A | 10:2,4-dianilino_pyrrolopyrimidines   | COc1cc(ccc1Nc1nc  |                 |
| GSK182497A  | 13:Anilino_thienopyrimidines          | CN(C)C(=O)O[C@    |                 |
| GSK192082A  | 13:Anilino_thienopyrimidines          | CCNC(=O)O[C@H     |                 |
| GSK200398A  | 13:Anilino_thienopyrimidines          | CI.O=C(O[C@H]1C   | <del>-</del>    |
| GSK204925A  | 05:Benzimidazole_N-thiophenes         | COc1cc2ncn(-c3cc  |                 |
| GSK2110236A | 10:2,4-dianilino_pyrrolopyrimidines   | COc1cc2CCCN(C(    |                 |
| GSK2163632A | 10:2,4-dianilino_pyrrolopyrimidines   | COc1cc2c(cc1Nc1   |                 |
| GSK2186269A | 10:2,4-dianilino_pyrrolopyrimidines   | COc1cc2CCN(C(=    |                 |
| GSK2213727A | 10:2,4-dianilino_pyrrolopyrimidines   | COc1cc(C)c(NC(=0  |                 |
| GSK2219385A | 10:2,4-dianilino_pyrrolopyrimidines   | COc1cc(C)c(cc1Nc  | : IGF-1R        |
| GSK2220400A | 10:2,4-dianilino_pyrrolopyrimidines   | CNC(=O)c1ncccc1   | NGF-1R          |
| GSK237700A  | 05:Benzimidazole_N-thiophenes         | COc1cc2ncn(-c3cc  | PLK             |
| GSK237701A  | 05:Benzimidazole_N-thiophenes         | COc1cc2ncn(-c3cc  | PLK             |
| GSK238063A  | 13:Anilino_thienopyrimidines          | CN(C)C(=O)O[C@    | EGFR/ErbB2      |
| GSK238583A  | 13:Anilino_thienopyrimidines          | OC(=O)C(F)(F)F.O  | : EGFR/ErbB2    |
| GSK248233A  | 03:Furazan_benzimidazoles             | CCn1c(nc2cnc(Oc3  | RHO             |
| GSK259178A  | 13:Anilino_thienopyrimidines          | OC(=O)C(F)(F)F.Fc | : EGFR/ErbB2    |
| GSK269962B  | 03:Furazan_benzimidazoles             | CI.CCn1c(nc2cnc(0 | RHO             |
| GSK270822A  | 25:Indazole-5-carboxamides            | CC1=C(C(CC(=O))   | RHO             |
| GSK299115A  | 25:Indazole-5-carboxamides            | CC1=C(C(CC(=O))   | RHO             |
| GSK300014A  | 13:Anilino_thienopyrimidines          | CS(=O)(=O)CCNC    | : EGFR/ErbB2    |
| GSK312948A  | 05:Benzimidazole_N-thiophenes         | COc1cc2ncn(-c3cc  |                 |
| GSK317314A  | 05:Benzimidazole_N-thiophenes         | COc1ccc2ncn(-c3c  |                 |
| GSK317315A  | 05:Benzimidazole_N-thiophenes         | COc1ccc2ncn(-c3c  |                 |
| GSK317354A  | 25:Indazole-5-carboxamides            | CC1=C(C(N=C(N1))  |                 |
| GSK319347A  | 05:Benzimidazole_N-thiophenes         | COc1cc2ncn(-c3cc  |                 |
| GSK326090A  | 05:Benzimidazole_N-thiophenes         | C[C@@H](Oc1cc(    |                 |
| GSK466314A  | 25:Indazole-5-carboxamides            | Cc1n[nH]c2ccc(NC  |                 |
| GSK466317A  | 25:Indazole-5-carboxamides            | CC1=C(C(CC(=O))   |                 |
| GSK554170A  | 03:Furazan_benzimidazoles             | OC(=O)C(F)(F)F.C  | CAKT            |

| GSK561866B             | 03:Furazan_benzimidazoles                          | OC(=O)C(F)(F)F.C(AKT)                        |
|------------------------|--|--|
| GSK571989A             | 05:Benzimidazole_N-thiophenes                      | C[C@@H](Oc1cc(s PLK                          |
| GSK579289A             | 05:Benzimidazole_N-thiophenes                      | C[C@@H](Oc1cc(s PLK                          |
| GSK586581A             | 24:Phenyl_carboxamides                             | CS(=O)(=O)Nc1ccc IKK                         |
| GSK605714A             | 24:Phenyl_carboxamides                             | COc1ccc(cc1C(N)=IKK                          |
| GSK614526A             | 03:Furazan_benzimidazoles                          | OC(=O)C(F)(F)F.C(AKT)                        |
| GSK619487A             | 03:Furazan_benzimidazoles                          | OC(=O)C(F)(F)F.C(AKT)                        |
| GSK620503A             | 24:Phenyl_carboxamides                             | NC(=O)c1cc(cc(-c2 IKK                        |
| GSK625137A             | 24:Phenyl_carboxamides                             | NC(=O)c1cc(cc(-c2 IKK                        |
| GSK635416A             | 24:Phenyl_carboxamides                             | CNC(=O)c1cc(cc(-c IKK                        |
| GSK711701A             | 24:Phenyl_carboxamides                             | COc1c(cc(cc1-c1cc IKK                        |
| GSK718429A             | 06:4-pyridyl_ortho-aryl_azoles                     | CCn1cc(c(n1)-c1cc RAF                        |
| GSK938890A             | 03:Furazan benzimidazoles                          | CCn1c(nc2c(nc(OC AKT                         |
| GSK943949A             | 03:Furazan_benzimidazoles                          | CCn1c(nc2c(nc(OCAKT                          |
| GSK949675A             | 03:Furazan benzimidazoles                          | CI.CCn1c(nc2c(nc(+AKT                        |
| GSK953913A             | 30:6-phenyl_isoquinolines                          | NS(=O)(=O)c1ccc(cIKK                         |
| GSK969786A             | 13:Anilino_thienopyrimidines                       | Fc1cccc(COc2ccc(IEGFR/ErbB2                  |
| GSK978744A             | 05:Benzimidazole_N-thiophenes                      | C[C@@H](Oc1cc(sPLK                           |
| GSK980961A             | 30:6-phenyl_isoquinolines                          | NS(=O)(=O)c1cccc IKK                         |
| GSK994854A             | 10:2,4-dianilino_pyrrolopyrimidines                | CCCN1CCC=C(C1)IGF-1R                         |
| GW275616X              | 02:Oxindoles                                       | NS(=O)(=O)c1cccc TRKA                        |
| GW275944X              | 02:Oxindoles                                       | Cc1ccc2NC(=O)\C(CDK2                         |
| GW276655X              | 02:Oxindoles                                       | NS(=O)(=O)c1ccc(1 CDK2                       |
| GW278681X              | 02:Oxindoles                                       | CS(=O)(=O)Nc1cccTRKA                         |
| GW279320X              | 02:Oxindoles                                       | Cc1cc(Cl)cc2C(=Nl CDK2                       |
| GW280670X              | 02:Oxindoles                                       | NS(=O)(=O)c1ccc(1 CDK2                       |
| GW282449A              | 04:4-anilino_quinazolines_and_related              | CI.COc1cc2ncnc(N/EGFR/ErbB2                  |
| GW282536X              | 02:Oxindoles                                       | Cc1ccc2c1NC(=O CDK2                          |
| GW282974X              | 04:4-anilino_quinazolines_and_related              | CN(C)c1cc2c(Nc3c EGFR/ErbB2                  |
| GW284372X              | 04:4-anilino_quinazolines_and_related              | C(Oc1ccc(Nc2ncnc EGFR/ErbB2                  |
| GW284408X              | 02:Oxindoles                                       | O=C1Nc2cccc2\C TRKA                          |
| GW290597X              | 02:Oxindoles                                       | NS(=0)(=0)c1ccc(1 CDK2                       |
| GW296115X              | 17:Maleimide                                       | COc1ccc2[nH]c3c4 PDGFR                       |
| GW297361X              | 02:Oxindoles                                       | NS(=0)(=0)c1ccc(1CDK2                        |
| GW300653X              | 02:Oxindoles                                       | CC(C)c1ccc2c(NC( CDK2                        |
| GW300657X              | 02:Oxindoles                                       | NS(=0)(=0)c1ccc(l*CDK2                       |
| GW300660X              | 02:Oxindoles                                       | NS(=0)(=0)c1ccc(1CDK2                        |
| GW301784X              | 02:Oxindoles                                       | CC(C)(CO)CNC(=CCDK2                          |
| GW301789X              | 02:Oxindoles                                       | O=C1Nc2cccc2\C TRKA                          |
| GW301888X              | 04:4-anilino_quinazolines_and_related              | CN(C)c1cc2c(Nc3c EGFR/ErbB2                  |
| GW305074X              | 02:Oxindoles                                       | Oc1c(Br)cc(C=C2C RAF                         |
| GW305178X              | 02:Oxindoles                                       | NS(=0)(=0)c1ccc(1 CDK2                       |
| GW335962X              | 02:Oxindoles                                       | C\C(Nc1ccc(cc1)S( CDK2                       |
| GW352430A              | 02:Oxindoles                                       | CI.NS(=0)(=0)c1cc CDK2                       |
| GW396574X              | 02:Oxindoles                                       | CC(C)=Cc1cccc2N CDK2                         |
| GW405841X              | 02:Oxindoles                                       | COC(=O)c1ccc2NCBR2                           |
|                        |  |  |
| GW406108X<br>GW406731X | 02:Oxindoles                                       | Oc1c(CI)cc(C=C2C RAF<br>COC(=O)c1cncc(\C RAF |
| GW406731X<br>GW407323A | 12:3-vinyl_pyridines 02:Oxindoles                  | CI.Nc1nc(cs1)-c1ccRAF                        |
| GW410563A              | 02.Oxindoles 04:4-anilino_quinazolines_and_related | CI.COc1cc2ncnc(N/VEGFR                       |
| GW416469X              | 02:Oxindoles                                       | CN(C)c1ccc2NC(=(CDK2                         |
| O 10403/               | UZ. OAH IUUIGS                                     | 014(0)010002140(-100112                      |

| 014/4400041/ | 00.0                                  | 00(0)000( 0) 4 00(0           |
|--------------|---------------------------------------|-------------------------------|
| GW416981X    | 02:Oxindoles                          | CC(C)COC(=O)c1c CDK2          |
| GW427984X    | 12:3-vinyl_pyridines                  | CN(C)C(=O)c1cncc RAF          |
| GW429374A    | 02:Oxindoles                          | CI.Oc1c(Br)cc(C=C RAF         |
| GW432441X    | 12:3-vinyl_pyridines                  | CNC(=0)Oc1cc(C)(RAF           |
| GW434756X    | 06:4-pyridyl_ortho-aryl_azoles        | Fc1ccc(cc1)-c1nn2(P38         |
| GW435821X    | 12:3-vinyl_pyridines                  | Cc1cc(O)cc(C)c1\C RAF         |
| GW439255X    | 12:3-vinyl_pyridines                  | Cc1cc(O)cc(C)c1\C RAF         |
| GW440139A    | 29:4-anilino_quinolines               | CI.Cc1ccc(O)cc1Nc RET         |
| GW441756X    | 02:Oxindoles                          | Cn1cc(C=C2C(=O) TRKA          |
| GW441806A    | 12:3-vinyl_pyridines                  | CI.Cc1cc(O)cc(C)c′RAF         |
| GW442130X    | 02:Oxindoles                          | COc1ccccc1-c1cc(\TRKA         |
| GW445012X    | 12:3-vinyl_pyridines                  | CNC(=O)c1cncc(\C RAF          |
| GW445014X    | 12:3-vinyl_pyridines                  | CNC(=O)c1cncc(\C RAF          |
| GW445015X    | 12:3-vinyl_pyridines                  | CNC(=O)c1cncc(\C RAF          |
| GW445017X    | 12:3-vinyl_pyridines                  | CNC(=O)c1cncc(\C RAF          |
| GW450241X    | 12:3-vinyl_pyridines                  | CCc1cccc(CC)c1\C RAF          |
| GW458344A    | 12:3-vinyl_pyridines                  | CI.Cc1cc(cc(C)c1\C RAF        |
| GW458787A    | 04:4-anilino_quinazolines_and_related | CI.CS(=O)(=O)CCN EGFR/ErbB2   |
| GW459057A    | 12:3-vinyl_pyridines                  | CI.Cc1cc(cc(C)c1\CRAF         |
| GW461104A    | 04:4-anilino_quinazolines_and_related | CI.CS(=O)(=O)CCN EGFR/ErbB2   |
| GW513184X    | 09:4-hydrazinly_pyrazolopyrimidines   | COc1cc(C=NNc2nc GSK3          |
| GW549034X    | 03:Furazan_benzimidazoles             | CCn1c(nc2cccc12 MSK           |
| GW549390X    | 08:2-amino_oxazoles                   | N(c1ncc(o1)-c1ccct VEGFR      |
| GW559768X    | 29:4-anilino_quinolines               | Cc1ccc(O)cc1Nc1c RET          |
| GW561436X    | 01:4-pyrimidinyl_ortho-aryl_azoles    | Fc1ccc(cc1)-c1nn2(P38         |
| GW566221A    | 04:4-anilino_quinazolines_and_related | CI.CS(=O)(=O)CCN EGFR/ErbB2   |
| GW567808A    | 04:4-anilino_quinazolines_and_related | CI.CS(=O)(=O)CCN EGFR/ErbB2   |
| GW568326X    | 01:4-pyrimidinyl_ortho-aryl_azoles    | Nc1nccc(n1)-c1c(nr P38        |
| GW568377A    | 04:4-anilino_quinazolines_and_related | CI.CS(=O)(=O)CCN EGFR/ErbB2   |
| GW569293E    | 01:4-pyrimidinyl_ortho-aryl_azoles    | OC(=O)\C=C\C(O)=P38           |
| GW569530A    | 04:4-anilino_quinazolines_and_related | CI.CS(=O)(=O)CCN EGFR/ErbB2   |
| GW572399X    | 08:2-amino_oxazoles                   | NS(=O)(=O)c1ccc(IVEGFR        |
| GW572401X    | 08:2-amino_oxazoles                   | CCN(CC)S(=O)(=O VEGFR         |
| GW572738X    | 23:3-cyano_thiophenes                 | Fc1ccccc1C(=O)Nc JNK          |
| GW574782A    | 04:4-anilino_quinazolines_and_related | CI.CS(=O)(=O)CCN EGFR/ErbB2   |
| GW574783B    | 04:4-anilino_quinazolines_and_related | CI.CS(=O)(=O)CCN EGFR/ErbB2   |
| GW575533A    | 08:2-amino_oxazoles                   | CI.COc1ccc(Nc2nc) VEGFR       |
| GW575808A    | 16:2,4-diamino_pyrimidines            | CI.Cc1ccc(Nc2ccnc LCK         |
| GW576484X    | 04:4-anilino_quinazolines_and_related | CS(=O)(=O)CCNCcEGFR/ErbB2     |
| GW576609A    | 04:4-anilino_quinazolines_and_related | OC(=O)C(F)(F)F.Fc EGFR/ErbB2  |
| GW576924A    | 04:4-anilino_quinazolines_and_related | CI.Fc1cc(Nc2ncnc3 EGFR/ErbB2  |
| GW577921A    | 08:2-amino_oxazoles                   | CI.COc1ccccc1Nc1 VEGFR        |
| GW578748X    | 09:4-hydrazinly_pyrazolopyrimidines   | COc1cc(\C=N\Nc2r GSK3         |
| GW580496A    | 04:4-anilino_quinazolines_and_related | CI.CS(=O)(=O)CCN EGFR/ErbB2   |
| GW580509X    | 08:2-amino_oxazoles                   | CCS(=O)(=O)c1cccVEGFR         |
| GW581744X    | 01:4-pyrimidinyl_ortho-aryl_azoles    | NC(=O)c1ccc2c(c(r P38         |
| GW583373A    | 04:4-anilino_quinazolines_and_related | Cl.Clc1cc(Nc2ncnc; EGFR/ErbB2 |
| GW589933X    | 02:Oxindoles                          | NS(=0)(=0)c1ccc(lCDK2         |
| GW589961A    | 14:Benzimidazolyl_diaryl_ureas        | CI.COC(=O)Nc1nc2TIE2/VEGFR2   |
| GW607049C    | 14:Benzimidazolyl_diaryl_ureas        | OS(O)(=O)=O.COCTIE2/VEGFR2    |
| GW607117X    | 11:Biaryl_amides                      | Cc1nnc(o1)-c1ccc((p38         |
|              |                                       |                               |

| GW612286X | 16:2,4-diamino_pyrimidines              | COc1cc(Nc2nccc(NVEGFR        |
|-----------|---|------------------------------|
| GW615311X | 04:4-anilino_quinazolines_and_related   | Fc1cccc(COc2ccc(IEGFR/ErbB2  |
| GW616030X | 04:4-anilino_quinazolines_and_related   | CS(=O)(=O)CCN(C EGFR/ErbB2   |
| GW618013A | 01:4-pyrimidinyl_ortho-aryl_azoles      | CS(O)(=O)=O.CN((P38          |
| GW620972X | 23:3-cyano_thiophenes                   | O=C(Nc1sc2CCCC JNK           |
| GW621431X | 08:2-amino_oxazoles                     | CCS(=O)(=O)c1cccVEGFR        |
| GW621823A | 04:4-anilino_quinazolines_and_related   | CI.CCCN(CCS(C)(= EGFR/ErbB2  |
| GW621970X | 08:2-amino_oxazoles                     | CCS(=O)(=O)c1ccc VEGFR       |
| GW622055X | 08:2-amino_oxazoles                     | CCS(=O)(=O)c1ccc VEGFR       |
| GW627512B | 08:2-amino_oxazoles                     | COc1cc(Nc2ncc(o2 VEGFR       |
| GW627834A | 08:2-amino_oxazoles                     | CI.N#Cc1cccc(Nc2r VEGFR      |
| GW631581B | 08:2-amino_oxazoles                     | COc1cc(Nc2ncc(o2 VEGFR       |
| GW632046X | 08:2-amino_oxazoles                     | Cc1cccc(Nc2ncc(o2VEGFR       |
| GW632580X | 31:3-benzyl_pyrimidines                 | COc1ccc(COc2ccclCSF          |
| GW633459A | 04:4-anilino_quinazolines_and_related   | CI.Fc1cccc(COc2cc EGFR/ErbB2 |
| GW641155A | 08:2-amino_oxazoles                     | CI.N(c1ncc(o1)-c1c VEGFR     |
| GW642125X | 18:Furopyrimidines_and_related          | COc1ccc(cc1)-c1ccTIE2/VEGFR2 |
| GW642138X | 18:Furopyrimidines_and_related          | COc1ccc(cc1)-c1ccTIE2/VEGFR2 |
| GW643971X | 09:4-hydrazinly_pyrazolopyrimidines     | COc1cc(C=NNc2nc GSK3         |
| GW644007X | 09:4-hydrazinly_pyrazolopyrimidines     | COc1cc(ccc1O)\C=GSK3         |
| GW651576X | 22:4-anilino_5-alkynyl_pyrimidines      | Fc1cccc(COc2ccc(IEGFR/ErbB2  |
| GW654652C | 16:2,4-diamino_pyrimidines              | CI.CCS(=O)(=O)c1(VEGFR       |
| GW659386A | 14:Benzimidazolyl_diaryl_ureas          | CI.COC(=O)Nc1nc2TIE2/VEGFR2  |
| GW659893X | 22:4-anilino_5-alkynyl_pyrimidines      | Nc1ccc(cc1)C#Cc1 EGFR/ErbB2  |
| GW673715X | 14:Benzimidazolyl_diaryl_ureas          | CCc1cccc(NC(=O)l TIE2/VEGFR2 |
| GW678313X | 08:2-amino_oxazoles                     | CCS(=O)(=O)c1ccc VEGFR       |
| GW679410X | 06:4-pyridyl_ortho-aryl_azoles          | COc1ccc(cc1)-c1ccTGFBR       |
| GW680191X | 04:4-anilino_quinazolines_and_related   | CS(=O)(=O)CCNC(EGFR/ErbB2    |
| GW680908A | 14:Benzimidazolyl_diaryl_ureas          | CI.COC(=O)Nc1nc2TIE2/VEGFR2  |
| GW680975X | 06:4-pyridyl_ortho-aryl_azoles          | Fc1ccc(cc1)-c1cc(cTGFBR      |
| GW682841X | 06:4-pyridyl_ortho-aryl_azoles          | CC(C)c1ccc(cc1)-c TGFBR      |
| GW683003X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | FC(F)(F)CNc1nccc(CDK         |
| GW683109X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | C(CNc1nccc(n1)-c1CDK         |
| GW683134A | 14:Benzimidazolyl_diaryl_ureas          | CI.Fc1ccc(cc1NC(=TIE2/VEGFR2 |
| GW683768X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | CCc1nn2ncccc2c1-CDK          |
| GW684626B | 13:Anilino_thienopyrimidines            | Fc1cccc(COc2ccc(IEGFR/ErbB2  |
| GW693481X | 21:2-pyridinyl_imidazoles_and_related   | Nc1nc(c(s1)-c1ccc2TGFBR      |
| GW693881A | 13:Anilino_thienopyrimidines            | CI.Fc1cccc(COc2cc EGFR/ErbB2 |
| GW693917A | 14:Benzimidazolyl_diaryl_ureas          | CI.COC(=O)Nc1nc2TIE2/VEGFR2  |
| GW694234A | 14:Benzimidazolyl_diaryl_ureas          | CI.COC(=O)Nc1nc2TIE2/VEGFR2  |
| GW694590A | 14:Benzimidazolyl_diaryl_ureas          | CI.COC(=O)Nc1nc2TIE2/VEGFR2  |
| GW695874X | 06:4-pyridyl_ortho-aryl_azoles          | C(CN1CCOCC1)OcTGFBR          |
| GW700494A | 14:Benzimidazolyl_diaryl_ureas          | CI.CN1CCN(CCCN TIE2/VEGFR2   |
| GW701032X | 11:Biaryl_amides                        | COc1ccc(CNC(=O) p38          |
| GW701427A | 14:Benzimidazolyl_diaryl_ureas          | CI.COC(=0)Nc1nc2TIE2/VEGFR2  |
| GW703087X | 22:4-anilino_5-alkynyl_pyrimidines      | CC(=O)Nc1cccc(c1 EGFR/ErbB2  |
| GW708336X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | C1CC1Nc1nccc(n1 CDK          |
| GW708893X | 11:Biaryl_amides                        | Cc1nnc(o1)-c1ccc((p38        |
| GW709042A | 14:Benzimidazolyl_diaryl_ureas          | CI.Fc1ccc(cc1NC(=TIE2/VEGFR2 |
| GW711782X | 06:4-pyridyl_ortho-aryl_azoles          | C(Cn1ccnc1)Oc1ccTGFBR        |
| GW734508X | 11:Biaryl_amides                        | Cc1nnc(o1)-c1cccc p38        |
|           | •                                       | • •                          |

| GW743024X | 11:Biaryl_amides                        | Cc1ccc(NC(=O)c2c p38                    |
|-----------|---|---|
| GW759710A | 16:2,4-diamino_pyrimidines              | CI.NC(=O)c1cccc(NLCK                    |
| GW768505A | 18:Furopyrimidines_and_related          | CI.COc1ccc(cc1)-c'TIE2/VEGFR2           |
| GW769076X | 11:Biaryl_amides                        | Cc1ccc(NC(=O)c2c P38                    |
| GW770220A | 16:2,4-diamino_pyrimidines              | CI.CN(c1ccc2c(C)n VEGFR                 |
| GW770249A | 18:Furopyrimidines_and_related          | CI.Nc1ncnc2occ(-c; TIE2/VEGFR2          |
| GW770249X | 18:Furopyrimidines_and_related          | CI.Nc1ncnc2occ(-c; TIE2/VEGFR2          |
| GW771127A | 16:2,4-diamino_pyrimidines              | CI.CN(c1ccc2c(C)n VEGFR                 |
| GW772405X | 22:4-anilino_5-alkynyl_pyrimidines      | CNC(=O)c1cccc(c1 EGFR/ErbB2             |
| GW775608X | 11:Biaryl_amides                        | Cc1ccc(NC(=O)c2c P38                    |
| GW778894X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | N#Cc1cccc(Nc2ncc CDK                    |
| GW779439X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | CN1CCN(CC1)c1ccCDK                      |
| GW780056X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | CCN(CC)Cc1ccc(N CDK                     |
| GW780159X | 21:2-pyridinyl_imidazoles_and_related   | Nc1nc(c(s1)-c1ccc2TGFBR                 |
| GW781673X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | Clc1ccc(CNc2nccc(CDK                    |
| GW782612X | 16:2,4-diamino_pyrimidines              | NC(=O)c1cccc(Nc2 LCK                    |
| GW782907X | 11:Biaryl_amides                        | Cc1ccc(cc1-c1ccc(rp38                   |
| GW782912X | 11:Biaryl_amides                        | Cc1ccc(cc1-c1ccc(cp38                   |
| GW784307A | 09:4-hydrazinly_pyrazolopyrimidines     | CI.COc1cccc(c1)-n <sup>-</sup> GSK3     |
| GW784684X | 13:Anilino_thienopyrimidines            | CN1CCN(Cc2ccc(o EGFR/ErbB2              |
| GW784752X | 09:4-hydrazinly_pyrazolopyrimidines     | COc1cccc(c1)-n1ncGSK3                   |
| GW785404X | 03:Furazan_benzimidazoles               | CCn1c(nc2ccc(F)ccMSK                    |
| GW785804X | 21:2-pyridinyl_imidazoles_and_related   | Nc1nc(c(s1)-c1ccc2TGFBR                 |
| GW785974X | 11:Biaryl_amides                        | CC(C)NC(=O)c1cccp38                     |
| GW786460X | 21:2-pyridinyl_imidazoles_and_related   | Cc1cccc(n1)-c1n[nlTGFBR                 |
| GW794607X | 09:4-hydrazinly_pyrazolopyrimidines     | CCCNc1cccc(c1)-n GSK3                   |
| GW794726X | 22:4-anilino_5-alkynyl_pyrimidines      | CC(=O)Nc1cccc(n1EGFR/ErbB2              |
| GW795486X | 18:Furopyrimidines_and_related          | Nc1ncnc2occ(-c3ccTIE2/VEGFR2            |
| GW795493X | 18:Furopyrimidines_and_related          | Nc1ncnc2occ(-c3ccTIE2/VEGFR2            |
| GW796920X | 11:Biaryl_amides                        | Cc1ccc(NC(=O)CC p38                     |
| GW796921X | 11:Biaryl_amides                        | CCC(=O)Nc1ccc(C p38                     |
| GW799251X | 22:4-anilino_5-alkynyl_pyrimidines      | Nc1nccc(n1)C#Cc1EGFR/ErbB2              |
| GW801372X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | COc1cc(Nc2nccc(n GSK3                   |
| GW804482X | 05:Benzimidazole_N-thiophenes           | COc1cccc(COc2cclPLK                     |
| GW805758X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | CC(C)c1ccc(Nc2nc CDK                    |
| GW806290X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | C1COc2cc(Nc3ncc GSK3                    |
| GW806742X | 16:2,4-diamino_pyrimidines              | CN(c1ccc(NC(=O)NVEGFR                   |
| GW806776X | 11:Biaryl_amides                        | O=C(NCC1CC1)c1/p38                      |
| GW807930X | 22:4-anilino_5-alkynyl_pyrimidines      | CC(=O)NCc1cccc(cEGFR/ErbB2              |
| GW807982X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | CCOc1ccc2c(cnn2r GSK3                   |
| GW809885X | 09:4-hydrazinly_pyrazolopyrimidines     | COc1cccc(c1)-n1ncGSK3                   |
| GW809897X | 16:2,4-diamino_pyrimidines              | CN(c1ccc(NC(=O)) VEGFR                  |
| GW810372X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | COc1ccc2c(cnn2n1GSK3                    |
| GW810576X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | COc1cccc(Nc2nccc GSK3                   |
| GW811168X | 09:4-hydrazinly_pyrazolopyrimidines     | COc1cccc(c1)-n1ncGSK3                   |
| GW811761X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | CCOc1ccc2c(cnn2r GSK3                   |
| GW813360X | 09:4-hydrazinly_pyrazolopyrimidines     | COc1cccc(c1)-n1cr GSK3                  |
| GW814408X | 09:4-hydrazinly_pyrazolopyrimidines     | COc1cccc(c1)-c1c[i GSK3                 |
| GW817394X | 09:4-hydrazinly_pyrazolopyrimidines     | COc1cccc(c1)-n1nc GSK3                  |
| GW817396X | 09:4-hydrazinly_pyrazolopyrimidines     | COc1cccc(c1)-n1nc GSK3                  |
| GW819077X | 07:2H-3_pyrimidinyl_pyrazolopyridazines | FC(F)(F)c1ccc(Nc GSK3                   |
|           |   | , |

| GW819230X   | 18:Furopyrimidines_and_related                | Cc1ccc(cc1)-c1cc2(GSK3                      |
|-------------|---|---|
| GW820759X   | 11:Biaryl_amides                              | Cc1ccc(cc1-c1ccc2 P38                       |
| GW824645A   | 27:3-amino_pyrazoles                          | CI.NS(=O)(=O)c1cc CDK2                      |
| GW827099X   | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines | Fc1ccc(cc1)-c1nn2i GSK3                     |
| GW827102X   | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines | FC(F)(F)c1cccc(c1)GSK3                      |
| GW827105X   | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines | COc1ccc(cc1)-c1nr GSK3                      |
| GW827106X   | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines | COc1ccc(cc1)-c1nr GSK3                      |
| GW827396X   | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines | COc1ccc(cc1)-c1nr GSK3                      |
| GW828525X   | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines | FC(F)(F)c1ccc(cc1) GSK3                     |
| GW828529X   | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines | Fc1ccc(Nc2nccc(n2GSK3                       |
| GW829055X   | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines | Clc1ccc(cc1)-c1nn2GSK3                      |
| GW829115X   | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines | COc1ccc(cc1)-c1nr GSK3                      |
| GW829874X   | 09:4-hydrazinly_pyrazolopyrimidines           | COc1cccc(\C=N\NcGSK3                        |
| GW829877X   | 09:4-hydrazinly_pyrazolopyrimidines           | COc1cccc(c1)-n1ncGSK3                       |
| GW829906X   | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines | Cc1ccc2c(c(nn2n1) GSK3                      |
| GW830263A   | 16:2,4-diamino_pyrimidines                    | CI.CN(c1ccc(NC(=CVEGFR                      |
| GW830365A   | 16:2,4-diamino_pyrimidines                    | CI.CN(c1ccc(NC(=( VEGFR                     |
| GW830900A   | 16:2,4-diamino_pyrimidines                    | CI.CN(C)CCNC(=O VEGFR                       |
| GW831090X   | 27:3-amino_pyrazoles                          | NS(=O)(=O)c1ccc(I CDK2                      |
| GW831091X   | 27:3-amino_pyrazoles                          | NS(=O)(=O)c1ccc(l CDK2                      |
| GW832467X   | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines | Cc1ccc2c(c(nn2n1) GSK3                      |
| GW833373X   | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines | Cc1ccc2c(c(nn2n1) GSK3                      |
| GW837331X   | 28:Imidazotriazine                            | COc1cc(Nc2ncc3c( PLK                        |
| GW843682X   | 05:Benzimidazole_N-thiophenes                 | COc1cc2ncn(-c3cciPLK                        |
| GW846105X   | 23:3-cyano_thiophenes                         | O=C(Nc1sc2N(CC(JNK                          |
| GW852849X   | 05:Benzimidazole_N-thiophenes                 | COc1cc2ncn(-c3cciPLK                        |
| GW853606X   | 05:Benzimidazole_N-thiophenes                 | NC(=O)c1sc(cc1O(PLK                         |
| GW853609X   | 05:Benzimidazole_N-thiophenes                 | NC(=O)c1sc(cc1OCPLK                         |
| GW856804X   | 18:Furopyrimidines_and_related                | Nc1ncc(-c2ccc(c2)TIE2/VEGFR2                |
| GW861893X   | 28:Imidazotriazine                            | COc1cc(Nc2ncc3c(PLK                         |
| GW869810X   | 13:Anilino_thienopyrimidines                  | Fc1cccc(COc2ccc(IEGFR/ErbB2                 |
| GW874091X   | 28:Imidazotriazine                            | Cc1nc(-c2cccc2)n:PLK                        |
| GW876790X   | 03:Furazan_benzimidazoles                     | CCn1c(nc2cncc(Ć(: AKT                       |
| SB-210313   | 06:4-pyridyl_ortho-aryl_azoles                | Fc1ccc(cc1)-c1ncn(P38                       |
| SB-216385   | 01:4-pyrimidinyl_ortho-aryl_azoles            | Nc1nccc(n1)-c1c(ncP38                       |
| SB-220025-A | 01:4-pyrimidinyl_ortho-aryl_azoles            | Cl.Nc1nccc(n1)-c1c P38                      |
| SB-220025-R | 01:4-pyrimidinyl_ortho-aryl_azoles            | Cl.Nc1nccc(n1)-c1c P38                      |
| SB-220455   | 01:4-pyrimidinyl_ortho-aryl_azoles            | CN1CCC(CC1)n1ciP38                          |
| SB-221466   | 01:4-pyrimidinyl_ortho-aryl_azoles            | CC1(C)CC(CC(C)((P38                         |
| SB-223133   | 01:4-pyrimidinyl_ortho-aryl_azoles            | Nc1nccc(n1)-c1c(ncP38                       |
| SB-226879   | 01:4-pyrimidinyl_ortho-aryl_azoles            | CN1CCC(CC1)n1ciP38                          |
| SB-236687   | 01:4-pyrimidinyl_ortho-aryl_azoles            | CN1CCC(CC1)n1ciP38                          |
| SB-239272   | 01:4-pyrimidinyl_ortho-aryl_azoles            | Fc1ccc(cc1)-c1ncn(P38                       |
| SB-242717   | 01:4-pyrimidinyl_ortho-aryl_azoles            | Fc1ccc(Oc2nccc(n2P38                        |
| SB-242718   | 01:4-pyrimidinyl_ortho-aryl_azoles            | NC(=O)c1ccc(Oc2r P38                        |
| SB-242719   | 01:4-pyrimidinyl_ortho-aryl_azoles            | CCc1ccc(Oc2nccc( P38                        |
| SB-242721   | 01:4-pyrimidinyl_ortho-aryl_azoles            | Fc1ccc(cc1)-c1ncn(P38                       |
| SB-245392   | 01:4-pyrimidinyl_ortho-aryl_azoles            | Fc1ccc(cc1)-c1ncn(P38                       |
| SB-250715   | 01:4-pyrimidinyl_ortho-aryl_azoles            | Fc1ccc(cc1)-c1ncn(P38                       |
| SB-251505   | 01:4-pyrimidinyl_ortho-aryl_azoles            | Fc1ccc(cc1)-c1ncn(P38                       |
| SB-251527   | 01:4-pyrimidinyl_ortho-aryl_azoles            | COc1cccc1Oc1nc P38                          |
|             | z p.,ayzz aryi_azzioo                         | 2 2 3 7 5 5 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 |

| SB-253226     | 01:4-pyrimidinyl_ortho-aryl_azoles    | Fc1ccc(cc1)-c1ncn(P38   |
|---------------|---------------------------------------|-------------------------|
| SB-253228     | 01:4-pyrimidinyl_ortho-aryl_azoles    | Fc1ccc(cc1)-c1ncn(P38   |
| SB-254169     | 01:4-pyrimidinyl_ortho-aryl_azoles    | CS(=O)(=O)c1ccc((P38    |
| SB-264865     | 01:4-pyrimidinyl_ortho-aryl_azoles    | NC(=O)Cc1ccccc1(P38     |
| SB-264866     | 01:4-pyrimidinyl_ortho-aryl_azoles    | NC(=O)CCc1ccccc P38     |
| SB-278538     | 01:4-pyrimidinyl_ortho-aryl_azoles    | CC(C)(C)c1ccc(Oc; P38   |
| SB-278539     | 01:4-pyrimidinyl_ortho-aryl_azoles    | Fc1ccc(cc1)-c1ncn(P38   |
| SB-284847-BT  | 01:4-pyrimidinyl_ortho-aryl_azoles    | OC(=O)C(F)(F)F.C(P38    |
| SB-285234-W   | 01:4-pyrimidinyl_ortho-aryl_azoles    | [Li+].[O-]C(=O)c1cc P38 |
| SB-333612     | 17:Maleimide                          | Clc1ccc(cc1)C1=C(GSK3   |
| SB-347804     | 23:3-cyano_thiophenes                 | Fc1ccc(cc1)C(=O)NJNK    |
| SB-358518     | 17:Maleimide                          | Oc1c(Cl)cc(NC2=C GSK3   |
| SB-360741     | 17:Maleimide                          | OC(=O)c1cc(NC2=GSK3     |
| SB-361058     | 17:Maleimide                          | COc1ccc(cc1)C1=CGSK3    |
| SB-376719     | 17:Maleimide                          | COc1cccc1C1=C(GSK3      |
| SB-390523     | 17:Maleimide                          | Oc1c(Cl)cc(NC2=C GSK3   |
| SB-390527     | 17:Maleimide                          | Oc1cccc(NC2=C(C GSK3    |
| SB-400868-A   | 21:2-pyridinyl_imidazoles_and_related | CI.C1Cc2nc(c(-c3crTGFBR |
| SB-409513     | 17:Maleimide                          | OC(=O)c1cc(NC2=GSK3     |
| SB-409514     | 17:Maleimide                          | Oc1ccc(NC2=C(C(=GSK3    |
| SB-431533     | 21:2-pyridinyl_imidazoles_and_related | OCc1ccc(cc1)-c1nc TGFBR |
| SB-431542-A   | 21:2-pyridinyl_imidazoles_and_related | CI.NC(=O)c1ccc(cc TGFBR |
| SB-437013     | 06:4-pyridyl_ortho-aryl_azoles        | COc1ccc2cc(ccc2c TIE2   |
| SB-476429-A   | 06:4-pyridyl_ortho-aryl_azoles        | Cl.NCc1ccc(cc1)-c1RAF   |
| SB-590885-AAD | 06:4-pyridyl_ortho-aryl_azoles        | O.Cl.CN(C)CCOc1(RAF     |
| SB-610251-B   | 06:4-pyridyl_ortho-aryl_azoles        | Cl.Oc1cccc(c1)-c1n RAF  |
| SB-614067-R   | 06:4-pyridyl_ortho-aryl_azoles        | CI.ON=C1CCc2cc(cRAF     |
| SB-630812     | 06:4-pyridyl_ortho-aryl_azoles        | COc1ccc2cc(ccc2c TIE2   |
| SB-633825     | 06:4-pyridyl_ortho-aryl_azoles        | COc1ccc2cc(ccc2c TIE2   |
| SB-657836-AAA |                                       | OC(=O)C(O)=O.O=JNK      |
| SB-675259-M   | 26:3-amino_pyrazolopyridazines        | OC(=0)C(F)(F)F.O: GSK3  |
| SB-678557-A   | 26:3-amino_pyrazolopyridazines        | CI.CN1CCC(CC1)CGSK3     |
| SB-682330-A   | 06:4-pyridyl_ortho-aryl_azoles        | CI.CN(C)CCOc1cccRAF     |
| SB-686709-A   | 26:3-amino_pyrazolopyridazines        | CI.CCN1CCC(CC1) GSK3    |
| SB-698596-AC  | 26:3-amino_pyrazolopyridazines        | O[C@H]([C@@H](GSK3      |
| SB-711237     | 20:3-amino_pyrazolopyridines          | COc1ccc(cc1)-c1cc GSK3  |
| SB-725317     | 20:3-amino_pyrazolopyridines          | Oc1ccc(cc1)-c1nc2 GSK3  |
| SB-732881     | 20:3-amino_pyrazolopyridines          | CN1CCC(CC1)C(=(GSK3     |
| SB-732881-H   | 20:3-amino_pyrazolopyridines          | OC(=O)\C=C/C(O)=GSK3    |
| SB-732941     | 19:Indazole-3-carboxamides            | O=C(Nc1n[nH]c2cc GSK3   |
| SB-734117     | 03:Furazan benzimidazoles             | Nc1nonc1-c1nc2cn MSK    |
| SB-735465     | 19:Indazole-3-carboxamides            | Fc1ccc(F)c(c1)-c1c GSK3 |
| SB-735467     | 19:Indazole-3-carboxamides            | Fc1ccc(cc1)-c1ccc2GSK3  |
| SB-736290     | 03:Furazan benzimidazoles             | Cn1c(nc2cnccc12)- MSK   |
| SB-736302     | 03:Furazan benzimidazoles             | Nc1nonc1-c1nc2cn MSK    |
| SB-737198     | 03:Furazan benzimidazoles             | CCOc1nccc2n(CC) MSK     |
| SB-738482     | 19:Indazole-3-carboxamides            | NS(=O)(=O)c1ccc(cGSK3   |
| SB-738561     | 03:Furazan_benzimidazoles             | CCn1c(nc2ccncc12 MSK    |
| SB-739245-AC  | 20:3-amino_pyrazolopyridines          | O[C@H]([C@@H](\GSK3     |
| SB-739452     | 20:3-amino_pyrazolopyridines          | Brc1cc2c(NC(=O)C GSK3   |
| SB-741905     | 19:Indazole-3-carboxamides            | NS(=O)(=O)c1cccc GSK3   |
|               |                                       | . , , ,                 |

| SB-742864    | 19:Indazole-3-carboxamides     | CS(=O)(=O)Nc1cccGSK3    |
|--------------|--------------------------------|-------------------------|
| SB-742865    | 19:Indazole-3-carboxamides     | CS(=O)(=O)Nc1cccGSK3    |
| SB-743899    | 20:3-amino_pyrazolopyridines   | O=C(Nc1n[nH]c2nc GSK3   |
| SB-744941    | 03:Furazan_benzimidazoles      | CCn1c(nc2c(nccc1; MSK   |
| SB-750140    | 03:Furazan_benzimidazoles      | NCc1ccc(cc1)-n1c(IMSK   |
| SB-751148    | 03:Furazan_benzimidazoles      | CCc1nccc2n(CC)c( MSK    |
| SB-751399    | 03:Furazan_benzimidazoles      | CN(C)CCCn1c(nc2 MSK     |
| SB-759335-B  | 03:Furazan_benzimidazoles      | CI.CCn1c(nc2cncc( AKT   |
| SB-772077-B  | 03:Furazan_benzimidazoles      | CI.CCn1c(nc2cncc( RHO   |
| SB-814597    | 23:3-cyano_thiophenes          | Fc1ccc(C(=O)Nc2s JNK    |
| SKF-62604    | 17:Maleimide                   | O=C1NC(=O)C(=C GSK3     |
| SKF-86002-A2 | 06:4-pyridyl_ortho-aryl_azoles | CI.Fc1ccc(cc1)-c1n P38  |
| SKF-86055    | 06:4-pyridyl_ortho-aryl_azoles | Fc1ccc(cc1)-c1c(ncTGFBR |
|              |                                |                         |

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s of a series of 1-(piperidin-4-yl)-4-(4-fluorophenyl)-5-(2-phenoxypyrimidin-4-yl) imidazoles.
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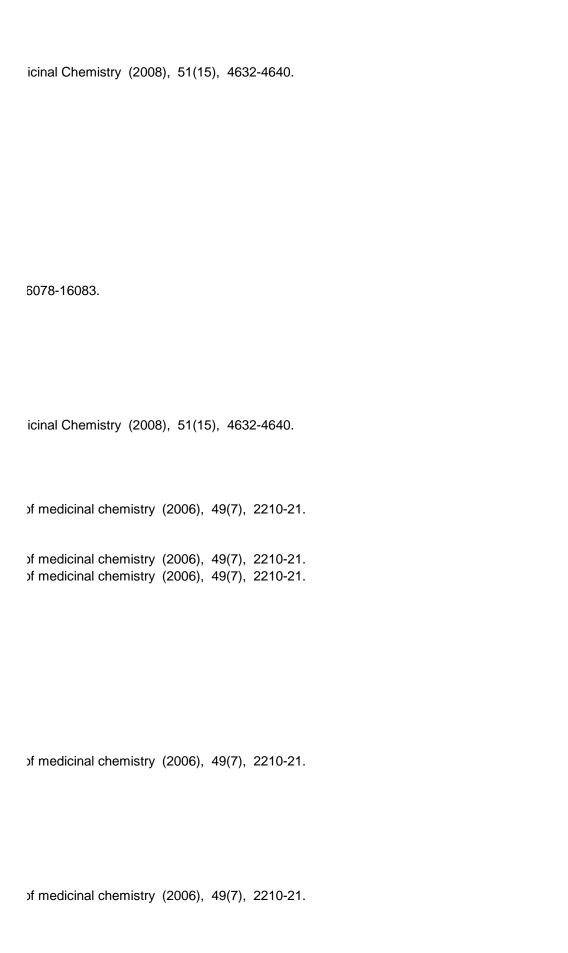
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Table S2. Compounds excluded for cytotoxicity. Each chemotype is labbeled with a different colo

| COMPOUND    | СНЕМОТУРЕ                               | REFERENCE                        |
|-------------|---|----------------------------------|
| GSK1007102B | 03:Furazan_benzimidazoles               | Aminofurazans as potent inhib    |
| GSK2110236A | 10:2,4-dianilino_pyrrolopyrimidines     | Optimization of a series of 4,6- |
| GSK237700A  | 05:Benzimidazole_N-thiophenes           | Design of potent thiophene inh   |
| GSK237701A  | 05:Benzimidazole_N-thiophenes           | Design of potent thiophene inh   |
| GSK317314A  | 05:Benzimidazole_N-thiophenes           | Design of potent thiophene inh   |
| GSK317315A  | 05:Benzimidazole_N-thiophenes           | Design of potent thiophene inh   |
| GSK326090A  | 05:Benzimidazole_N-thiophenes           | Design of potent thiophene inh   |
| GSK579289A  | 05:Benzimidazole_N-thiophenes           | Design of potent thiophene inh   |
| GSK953913A  | 30:6-phenyl_isoquinolines               | Discovery of 6-Aryl-7-alkoxyisc  |
| GSK978744A  | 05:Benzimidazole_N-thiophenes           | Design of potent thiophene inh   |
| GW305178X   | 02:Oxindoles                            | Oxindole-Based Inhibitors of C   |
| GW416981X   | 02:Oxindoles                            | Oxindole-Based Inhibitors of C   |
| GW589933X   | 02:Oxindoles                            | Oxindole-Based Inhibitors of C   |
| GW589961A   | 14:Benzimidazolyl_diaryl_ureas          | Discovery of Novel Benzimida:    |
| GW620972X   | 23:3-cyano_thiophenes                   | N-(3-Cyano-4,5,6,7-tetrahydro    |
| GW694590A   | 14:Benzimidazolyl_diaryl_ureas          | Discovery of Novel Benzimida:    |
| GW778894X   | 07:2H-3_pyrimidinyl_pyrazolopyridazines | Synthesis and evaluation of py   |
| GW779439X   | 07:2H-3_pyrimidinyl_pyrazolopyridazines | Synthesis and evaluation of py   |
| GW780056X   | 07:2H-3_pyrimidinyl_pyrazolopyridazines | Synthesis and evaluation of py   |
| GW801372X   | 07:2H-3_pyrimidinyl_pyrazolopyridazines | N-Phenyl-4-pyrazolo[1,5-b]pyri   |
| GW805758X   | 07:2H-3_pyrimidinyl_pyrazolopyridazines | Synthesis and evaluation of py   |
| GW806290X   | 07:2H-3_pyrimidinyl_pyrazolopyridazines | N-Phenyl-4-pyrazolo[1,5-b]pyri   |
| GW810576X   | 07:2H-3_pyrimidinyl_pyrazolopyridazines | N-Phenyl-4-pyrazolo[1,5-b]pyri   |
| GW843682X   | 05:Benzimidazole_N-thiophenes           | Design of potent thiophene inh   |
| GW852849X   | 05:Benzimidazole_N-thiophenes           | Design of potent thiophene inh   |
| SB-675259-M | 26:3-amino_pyrazolopyridazines          | 5-Aryl-pyrazolo[3,4-b]pyridazin  |
| SB-725317   | 20:3-amino_pyrazolopyridines            | 6-Heteroaryl-pyrazolo[3,4-b]py   |
| SB-732881   | 20:3-amino_pyrazolopyridines            | 6-Aryl-pyrazolo[3,4-b]pyridines  |
| SB-732881-H | 20:3-amino_pyrazolopyridines            | 6-Aryl-pyrazolo[3,4-b]pyridines  |
| SB-742864   | 19:Indazole-3-carboxamides              | 6-Heteroaryl-pyrazolo[3,4-b]py   |
| SB-814597   | 23:3-cyano_thiophenes                   | N-(3-Cyano-4,5,6,7-tetrahydrc    |

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Table S3. Comounds with z-scores. Each chemotype is labbeled with a different col

| Z-SCORE      | COMPOUND    | СНЕМОТУРЕ                                     |
|--------------|-------------|---|
| -3.169797691 | GW297361X   | 02:Oxindoles                                  |
| -3.140110193 | SB-734117   | 03:Furazan_benzimidazoles                     |
| -2.530824545 | SB-220025-R | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| -2.453957701 | GW795493X   | 18:Furopyrimidines_and_related                |
| -1.850126041 | GW814408X   | 09:4-hydrazinly_pyrazolopyrimidines           |
| -1.669248959 | GW683003X   | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| -1.615567914 | GW781673X   | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| -1.614579425 | GW829906X   | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| -1.585815461 | GSK1173862A | 10:2,4-dianilino_pyrrolopyrimidines           |
| -1.526063338 | GSK938890A  | 03:Furazan_benzimidazoles                     |
| -1.524934645 | GW786460X   | 21:2-pyridinyl_imidazoles_and_related         |
| -1.467016484 | GSK718429A  | 06:4-pyridyl_ortho-aryl_azoles                |
| -1.459262622 | GW856804X   | 18:Furopyrimidines_and_related                |
| -1.443746972 | GW770249A   | 18:Furopyrimidines_and_related                |
| -1.440607043 | GSK1326255A | 10:2,4-dianilino_pyrrolopyrimidines           |
| -1.369339564 | SKF-86055   | 06:4-pyridyl_ortho-aryl_azoles                |
| -1.356463631 | GW833373X   | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| -1.301473159 | GW770249X   | 18:Furopyrimidines_and_related                |
| -1.275839775 | GW775608X   | 11:Biaryl_amides                              |
| -1.26667381  | GW679410X   | 06:4-pyridyl_ortho-aryl_azoles                |
| -1.26461248  | GW695874X   | 06:4-pyridyl_ortho-aryl_azoles                |
| -1.225914986 | GSK994854A  | 10:2,4-dianilino_pyrrolopyrimidines           |
| -1.21511901  | GW683109X   | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| -1.207651294 | GW784307A   | 09:4-hydrazinly_pyrazolopyrimidines           |
| -1.184965891 | GW806742X   | 16:2,4-diamino_pyrimidines                    |
| -1.08262417  | GW711782X   | 06:4-pyridyl_ortho-aryl_azoles                |
| -1.068060494 | GW296115X   | 17:Maleimide                                  |
| -1.039715515 | GSK1220512A | 10:2,4-dianilino_pyrrolopyrimidines           |
| -1.029006859 | SB-732941   | 19:Indazole-3-carboxamides                    |
| -1.021493927 |             | 03:Furazan_benzimidazoles                     |
|              | GW572399X   | 08:2-amino_oxazoles                           |
| -0.994882477 | GW429374A   | 02:Oxindoles                                  |
| -0.977988237 | GSK625137A  | 24:Phenyl_carboxamides                        |
|              | GSK2186269A | 10:2,4-dianilino_pyrrolopyrimidines           |
|              | GW768505A   | 18:Furopyrimidines_and_related                |
|              | GW440139A   | 29:4-anilino_quinolines                       |
| -0.847844226 | SB-242721   | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| -0.794219247 |             | 19:Indazole-3-carboxamides                    |
| -0.773771855 |             | 03:Furazan_benzimidazoles                     |
|              | GW709042A   | 14:Benzimidazolyl_diaryl_ureas                |
| -0.754454018 | GW581744X   | 01:4-pyrimidinyl_ortho-aryl_azoles            |

| -0.752829798 GW769076X          | 11:Biaryl_amides                              |
|---------------------------------|---|
| -0.743648528 GW680975X          | 06:4-pyridyl_ortho-aryl_azoles                |
| -0.725887923 GW784752X          | 09:4-hydrazinly_pyrazolopyrimidines           |
| -0.715805908 SB- <b>711237</b>  | 20:3-amino_pyrazolopyridines                  |
| -0.705276988 GW827106X          | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| -0.66025709 GW804482X           | 05:Benzimidazole_N-thiophenes                 |
| -0.6584495 SB- <b>7</b> 43899   | 20:3-amino_pyrazolopyridines                  |
| -0.655339844 GW406108X          | 02:Oxindoles                                  |
| -0.654900974 GW708336X          | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| -0.63805317 GW569530A           | 04:4-anilino_quinazolines_and_related         |
| -0.621275354 GW827102X          | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| -0.581024151 GW693881A          | 13:Anilino_thienopyrimidines                  |
| -0.544290577 SB-735465          | 19:Indazole-3-carboxamides                    |
| -0.525284667 GSK312948A         | 05:Benzimidazole_N-thiophenes                 |
| -0.511565687 SB-686709-A        | 26:3-amino_pyrazolopyridazines                |
| -0.501225216 SB-630812          | 06:4-pyridyl_ortho-aryl_azoles                |
| -0.493156603 GW827396X          | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| -0.483248881 GW641155A          | 08:2-amino_oxazoles                           |
| -0.482833885 GW830263A          | 16:2,4-diamino_pyrimidines                    |
| -0.47912894 GW301888X           | 04:4-anilino_quinazolines_and_related         |
| -0.475340924 GW405841X          | 02:Oxindoles                                  |
| -0.472863321 SB-476429-A        | 06:4-pyridyl_ortho-aryl_azoles                |
| -0.469364336 GW827099X          | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| -0.459316596 GW621823A          | 04:4-anilino_quinazolines_and_related         |
| -0.45858838 GW682841X           | 06:4-pyridyl_ortho-aryl_azoles                |
| -0.450324767 GSK1023156A        | 05:Benzimidazole_N-thiophenes                 |
| -0.43775124 GW282974X           | 04:4-anilino_quinazolines_and_related         |
| -0.430397951 GW832467X          | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| -0.42058237 SB-400868-A         | 21:2-pyridinyl_imidazoles_and_related         |
| -0.411014998 SB-633825          | 06:4-pyridyl_ortho-aryl_azoles                |
| -0.39196538 GW572738X           | 23:3-cyano_thiophenes                         |
| -0.388028691 SB-744941          | 03:Furazan_benzimidazoles                     |
| -0.382452669 GW782912X          | 11:Biaryl_amides                              |
| -0.371165097 SB-347804          | 23:3-cyano_thiophenes                         |
| -0.366706546 GW569293E          | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| -0.358964461 SB- <b>742</b> 865 | 19:Indazole-3-carboxamides                    |
| -0.357765135 GW708893X          | 11:Biaryl_amides                              |
| -0.355798615 GW784684X          | 13:Anilino_thienopyrimidines                  |
| -0.349584468 GR269666A          | 04:4-anilino_quinazolines_and_related         |
| -0.338467482 GW632580X          | 31:3-benzyl_pyrimidines                       |
| -0.326166984 SB-431533          | 21:2-pyridinyl_imidazoles_and_related         |
| -0.324498832 GW819230X          | 18:Furopyrimidines_and_related                |
| -0.309045451 GW576609A          | 04:4-anilino_quinazolines_and_related         |
| -0.306755798 GW694234A          | 14:Benzimidazolyl_diaryl_ureas                |

| -0.306313009 GW282536X    | 02:Oxindoles                                  |
|---------------------------|---|
| -0.298703659 GW819077X    | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| -0.292348425 SB-614067-R  | 06:4-pyridyl_ortho-aryl_azoles                |
| -0.289660875 SB-737198    | 03:Furazan_benzimidazoles                     |
| -0.28761919 SB-254169     | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| -0.273680305 GW807982X    | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| -0.271673073 GW651576X    | 22:4-anilino_5-alkynyl_pyrimidines            |
| -0.258966214 GW416469X    | 02:Oxindoles                                  |
| -0.255477575 GW659893X    | 22:4-anilino_5-alkynyl_pyrimidines            |
| -0.254453414 GW785974X    | 11:Biaryl_amides                              |
| -0.243445401 SKF-86002-A2 | 06:4-pyridyl_ortho-aryl_azoles                |
| -0.234040406 SB-698596-AC | 26:3-amino_pyrazolopyridazines                |
| -0.223827153 SB-216385    | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| -0.221689675 SB-220455    | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| -0.216367548 GW811761X    | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| -0.214816612 GW642125X    | 18:Furopyrimidines_and_related                |
| -0.210306441 GW829115X    | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| -0.19767302 GW513184X     | 09:4-hydrazinly_pyrazolopyrimidines           |
| -0.195548743 SB-431542-A  | 21:2-pyridinyl_imidazoles_and_related         |
| -0.190878672 GW683768X    | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| -0.187090916 GSK300014A   | 13:Anilino_thienopyrimidines                  |
| -0.186679269 GW796921X    | 11:Biaryl amides                              |
| -0.184062033 GW275616X    | 02:Oxindoles                                  |
| -0.183580329 GW809885X    | 09:4-hydrazinly_pyrazolopyrimidines           |
| -0.177207824 GW561436X    | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| -0.171340775 GW607117X    | 11:Biaryl_amides                              |
| -0.170363151 GSK1392956A  | 10:2,4-dianilino_pyrrolopyrimidines           |
| -0.159820042 GW817394X    | 09:4-hydrazinly_pyrazolopyrimidines           |
| -0.155215129 GW574783B    | 04:4-anilino_quinazolines_and_related         |
| -0.151425963 GW817396X    | 09:4-hydrazinly_pyrazolopyrimidines           |
| -0.151329371 GW794726X    | 22:4-anilino_5-alkynyl_pyrimidines            |
| -0.144143449 GW828525X    | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| -0.139956334 GW782907X    | 11:Biaryl_amides                              |
| -0.118978477 GW622055X    | 08:2-amino_oxazoles                           |
| -0.118080311 GW734508X    | 11:Biaryl_amides                              |
| -0.113913232 GW407323A    | 02:Oxindoles                                  |
| -0.111006185 GSK1713088A  | 10:2,4-dianilino_pyrrolopyrimidines           |
| -0.110626749 SB-221466    | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| -0.108256361 GW305074X    | 02:Oxindoles                                  |
| -0.107876368 GW700494A    | 14:Benzimidazolyl_diaryl_ureas                |
| -0.10656013 GW785804X     | 21:2-pyridinyl_imidazoles_and_related         |
| -0.101559189 SB-678557-A  | 26:3-amino_pyrazolopyridazines                |
| -0.096659801 GW680908A    | 14:Benzimidazolyl_diaryl_ureas                |
| -0.093363938 GW795486X    | 18:Furopyrimidines_and_related                |

| -0.08619167 GW549034X     | 03:Furazan benzimidazoles                     |
|---------------------------|---|
| -0.084854293 GW583373A    | 04:4-anilino quinazolines and related         |
| -0.058910114 SB-242718    | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| -0.056006538 GSK1030059A  | 05:Benzimidazole_N-thiophenes                 |
| -0.055808935 GW829055X    | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| -0.054655478 GW282449A    | 04:4-anilino quinazolines and related         |
| -0.049924633 GW434756X    | 06:4-pyridyl_ortho-aryl_azoles                |
| -0.040894659 GW703087X    | 22:4-anilino_5-alkynyl_pyrimidines            |
| -0.038089205 GW300660X    | 02:Oxindoles                                  |
| -0.024796258 SB-285234-W  | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| -0.009674542 GW618013A    | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| -0.009181085 GW827105X    | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| -0.005620923 GW461104A    | 04:4-anilino_quinazolines_and_related         |
| -0.004208573 GW820759X    | 11:Biaryl_amides                              |
| -0.003643629 GSK238063A   | 13:Anilino_thienopyrimidines                  |
| 0.003870959 GW824645A     | 27:3-amino_pyrazoles                          |
| 0.00963596 GSK238583A     | 13:Anilino_thienopyrimidines                  |
| 0.011790396 GW693481X     | 21:2-pyridinyl_imidazoles_and_related         |
| 0.012723882 SB-390523     | 17:Maleimide                                  |
| 0.014117095 SB-657836-AAA | 23:3-cyano_thiophenes                         |
| 0.015615266 GW780159X     | 21:2-pyridinyl_imidazoles_and_related         |
| 0.026661965 GW785404X     | 03:Furazan_benzimidazoles                     |
| 0.027306967 SB-610251-B   | 06:4-pyridyl_ortho-aryl_azoles                |
| 0.028573384 GW445014X     | 12:3-vinyl_pyridines                          |
| 0.031804031 SB-242717     | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| 0.032816577 GW811168X     | 09:4-hydrazinly_pyrazolopyrimidines           |
| 0.033856669 GW680191X     | 04:4-anilino_quinazolines_and_related         |
| 0.046024276 SB-250715     | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| 0.046480444 GSK1030062A   | 05:Benzimidazole_N-thiophenes                 |
| 0.048958032 GW615311X     | 04:4-anilino_quinazolines_and_related         |
| 0.056876417 GW633459A     | 04:4-anilino_quinazolines_and_related         |
| 0.057016401 GW276655X     | 02:Oxindoles                                  |
| 0.058390532 GW807930X     | 22:4-anilino_5-alkynyl_pyrimidines            |
| 0.063406682 GSK605714A    | 24:Phenyl_carboxamides                        |
| 0.066222036 GSK182497A    | 13:Anilino_thienopyrimidines                  |
| 0.07078921 GW568377A      | 04:4-anilino_quinazolines_and_related         |
| 0.08089029 GW580509X      | 08:2-amino_oxazoles                           |
| 0.091498657 GW796920X     | 11:Biaryl_amides                              |
| 0.09462216 GW290597X      | 02:Oxindoles                                  |
| 0.100998808 GW459057A     | 12:3-vinyl_pyridines                          |
| 0.10173642 GW441806A      | 12:3-vinyl_pyridines                          |
| 0.104342308 GSK635416A    | 24:Phenyl_carboxamides                        |
| 0.107170069 SB-738482     | 19:Indazole-3-carboxamides                    |
| 0.113248866 GW813360X     | 09:4-hydrazinly_pyrazolopyrimidines           |

| 0.116372525 GSK1030061A  | 05:Benzimidazole_N-thiophenes                 |
|--------------------------|---|
| 0.116452925 GW794607X    | 09:4-hydrazinly_pyrazolopyrimidines           |
| 0.132284718 GW673715X    | 14:Benzimidazolyl_diaryl_ureas                |
| 0.134319539 SB-739245-AC | 20:3-amino_pyrazolopyridines                  |
| 0.137881548 SB-736302    | 03:Furazan_benzimidazoles                     |
| 0.137942567 GW445017X    | 12:3-vinyl_pyridines                          |
| 0.14045169 SB-284847-BT  | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| 0.146870804 GW410563A    | 04:4-anilino_quinazolines_and_related         |
| 0.149992537 GW607049C    | 14:Benzimidazolyl_diaryl_ureas                |
| 0.15348926 GW575533A     | 08:2-amino_oxazoles                           |
| 0.153636166 SB-361058    | 17:Maleimide                                  |
| 0.154774724 GSK1030058A  | 05:Benzimidazole_N-thiophenes                 |
| 0.155921837 GW300657X    | 02:Oxindoles                                  |
| 0.159360267 SB-245392    | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| 0.173660255 SB-739452    | 20:3-amino_pyrazolopyridines                  |
| 0.17588616 GSK192082A    | 13:Anilino_thienopyrimidines                  |
| 0.179075798 SB-741905    | 19:Indazole-3-carboxamides                    |
| 0.181324731 GSK561866B   | 03:Furazan_benzimidazoles                     |
| 0.182207285 SB-264865    | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| 0.183751685 GSK554170A   | 03:Furazan_benzimidazoles                     |
| 0.186973957 SB-759335-B  | 03:Furazan_benzimidazoles                     |
| 0.18906862 SB-278539     | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| 0.190801839 GW701032X    | 11:Biaryl_amides                              |
| 0.197750718 GW853606X    | 05:Benzimidazole_N-thiophenes                 |
| 0.198345425 GW572401X    | 08:2-amino_oxazoles                           |
| 0.200085932 GW643971X    | 09:4-hydrazinly_pyrazolopyrimidines           |
| 0.200699667 SB-333612    | 17:Maleimide                                  |
| 0.202586534 GW684626B    | 13:Anilino_thienopyrimidines                  |
| 0.211741808 GW549390X    | 08:2-amino_oxazoles                           |
| 0.213932603 GW828529X    | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| 0.2157848 SB-409513      | 17:Maleimide                                  |
| 0.215814392 GSK711701A   | 24:Phenyl_carboxamides                        |
| 0.22033482 GSK2213727A   | 10:2,4-dianilino_pyrrolopyrimidines           |
| 0.228366784 GW654652C    | 16:2,4-diamino_pyrimidines                    |
| 0.229040796 GW284372X    | 04:4-anilino_quinazolines_and_related         |
| 0.229127852 SB-226879    | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| 0.233980709 SB-242719    | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| 0.242543243 SB-251527    | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| 0.267721433 SB-253226    | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| 0.27686594 SB-239272     | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| 0.27792719 GW441756X     | 02:Oxindoles                                  |
| 0.279417194 SB-278538    | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| 0.284848288 GW810372X    | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| 0.285259829 GSK1000163A  | 03:Furazan_benzimidazoles                     |

| 0.285278237 GW458344A   | 12:3-vinyl_pyridines                  |
|-------------------------|---------------------------------------|
| 0.289825206 GW279320X   | 02:Oxindoles                          |
| 0.2934662 GSK943949A    | 03:Furazan benzimidazoles             |
| 0.294081916 GSK2219385A | 10:2,4-dianilino_pyrrolopyrimidines   |
| 0.29941706 GW829877X    | 09:4-hydrazinly_pyrazolopyrimidines   |
| 0.307163031 GW567808A   | 04:4-anilino_quinazolines_and_related |
| 0.312440941 GW743024X   | 11:Biaryl_amides                      |
| 0.312643751 GW458787A   | 04:4-anilino_quinazolines_and_related |
| 0.314241725 GW616030X   | 04:4-anilino_quinazolines_and_related |
| 0.315461136 SB-253228   | 01:4-pyrimidinyl_ortho-aryl_azoles    |
| 0.326431814 GSK969786A  | 13:Anilino_thienopyrimidines          |
| 0.330210554 GSK200398A  | 13:Anilino_thienopyrimidines          |
| 0.337938877 GW829874X   | 09:4-hydrazinly_pyrazolopyrimidines   |
| 0.347513054 SB-210313   | 06:4-pyridyl_ortho-aryl_azoles        |
| 0.34812041 GW693917A    | 14:Benzimidazolyl_diaryl_ureas        |
| 0.355596334 SB-750140   | 03:Furazan_benzimidazoles             |
| 0.369867946 SB-264866   | 01:4-pyrimidinyl_ortho-aryl_azoles    |
| 0.376997383 GW642138X   | 18:Furopyrimidines_and_related        |
| 0.379571001 GW445015X   | 12:3-vinyl_pyridines                  |
| 0.38067894 GSK2220400A  | 10:2,4-dianilino_pyrrolopyrimidines   |
| 0.383644722 SB-437013   | 06:4-pyridyl_ortho-aryl_azoles        |
| 0.388711016 SB-251505   | 01:4-pyrimidinyl_ortho-aryl_azoles    |
| 0.394813493 SB-738561   | 03:Furazan_benzimidazoles             |
| 0.404954289 GSK1751853A | 10:2,4-dianilino_pyrrolopyrimidines   |
| 0.406475676 GW576924A   | 04:4-anilino_quinazolines_and_related |
| 0.422216359 GW869810X   | 13:Anilino_thienopyrimidines          |
| 0.422940933 GSK204925A  | 05:Benzimidazole_N-thiophenes         |
| 0.431050604 GI261520A   | 04:4-anilino_quinazolines_and_related |
| 0.431611511 GW439255X   | 12:3-vinyl_pyridines                  |
| 0.433646341 GW568326X   | 01:4-pyrimidinyl_ortho-aryl_azoles    |
| 0.441302263 GSK1819799A | 10:2,4-dianilino_pyrrolopyrimidines   |
| 0.448744243 SB-358518   | 17:Maleimide                          |
| 0.450519081 GW806776X   | 11:Biaryl_amides                      |
| 0.451739079 GR105659X   | 02:Oxindoles                          |
| 0.454118697 GW280670X   | 02:Oxindoles                          |
| 0.455652866 GW659386A   | 14:Benzimidazolyl_diaryl_ureas        |
| 0.457513416 GW770220A   | 16:2,4-diamino_pyrimidines            |
| 0.457741232 GSK620503A  | 24:Phenyl_carboxamides                |
| 0.460149114 GW301784X   | 02:Oxindoles                          |
| 0.46544783 GW442130X    | 02:Oxindoles                          |
| 0.480689646 GW574782A   | 04:4-anilino_quinazolines_and_related |
| 0.490087229 GW853609X   | 05:Benzimidazole_N-thiophenes         |
| 0.49289653 GW831090X    | 27:3-amino_pyrazoles                  |
| 0.493546524 GW301789X   | 02:Oxindoles                          |

| 0.495011374 GW809897X  | 16:2,4-diamino_pyrimidines  |
|--|---|
| 0.497093129 GW284408X  | 02:Oxindoles  |
| 0.501601736 SB-682330-A  | 06:4-pyridyl_ortho-aryl_azoles  |
| 0.506057767 GSK586581A   | 24:Phenyl_carboxamides  |
| 0.512994518 GW580496A  | 04:4-anilino_quinazolines_and_related   |
| 0.521535037 GW837331X  | 28:Imidazotriazine  |
| 0.544034175 GW576484X  | 04:4-anilino_quinazolines_and_related   |
| 0.545707652 GW300653X  | 02:Oxindoles  |
| 0.561377631 GW427984X  | 12:3-vinyl_pyridines  |
| 0.564461504 GW701427A  | 14:Benzimidazolyl_diaryl_ureas  |
| 0.564646535 GW450241X  | 12:3-vinyl_pyridines  |
| 0.568347415 SB-590885-AAD  | 06:4-pyridyl_ortho-aryl_azoles  |
| 0.570907279 GW683134A  | 14:Benzimidazolyl_diaryl_ureas  |
| 0.571279027 SB-409514  | 17:Maleimide  |
| 0.597514284 SB-390527  | 17:Maleimide  |
| 0.598008002 GW578748X  | 09:4-hydrazinly_pyrazolopyrimidines   |
| 0.621812252 GW631581B  | 08:2-amino_oxazoles   |
| 0.645977877 GSK980961A   | 30:6-phenyl_isoquinolines   |
| 0.653197436 GSK248233A   | 03:Furazan_benzimidazoles   |
| 0.657401746 GW445012X  | 12:3-vinyl_pyridines  |
| 0.664527263 GW876790X  | 03:Furazan_benzimidazoles   |
| 0.693914556 GW830900A  | 16:2,4-diamino_pyrimidines  |
| 0.7001293 GSK259178A   | 13:Anilino_thienopyrimidines  |
| 0.700877947 GW406731X  | 12:3-vinyl_pyridines  |
| 0.708764162 SB-360741  | 17:Maleimide  |
| 0.709792668 SB-751399  | 03:Furazan_benzimidazoles   |
| 0.727202681 GSK619487A   | 03:Furazan benzimidazoles   |
| 0.7E0400400 CM/E77031A   | _   |
| 0.758488408 GW577921A  | 08:2-amino_oxazoles   |
| 0.763898119 GW566221A  | _   |
| 0.763898119 GW566221A<br>0.764984642 SKF-62604   | 08:2-amino_oxazoles   |
| 0.763898119 GW566221A  | 08:2-amino_oxazoles 04:4-anilino_quinazolines_and_related   |
| 0.763898119 GW566221A<br>0.764984642 SKF-62604<br>0.821603498 GSK2163632A<br>0.829822517 SB-772077-B   | 08:2-amino_oxazoles 04:4-anilino_quinazolines_and_related 17:Maleimide 10:2,4-dianilino_pyrrolopyrimidines 03:Furazan_benzimidazoles  |
| 0.763898119 GW566221A<br>0.764984642 SKF-62604<br>0.821603498 GSK2163632A<br>0.829822517 SB-772077-B<br>0.830140226 GW799251X  | 08:2-amino_oxazoles 04:4-anilino_quinazolines_and_related 17:Maleimide 10:2,4-dianilino_pyrrolopyrimidines 03:Furazan_benzimidazoles 22:4-anilino_5-alkynyl_pyrimidines   |
| 0.763898119 GW566221A<br>0.764984642 SKF-62604<br>0.821603498 GSK2163632A<br>0.829822517 SB-772077-B   | 08:2-amino_oxazoles 04:4-anilino_quinazolines_and_related 17:Maleimide 10:2,4-dianilino_pyrrolopyrimidines 03:Furazan_benzimidazoles 22:4-anilino_5-alkynyl_pyrimidines 08:2-amino_oxazoles   |
| 0.763898119 GW566221A<br>0.764984642 SKF-62604<br>0.821603498 GSK2163632A<br>0.829822517 SB-772077-B<br>0.830140226 GW799251X  | 08:2-amino_oxazoles 04:4-anilino_quinazolines_and_related 17:Maleimide 10:2,4-dianilino_pyrrolopyrimidines 03:Furazan_benzimidazoles 22:4-anilino_5-alkynyl_pyrimidines 08:2-amino_oxazoles 27:3-amino_pyrazoles  |
| 0.763898119 GW566221A<br>0.764984642 SKF-62604<br>0.821603498 GSK2163632A<br>0.829822517 SB-772077-B<br>0.830140226 GW799251X<br>0.84014397 GW678313X<br>0.846248342 GW831091X<br>0.850147644 SB-223133  | 08:2-amino_oxazoles 04:4-anilino_quinazolines_and_related 17:Maleimide 10:2,4-dianilino_pyrrolopyrimidines 03:Furazan_benzimidazoles 22:4-anilino_5-alkynyl_pyrimidines 08:2-amino_oxazoles 27:3-amino_pyrazoles 01:4-pyrimidinyl_ortho-aryl_azoles   |
| 0.763898119 GW566221A<br>0.764984642 SKF-62604<br>0.821603498 GSK2163632A<br>0.829822517 SB-772077-B<br>0.830140226 GW799251X<br>0.84014397 GW678313X<br>0.846248342 GW831091X<br>0.850147644 SB-223133<br>0.874085694 GW621970X   | 08:2-amino_oxazoles 04:4-anilino_quinazolines_and_related 17:Maleimide 10:2,4-dianilino_pyrrolopyrimidines 03:Furazan_benzimidazoles 22:4-anilino_5-alkynyl_pyrimidines 08:2-amino_oxazoles 27:3-amino_pyrazoles 01:4-pyrimidinyl_ortho-aryl_azoles 08:2-amino_oxazoles   |
| 0.763898119 GW566221A<br>0.764984642 SKF-62604<br>0.821603498 GSK2163632A<br>0.829822517 SB-772077-B<br>0.830140226 GW799251X<br>0.84014397 GW678313X<br>0.846248342 GW831091X<br>0.850147644 SB-223133<br>0.874085694 GW621970X<br>0.878031184 GW772405X  | 08:2-amino_oxazoles 04:4-anilino_quinazolines_and_related 17:Maleimide 10:2,4-dianilino_pyrrolopyrimidines 03:Furazan_benzimidazoles 22:4-anilino_5-alkynyl_pyrimidines 08:2-amino_oxazoles 27:3-amino_pyrazoles 01:4-pyrimidinyl_ortho-aryl_azoles 08:2-amino_oxazoles 22:4-anilino_5-alkynyl_pyrimidines  |
| 0.763898119 GW566221A<br>0.764984642 SKF-62604<br>0.821603498 GSK2163632A<br>0.829822517 SB-772077-B<br>0.830140226 GW799251X<br>0.84014397 GW678313X<br>0.846248342 GW831091X<br>0.850147644 SB-223133<br>0.874085694 GW621970X<br>0.878031184 GW772405X<br>0.908398348 GSK317354A                                      | 08:2-amino_oxazoles 04:4-anilino_quinazolines_and_related 17:Maleimide 10:2,4-dianilino_pyrrolopyrimidines 03:Furazan_benzimidazoles 22:4-anilino_5-alkynyl_pyrimidines 08:2-amino_oxazoles 27:3-amino_pyrazoles 01:4-pyrimidinyl_ortho-aryl_azoles 08:2-amino_oxazoles 22:4-anilino_5-alkynyl_pyrimidines 25:Indazole-5-carboxamides   |
| 0.763898119 GW566221A<br>0.764984642 SKF-62604<br>0.821603498 GSK2163632A<br>0.829822517 SB-772077-B<br>0.830140226 GW799251X<br>0.84014397 GW678313X<br>0.846248342 GW831091X<br>0.850147644 SB-223133<br>0.874085694 GW621970X<br>0.878031184 GW772405X<br>0.908398348 GSK317354A<br>0.918187008 GW830365A             | 08:2-amino_oxazoles 04:4-anilino_quinazolines_and_related 17:Maleimide 10:2,4-dianilino_pyrrolopyrimidines 03:Furazan_benzimidazoles 22:4-anilino_5-alkynyl_pyrimidines 08:2-amino_oxazoles 27:3-amino_pyrazoles 01:4-pyrimidinyl_ortho-aryl_azoles 08:2-amino_oxazoles 22:4-anilino_5-alkynyl_pyrimidines 22:4-anilino_5-alkynyl_pyrimidines 25:Indazole-5-carboxamides 16:2,4-diamino_pyrimidines   |
| 0.763898119 GW566221A 0.764984642 SKF-62604 0.821603498 GSK2163632A 0.829822517 SB-772077-B 0.830140226 GW799251X 0.84014397 GW678313X 0.846248342 GW831091X 0.850147644 SB-223133 0.874085694 GW621970X 0.878031184 GW772405X 0.908398348 GSK317354A 0.918187008 GW830365A 0.924920506 GSK180736A                       | 08:2-amino_oxazoles 04:4-anilino_quinazolines_and_related 17:Maleimide 10:2,4-dianilino_pyrrolopyrimidines 03:Furazan_benzimidazoles 22:4-anilino_5-alkynyl_pyrimidines 08:2-amino_oxazoles 27:3-amino_pyrazoles 01:4-pyrimidinyl_ortho-aryl_azoles 08:2-amino_oxazoles 22:4-anilino_5-alkynyl_pyrimidines 22:4-anilino_5-alkynyl_pyrimidines 25:Indazole-5-carboxamides 16:2,4-diamino_pyrimidines 25:Indazole-5-carboxamides              |
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| 0.763898119 GW566221A 0.764984642 SKF-62604 0.821603498 GSK2163632A 0.829822517 SB-772077-B 0.830140226 GW799251X 0.84014397 GW678313X 0.846248342 GW831091X 0.850147644 SB-223133 0.874085694 GW621970X 0.878031184 GW772405X 0.908398348 GSK317354A 0.918187008 GW830365A 0.924920506 GSK180736A                       | 08:2-amino_oxazoles 04:4-anilino_quinazolines_and_related 17:Maleimide 10:2,4-dianilino_pyrrolopyrimidines 03:Furazan_benzimidazoles 22:4-anilino_5-alkynyl_pyrimidines 08:2-amino_oxazoles 27:3-amino_pyrazoles 01:4-pyrimidinyl_ortho-aryl_azoles 08:2-amino_oxazoles 22:4-anilino_5-alkynyl_pyrimidines 22:4-anilino_5-alkynyl_pyrimidines 25:Indazole-5-carboxamides 16:2,4-diamino_pyrimidines 25:Indazole-5-carboxamides              |

| 0.968926534 GW759710A   | 16:2,4-diamino_pyrimidines          |
|-------------------------|-------------------------------------|
| 1.008477028 GSK319347A  | 05:Benzimidazole_N-thiophenes       |
| 1.045075353 GW352430A   | 02:Oxindoles                        |
| 1.048834639 SB-220025-A | 01:4-pyrimidinyl_ortho-aryl_azoles  |
| 1.060072211 SB-376719   | 17:Maleimide                        |
| 1.069107266 GW621431X   | 08:2-amino_oxazoles                 |
| 1.106251272 GW846105X   | 23:3-cyano_thiophenes               |
| 1.152990985 SB-236687   | 01:4-pyrimidinyl_ortho-aryl_azoles  |
| 1.171052746 GW335962X   | 02:Oxindoles                        |
| 1.213996207 GW771127A   | 16:2,4-diamino_pyrimidines          |
| 1.215675479 GSK1511931A | 10:2,4-dianilino_pyrrolopyrimidines |
| 1.240976912 GSK571989A  | 05:Benzimidazole_N-thiophenes       |
| 1.305668826 GW559768X   | 29:4-anilino_quinolines             |
| 1.323097818 GSK299115A  | 25:Indazole-5-carboxamides          |
| 1.333521309 GW432441X   | 12:3-vinyl_pyridines                |
| 1.357218661 GW275944X   | 02:Oxindoles                        |
| 1.372460629 GSK949675A  | 03:Furazan_benzimidazoles           |
| 1.535310142 GW861893X   | 28:Imidazotriazine                  |
| 1.554601222 GW632046X   | 08:2-amino_oxazoles                 |
| 1.577146883 GW627834A   | 08:2-amino_oxazoles                 |
| 1.616308645 GW782612X   | 16:2,4-diamino_pyrimidines          |
| 1.692568646 GSK466317A  | 25:Indazole-5-carboxamides          |
| 1.712367168 GW435821X   | 12:3-vinyl_pyridines                |
| 1.74269662 GW396574X    | 02:Oxindoles                        |
| 1.748711727 GSK614526A  | 03:Furazan_benzimidazoles           |
| 1.833188223 GSK270822A  | 25:Indazole-5-carboxamides          |
| 1.838355728 GSK466314A  | 25:Indazole-5-carboxamides          |
| 1.985612551 GW612286X   | 16:2,4-diamino_pyrimidines          |
| 2.072046415 GW627512B   | 08:2-amino_oxazoles                 |
| 2.200130929 GW874091X   | 28:Imidazotriazine                  |
| 2.416773858 GW575808A   | 16:2,4-diamino_pyrimidines          |

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Oxindole-Based Inhibitors of Cyclin-Dependent Kinase 2 (CDK2): Design, Synthesis, Enzymatic Activities, and (1H-Imidazo[4,5-c]pyridin-2-yl)-1,2,5-oxadiazol-3-ylamine derivatives: A novel class of potent MSK-1-inhibit Pyrimidinylimidazole inhibitors of p38: cyclic N-1 imidazole substituents enhance p38 kinase inhibition and Orally active 4-amino-5-diarylurea-furo[2,3-d]pyrimidine derivatives as anti-angiogenic agent inhibiting VE Synthesis and evaluation of novel heterocyclic inhibitors of GSK-3. Bioorganic & Medicinal Chemistry Lett Synthesis and evaluation of pyrazolo[1,5-b]pyridazines as selective cyclin dependent kinase inhibitors. Synthesis and evaluation of pyrazolo[1,5-b]pyridazines as selective cyclin dependent kinase inhibitors. Bio N-Phenyl-4-pyrazolo[1,5-b]pyridazin-3-ylpyrimidin-2-amines as Potent and Selective Inhibitors of Glycogen Discovery of 4,6-bis-anilino-1H-pyrrolo[2,3-d]pyrimidines: Potent inhibitors of the IGF-1R receptor tyrosine Aminofurazans as potent inhibitors of AKT kinase. Bioorganic & Medicinal Chemistry Letters (2009), 19(! Identification of 1,5-Naphthyridine Derivatives as a Novel Series of Potent and Selective TGF-.beta. Type I F Knowledge-based design of 7-azaindoles as selective B-Raf inhibitors. Bioorganic & Medicinal Chemistry Design and effective synthesis of novel templates, 3,7-diphenyl-4-amino-thieno and furo-[3,2-c]pyridines a Orally active 4-amino-5-diarylurea-furo[2,3-d]pyrimidine derivatives as anti-angiogenic agent inhibiting VE Discovery of 4,6-bis-anilino-1H-pyrrolo[2,3-d]pyrimidines: Potent inhibitors of the IGF-1R receptor tyrosine Identification of Novel Inhibitors of the Transforming Growth Factor .beta.1 (TGF-.beta.1) Type 1 Receptor N-Phenyl-4-pyrazolo[1,5-b]pyridazin-3-ylpyrimidin-2-amines as Potent and Selective Inhibitors of Glycogen Orally active 4-amino-5-diarylurea-furo[2,3-d]pyrimidine derivatives as anti-angiogenic agent inhibiting VE Biphenyl amide p38 kinase inhibitors 4: DFG-in and DFG-out binding modes. Bioorganic & Medicinal Che Discovery of 4-{4-[3-(pyridin-2-yl)-1H-pyrazol-4-yl]pyridin-2-yl}-N-(tetrahydro-2H-pyran-4-yl)benzamide (G Discovery of 4-{4-[3-(pyridin-2-yl)-1H-pyrazol-4-yl]pyridin-2-yl}-N-(tetrahydro-2H-pyran-4-yl)benzamide (G Discovery of 4,6-bis-anilino-1H-pyrrolo[2,3-d]pyrimidines: Potent inhibitors of the IGF-1R receptor tyrosine Synthesis and evaluation of pyrazolo[1,5-b]pyridazines as selective cyclin dependent kinase inhibitors. Bio Novel pyrazolopyrimidine derivatives as GSK-3 inhibitors. Bioorganic & Medicinal Chemistry Letters (200 Discovery of a novel and potent series of dianilinopyrimidineurea and urea isostere inhibitors of VEGFR2 ty Discovery of 4-{4-[3-(pyridin-2-yl)-1H-pyrazol-4-yl]pyridin-2-yl}-N-(tetrahydro-2H-pyran-4-yl)benzamide (G Uings I J; Spacey G D; Bonser R W Effects of the indolocarbazole 3744W on the tyrosine kinase activity of t Discovery of 4,6-bis-anilino-1H-pyrrolo[2,3-d]pyrimidines: Potent inhibitors of the IGF-1R receptor tyrosine 6-Heteroaryl-pyrazolo[3,4-b]pyridines: potent and selective inhibitors of glycogen synthase kinase-3 (GSK-3 (1H-Imidazo[4,5-c]pyridin-2-yl)-1,2,5-oxadiazol-3-ylamine derivatives: A novel class of potent MSK-1-inhibit Discovery and Evaluation of 2-Anilino-5-aryloxazoles as a Novel Class of VEGFR2 Kinase Inhibitors. Journa The discovery of potent cRaf1 kinase inhibitors. Bioorganic & Medicinal Chemistry Letters (2000), 10(3), The discovery of 2-amino-3,5-diarylbenzamide inhibitors of IKK-.alpha. and IKK-.beta. kinases. Bioorganic Optimization of a series of 4,6-bis-anilino-1H-pyrrolo[2,3-d]pyrimidine inhibitors of IGF-1R: elimination of a Orally active 4-amino-5-diarylurea-furo[2,3-d]pyrimidine derivatives as anti-angiogenic agent inhibiting VE The discovery of substituted 4-(3-hydroxyanilino)-quinolines as potent RET kinase inhibitors. ■ Bioorganic & Phenoxypyrimidine inhibitors of p38.alpha. kinase synthesis and statistical evaluation of the p38 inhibitory 6-Heteroaryl-pyrazolo[3,4-b]pyridines: potent and selective inhibitors of glycogen synthase kinase-3 (GSK-3 (1H-Imidazo[4,5-c]pyridin-2-yl)-1,2,5-oxadiazol-3-ylamine derivatives: Further optimisation as highly poten Discovery of Novel Benzimidazoles as Potent Inhibitors of TIE-2 and VEGFR-2 Tyrosine Kinase Receptors. . . Pyrazolo[1,5-a]pyridines as p38 Kinase Inhibitors. Organic Letters (2005), 7(21), 4753-4756.

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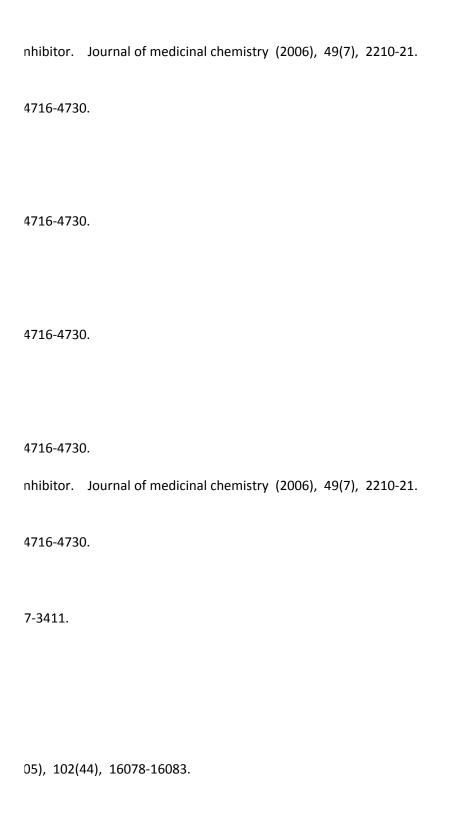
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| 4716-4730.                                 |                             |         |        |            |
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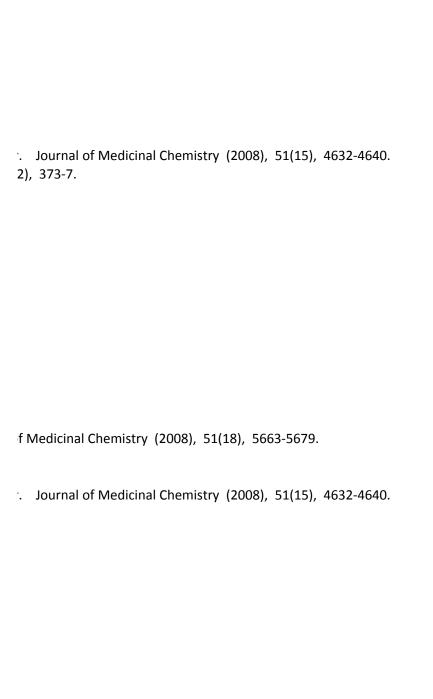


Table S4. Kinase selectivity profiles of compounds excluded due to toxicity.

|                          |                |  | 1        | 1           | 1             |          |          |        |
|--------------------------|----------------|--|----------|-------------|---------------|----------|----------|--------|
|                          |                |  |          |             |               |          |          |        |
|                          |                |  | ¥        | ΤK          | Τ             | ¥        | TK       | ¥      |
| The notency of ea        | ach compoi     | und at 1 micromolar concentration against a pa             |          |             | -             |          | -        | •      |
| The potency of ca        | acii compot    | ind at 1 micromolar concentration against a pe             |          |             |               |          |          |        |
|                          |                |  |          |             |               |          |          |        |
|                          |                |  |          |             |               |          |          |        |
|                          |                |  |          |             |               |          |          |        |
|                          |                |  |          |             |               |          |          |        |
|                          |                |  |          |             |               |          |          |        |
|                          | Caman          |  |          |             |               |          |          |        |
|                          | Comp<br>Conc.  |  | $\Sigma$ | $\varsigma$ | $\mathcal{S}$ | (3       | ~        | တ      |
| Compound                 |                | Chamatuna  | JAK1     | TYK2        | JAK2          | JAK3     | ER       | ш      |
| Compound                 | (µM)           | Chemotype  | 13       |             | 12            | <b>→</b> | 11       | Щ      |
| GW416981X                | 1              | 02:Oxindoles   | 17       | 4<br>34     | 22            | 68       |          | 0<br>7 |
| GW305178X                | 1              | 02:Oxindoles   | 51       | 64          | 24            | 64       | 23<br>28 | 17     |
| GW589933X<br>GSK1007102B | 1              | 02:Oxindoles   | 4        |             | 24<br>1       | 4        | 20<br>12 | 5      |
| GSK317315A               | 1              | 03:Furazan_benzimidazoles<br>05:Benzimidazole_N-thiophenes | 5        | 1<br>-2     | -1            | 6        | 4        | 0      |
| GSK978744A               | 1              | . 05:Benzimidazole_N-thiophenes                            | 0        | 2           | 0             | 20       | 5        | 0      |
| GW852849X                | 1              | . 05:Benzimidazole_N-thiophenes                            | 6        | 2           | 0             | 5        | 9        | 0      |
| GSK237701A               | 1              | . 05:Benzimidazole_N-thiophenes                            | 22       | 0           | 7             | 26       | 9<br>17  | 5      |
| GSK237701A<br>GSK326090A | 1              | . 05:Benzimidazole_N-thiophenes                            | -2       | 3           | 3             | 30       | 4        | -2     |
| GSK520090A<br>GSK579289A | 1              | . 05:Benzimidazole_N-thiophenes                            | 0        | -8          | 2             | 13       | 4        | 4      |
| GW843682X                | 1              | . 05:Benzimidazole_N-thiophenes                            | 3        | -7          | 2             | -3       | 11       | 1      |
| GSK237700A               | 1              | . 05:Benzimidazole_N-thiophenes                            | 3        | -5          | 1             | 2        | 8        | 3      |
| GSK317314A               | <del>- i</del> | 05:Benzimidazole_N-thiophenes                              | 2        | -6          | 1             | -5       | 4        | 2      |
| GW801372X                | <del></del> 1  | 07:2H-3_pyrimidinyl_pyrazolopyridazines                    | 23       | 32          | 36            | 60       | 59       | 53     |
| GW806290X                | 1              | 07:2H-3_pyrimidinyl_pyrazolopyridazines                    | 20       | 13          | 21            | 46       | 44       | 48     |
| GW810576X                | 1              | 07:2H-3_pyrimidinyl_pyrazolopyridazines                    | 13       | 30          | 29            | 44       | 48       | 50     |
| GW779439X                | 1              | 07:2H-3_pyrimidinyl_pyrazolopyridazines                    | 18       | 8           | 30            | 49       | 37       | 40     |
| GW778894X                | 1              | 07:2H-3_pyrimidinyl_pyrazolopyridazines                    | 15       | 11          | 22            | 36       | 49       | 34     |
| GW805758X                | 1              | 07:2H-3_pyrimidinyl_pyrazolopyridazines                    | 9        | 0           | 9             | 6        | 16       | 26     |
| GW780056X                | 1              | 07:2H-3_pyrimidinyl_pyrazolopyridazines                    | 5        | 12          | 21            | 14       | 15       | 28     |
| GSK2110236A              | 1              | 10:2,4-dianilino_pyrrolopyrimidines                        | 2        | -1          | 0             | -2       | 82       | 87     |
| GW694590A                | 1              | 14:Benzimidazolyl_diaryl_ureas                             | 10       | -1          | 1             | 0        | 3        | 1      |
| GW589961A                | 1              | 14:Benzimidazolyl_diaryl_ureas                             | 4        | -1          | 0             | 0        | 2        | 1      |
| SB-742864                | 1              | 19:Indazole-3-carboxamides                                 | 0        | -1          | 1             | 3        | 0        | 1      |
| SB-732881                | 1              | 20:3-amino_pyrazolopyridines                               | 20       | -1          | 1             | -2       | 5        | 2      |
| SB-732881-H              | 1              | 20:3-amino_pyrazolopyridines                               | 3        | -1          | 1             | 1        | 5        | 2      |
| SB-725317                | 1              | 20:3-amino_pyrazolopyridines                               | 55       | 18          | 28            | 62       | 7        | 4      |
| SB-814597                | 1              | 23:3-cyano_thiophenes                                      | 11       | -3          | 2             | 0        | 5        | 3      |
| GW620972X                | 1              | 23:3-cyano_thiophenes                                      | 4        | -4          | 2             | 2        | 2        | 2      |
| SB-675259-M              | 1              | 26:3-amino_pyrazolopyridazines                             | 3        | 2           | 0             | 0        | 1        | -2     |
| GSK953913A               | 1              | 30:6-phenyl_isoquinolines                                  | 10       | -1          | 3             | -1       | 8        | 5      |

| TK         | TK        | TK        | TK        | TK        | TK        | TK       | TK       | TK       | TK       | TK       | TK      | TK      | TK     | TK       | TK      | TK     | TK       | TK      | TK       |
|------------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|----------|---------|---------|--------|----------|---------|--------|----------|---------|----------|
| RABL-E255K | АВГ-Н396Р | ABL-M351T | ABL-Q252H | ABL-T315I | ABL-Y253F | ABL1     | ARG      | CSK      | BMX      | ВТК      | ХХТ     | TEC     | ІТК    | BRK      | SRMS    | PTK5   | ВLК      | ГСК     | НСК      |
| 22         | 27        | 33        | 29        | 43        | 29        | 36       | 20       | -2       | -2       | -1       | 5       | 7       | 5      | -3       | 3       | 2      | 29       | 14      | 39       |
| 39         | 48        | 49        | 52        | 47        | 50        | 50       | 34       | 9        | 25       | 13       | 27      | 38      | 19     | 32       | 4       | 4      | 60       | 30      | 73       |
| 38         | 47<br>0   | 51<br>-   | 56        | 62<br>4   | 49        | 45<br>6  | 31<br>7  | -5       | 14<br>-1 | 4        | 17<br>2 | 22<br>6 | 15     | 9        | 0<br>0  | 4      | 58<br>10 | 31<br>5 | 44<br>14 |
| -1<br>-2   | 2         | 5<br>2    | 0<br>2    | 4<br>1    | 1<br>-1   | 6<br>9   | 3        | -5<br>-2 | 2        | -1       | 3       | 0       | 1<br>1 | -3<br>-1 | 1       | 1<br>1 | 2        | 5<br>2  | 2        |
| 6          | 10        | 9         | 8         | 12        | 10        | 12       | 8        | -2<br>-1 | 0        | -1       | 3       | 0       | 1      | 0        | 2       | 2      | 3        | 6       | 6        |
| 22         | 31        | 32        | 28        | 27        | 33        | 32       | 21       | 5        | 4        | 1        | 13      | 8       | 3      | 8        | 8       | 2      | 23       | 19      | 27       |
| 28         | 49        | 48        | 43        | 58        | 47        | 47       | 37       | 10       | 10       | 6        | 16      | 19      | 9      | 4        | 6       | 2      | 23       | 28      | 52       |
| 1          | 1         | 3         | 2         | 14        | 1         | 3        | 4        | -1       | -2       | -1       | 1       | 0       | 1      | -4       | 3       | 1      | 14       | 34      | 33       |
| 8          | 10        | 5         | 11        | 8         | 13        | 7        | 2        | 5        | 7        | -3       | 19      | 2       | -2     | 3        | -3      | 4      | -1       | 4       | 13       |
| 13         | 23        | 19        | 22        | 14        | 19        | 18       | 13       | 9        | 8        | -2       | 3       | 7       | 0      | 5        | -1      | 3      | 18       | 13      | 29       |
| 21         | 34        | 30        | 28        | 13        | 26        | 28       | 11       | 6        | 7        | 1        | 6       | 8       | 3      | 8        | -1      | 4      | 51       | 20      | 43       |
| 2          | 9         | 6         | 5         | 4         | 4         | 1        | 0        | 4        | 5        | -3       | -1      | 1       | -3     | 5        | -2      | 5      | -2       | -2      | 5        |
| 46         | 59        | 63        | 69        | 40        | 60        | 63       | 70       | 12       | 31       | 11       | 31      | 43      | 12     | 18       | 7       | 5      | 25       | 19      | 33       |
| 20         | 34        | 41        | 41        | 36        | 36        | 39       | 44       | 15       | 14       | 4        | 18      | 20      | 6      | 14       | 2<br>-2 | 3      | 10       | 9       | 17       |
| 23         | 41        | 45        | 46        | 30        | 39        | 41       | 44       | 12       | 22       | 5        | 16      | 25      | 6      | 10       |         | 4      | 14       | 11      | 17       |
| 38         | 62        | 75        | 74        | 64        | 62        | 63       | 57       | 7        | 14       | 6        | 21      | 23      | 14     | 28       | 3       | 15     | 16       | 34      | 33       |
| 33         | 52        | 61        | 57        | 34        | 50        | 48       | 44       | 13       | 40       | 5<br>-1  | 24      | 39      | 21     | 24       | 15      | 16     | 26       | 18      | 36       |
| 4<br>23    | 9<br>38   | 10<br>37  | 12<br>43  | 11<br>47  | 10<br>39  | 13<br>30 | 11<br>22 | 6<br>8   | 6<br>11  | -1<br>-1 | 3<br>2  | 7<br>3  | 0      | 6<br>16  | 3<br>1  | 1<br>4 | 5<br>2   | 3<br>15 | 9<br>13  |
| -13        | 0         | 3         | 3         | 2         | 5<br>5    | 30<br>4  | 8        | -5       | 1        | 1        | -2      | 3<br>4  | 1      | 3        | 4       | 9      | 11       | 7       | 17       |
| 11         | 41        | -<br>48   | 52        | 31        | 19        | 11       | o<br>17  | -5<br>1  | 4        | 1        | 2       | 2       | 2      | 3        | -1      | 2      | 4        | 5       | 5        |
| 9          | 41        | 56        | 60        | 42        | 22        | 13       | 29       | 6        | 1        | 0        | 2<br>2  | 2       | 0      | 0        | -1      | 0      | 2        | 9       | 3        |
| 7          | 17        | 16        | 7         | 31        | 12        | 18       | 4        | -2       | 2        | 2        | 3       | 4       | 2      | -3       | -2      | 0      | 5        | 6       | 3        |
| 13         | 16        | 14        | 17        | 23        | 15        | 11       | 4        | 8        | 4        | -3       | -1      | 1       | -2     | 9        | -2      | 2      | 1        | 8       | 6        |
| 7          | 14        | 10        | 16        | 16        | 10        | 12       | 5        | 4        | 4        | 0        | 3       | 3       | 2      | 6        | -1      | 4      | 4        | 12      | 5        |
| 66         | 81        | 81        | 82        | 88        | 67        | 73       | 26       | 11       | 13       | 1        | 9       | 14      | 4      | 11       | 17      | 2      | 15       | 22      | 28       |
| 2          | 2         | -2        | 3         | 2         | 5         | 2        | 7        | 3        | 6        | 0        | 3       | 4       | 1      | 5        | -3      | 2      | 3        | 6       | 8        |
| 6          | 3         | 4         | 3         | 3         | 6         | 9        | 10       | 0        | 3        | 0        | 4       | 3       | 1      | 3        | -1      | 1      | 2        | 4       | 6        |
| 1          | 3         | 4         | 3         | 3         | 4         | 7        | 4        | -2       | 1        | 0        | 2       | 3       | 2      | -1       | 1       | 0      | 3        | 4       | 3        |
| 4          | 7         | 4         | 5         | 3         | 4         | 7        | 6        | 5        | 5        | 0        | 1       | 4       | 0      | 6        | 2       | 1      | 4        | 4       | 6        |

| 关        | TK       | TK      | TK       | TK       | TK       | TK       | TK       | TK       | ΤK               | ТК       | TK       |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|------------------|----------|----------|
| LYNA     | LYNB     | FGR      | FYN      | SRC      | YES      | EPHA2    | EPHA4    | ЕРНАЗ    | EPHB4    | ЕРНВЗ   | EPHB2    | PYK2     | ЗҮК      | ZAP70    | ГТК      | ALK      | ROS              | INSR     | IGF1R    |
| 24       | 20       | 32       | 72       | 39       | 22       | -3       | 2        | 0        | 2        | -5      | -5       | 16       | -3       | 1        | 4        | 5        | 15               |          | 2        |
| 44<br>47 | 40<br>41 | 42<br>36 | 30       | 71<br>62 | 48<br>41 | 10<br>7  | 31<br>34 | 12<br>13 | 13<br>12 | -4<br>2 | 29<br>26 | 43<br>67 | 22<br>4  | 19<br>12 | 10<br>17 | 16<br>32 | 35<br>37         | 28<br>30 | 14<br>27 |
| 22       | 17       | 36<br>29 | 26<br>25 | 21       | 24       | -5       | -5       | -1       | 12       | 3<br>-3 | -10      | 80       | 1        | 12       | 77       | 32<br>20 | 3 <i>1</i><br>11 | 2        | 0        |
| 2        | 2        | 2        | 5        | 0        | 1        | -4       | 0        |          | 2        | 1       | 2        | -10      | 1        | 3        | 2        | 2        | 3                | 1        | 0        |
| 4        | 3        | 4        | 5        | 5        | 4        | -5       | 0        | 3<br>2   | 0        | -1      | -2       | -1       | 1        | 0        | 4        | 5        | 12               | 0        | 0        |
| 26       | 21       | 19       | 24       | 21       | 18       | -1       | 7        | 1        | 3        | 2       | 7        | 6        | 2        | 0        | 4        | 6        | 29               | 7        | 3        |
| 28       | 24       | 17       | 9        | 41       | 18       | 7        | 27       | 14       | 7        | 6       | 22       | 32       | 0        | 8        | 11       | 19       | 37               | 5        | 3        |
| 19       | 16       | 13       | 13       | 21       | 13       | -3       | -5       | 0        | 1        | -1      | -1       | 6        | 0        | -1       | 3        | 21       | 7                | 1        | -2       |
| 7        | 6        | 5        | -4       | 19       | 3        | -4       | 10       | -1       | -1       | 0       | 8        | 12       | 2        | -1       | 5        | 5        | 15               | -2       | 0        |
| 21       | 17       | 15       | 9        | 21       | 8        | 3        | 23       | 7        | 2        | 1       | 17       | 19       | -8       | -1       | 4        | 5        | 21               | 2        | -3       |
| 29       | 22       | 32       | 27       | 30       | 33       | 1        | 14       | 6        | 4        | 4       | 14       | 14       | -5       | 2        | 5        | 6        | 29               | 3        | 2<br>-7  |
| 6        | 3        | 3        | -3       | 6        | 1        | -3       | 10       | 1        | -1       | 0       | 12       | 10       | -3       | 1        | 3        | 1        | 11               | 4        |          |
| 29       | 24       | 37       | 40       | 64       | 40       | 24       | 45       | 11       | 26       | -4<br>- | 40       | 96       | 61       | 14       | 34       | 45       | 87               | 70       | 65       |
| 13       | 11       | 15       | 9        | 32       | 18       | 6        | 28       | 5        | 12       | 7       | 29       | 85       | 13       | 9        | 22       | 32       | 83               | 59       | 57       |
| 17<br>33 | 11<br>27 | 19<br>48 | 16<br>32 | 42<br>63 | 20<br>50 | 12<br>-1 | 37<br>15 | 9        | 16<br>27 | -4<br>0 | 36<br>58 | 87<br>72 | 34       | 12<br>12 | 18       | 32<br>63 | 71<br>92         | 54<br>94 | 52<br>84 |
| 32       | 22       | 48<br>42 | 39       | 66       | 37       |          | 15<br>44 | 6<br>19  | 22       |         | 58<br>46 | 71       | 47<br>53 | 13       | 28<br>13 | 19       | 74               | 41       | 38       |
| 7        | 5        | 8        | 39<br>6  | 13       | 7        | 15<br>0  | 10       | 5        | 3        | 4<br>3  | 14       | 46       | 9        | 7        | 11       | 24       | 62               | 48       | 53       |
| 12       | 9        | 11       | 5        | 38       | 22       | -5       | 15       | 1        | 8        | 1       | 27       | 81       | 0        | -4       | 10       | 24       | 70               | 73       | 55       |
| 6        | 2        | 11       | 6        | 7        | 2        | -1       | 4        | 0        | 2        | 1       | 5        | 96       | 11       | 2        | 95       | 85       | 82               | 100      | 101      |
| 9        | 7        | 3        | 5        | 8        | 5        | 3        | 11       | 1        | 0        | 2       | 4        | 7        | 0        | 1        | 4        | 2        | 3                | 7        | 0        |
| 14       | 11       | 4        | 2        | 1        | 2        | 41       | 63       | 9        | 14       | 5       | 68       | 5        | 1        | 2        | 1        | 2        | 3                | 1        | 2        |
| 1        | 0        | 5        | 3        | 4        | 3        | 2        | -7       | -1       | 1        | -4      | -11      | 3        | 1        | 1        | 1        | 1        | 3                | 4        | -2       |
| 9        | 6        | 5        | 2        | 10       | 11       | -3       | 11       | -1       | -1       | 2       | 8        | 13       | 0        | 2        | 50       | 32       | 10               | 5        | -5       |
| 3        | 3        | 4        | 5        | 8        | 3        | -1       | 9        | 4        | 5        | 5       | 9        | 6        | 0        | 2        | 46       | 35       | 2                | 7        | 3        |
| 16       | 13       | 21       | 15       | 20       | 27       | 24       | 39       | 14       | 29       | 6       | 38       | 19       | 0        | 4        | 92       | 72       | 11               | 6        | 6        |
| 6        | 5        | 3        | 2        | 10       | 4        | 1        | 7        | 5        | 4        | 5       | 7        | 7        | 2        | 3        | 4        | 4        | 9                | 5        | 6        |
| 6        | 4        | 5        | 4        | 7        | 2        | -1       | 3        | 4        | 3        | 4       | 7        | 6        | 2        | 4        | 3        | 2        | 5                | 7        | 3        |
|          |          |          |          |          |          |          |          |          |          |         |          |          |          | 4        |          |          |                  |          |          |
| 1<br>8   | 2<br>5   | 3<br>5   | 5<br>4   | 3<br>7   | 7<br>3   | -3<br>1  | 2<br>10  | 0<br>4   | 1<br>3   | 2<br>3  | 4<br>13  | 2<br>13  | 1        | 2<br>-1  | 0<br>15  | 2<br>16  | 1<br>11          | 2<br>5   | -1<br>2  |

| 关        | TK      | TK       | TK       | TK       | TK       | TK       | TK       | TK       | TK       | TK       | TK       | ТК        | TK        | ТК      | TK       | TK       | TK      | ТК       | TK       |
|----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|---------|----------|----------|---------|----------|----------|
| IRR      | DDR2    | MUSK     | TRKA     | TRKB     | TRKC     | RON      | MET      | AXL      | MER      | TYRO3    | RET      | RET-V804L | RET-Y791F | FGFR1   | FGFR2    | FGFR3    | FGFR4   | FLT1     | KDR      |
| 0        | 2       | 51       | 30       | 40       | 48       | 17       | 13       | 13       | 4        | 17       | 78       | 82        | 70        | 5       | 17       | 11       | 2       | 39       | 71       |
| 2        | 6       | 49       | 50       | 72       | 78<br>05 | 13       | 19       | 37       | 18       | 42       | 79       | 83        | 78        | 41      | 70       | 71<br>65 | 7       | 60       | 89       |
| 6 -2     | 7<br>0  | 73<br>2  | 69<br>0  | 80<br>1  | 85<br>1  | 56<br>3  | 62<br>0  | 42<br>9  | 16<br>1  | 42<br>7  | 80<br>90 | 78<br>48  | 72<br>80  | 42<br>6 | 64<br>1  | 65<br>0  | 11<br>1 | 68<br>80 | 71<br>75 |
| 0        | -2      | 22       | 3        | 5        | 6        | 0        | 1        | 2        | 3        | 3        | 4        | 4         | 5         | -1      | 5        | 4        | 3       | 1        | 14       |
| -2       | 1       | 51       | 4        | 15       | 29       | 7        | -4       | 3        | 4        | 2        | 7        | 5         | 11        | 1       | 8        | 7        | 0       | -1       | 22       |
| 0        | 1       | 21       | 3        | 14       | 20       | 13       | 20       | 2        | 9        | 10       | 61       | 27        | 60        | 8       | 13       | 13       | 3       | 10       | 54       |
| 3        | 12      | 78       | 12       | 43       | 63       | 18       | 17       | 8        | 23       | 38       | 52       | 55        | 64        | 29      | 45       |          | 9       | 26       | 72       |
| -3       | -4      | 76       | 1        | 1        | 1        | 9        | 10       | 13       | 7        | 7        | 12       | 19        | 18        | 13      | 8        | 1        | -1      | 0        | 34       |
| 3        | 5       | 41       | 8        | 8        | 9        | 10       | 5        | -4       | 9        | 5        | 17       | 16        | 22        | 9       | 9        | 10       | -1      | 3        | 40       |
| 3        | 7       | 33       | 5        | 10       | 10       | 8        | 20       | -2       | 9        | 10       | 42       | 34        | 51        | 13      | 21       | 18       | -1      | 9        | 69       |
| 4        | 2       | 14       | 6        | 19       | 33       | 3        | 3        | -6       | 10       | 6        | 72       | 38        | 72        | 17      | 22       | 24       | 3       | 13       | 68       |
| 4        | 1       | 15       | 4        | 10       | 11       | 3        | 4        | -9       | 4        | 3        | 10       | 7         | 9         | 5       | 5        | 5        | -2      | 4        | 13       |
| 22       | 9       | 42       | 27       | 39       | 46       | 22       | 14       | 21       | 17       | 15       | 25       | 34        | 34        | 7       | 23       | 20       | 0       | 31       | 64       |
| 15       | 2       | 27       | 10       | 18       | 21       | 17       | 17       | 10       | 20       | 25       | 22       | 22        | 26        | 5       | 16       | 16       | 5       | 20       | 37       |
| 15<br>25 | 4<br>18 | 25<br>60 | 17<br>17 | 34<br>13 | 38<br>18 | 15<br>28 | 12<br>27 | 11<br>59 | 12<br>30 | 21<br>23 | 17<br>36 | 23<br>51  | 24<br>47  | 5<br>5  | 17<br>19 | 11<br>15 | 1<br>1  | 25<br>28 | 42<br>59 |
| 11       | 7       | 25       | 66       | 75       | 88       | 16       | 17       | 34       | 46       | 23<br>48 | 37       | 44        | 37        | 9       | 23       | 17       | 5       | 28       | 44       |
| 9        | 1       | 9        | 8        | 6        | 9        | 17       | 13       | 0        | 8        | 4        | 14       | 10        | 13        | 4       | 8        | 6        | 3       | 11       | 15       |
| 7        | 4       | 31       | 12       | 7        | 6        | 22       | 10       | 16       | 10       | 18       | 13       | 16        | 18        | 12      | 9        | 5        | -3      | 16       | 39       |
| 97       | 6       | 29       | -26      | 4        | 4        | 12       | 7        | 67       | 7        | -22      | 14       | 14        | 7         | -2      | 1        | 3        | 2       | 1        | 5        |
| 1        | 81      | 3        | 0        | 3        | 7        | 8        | 19       | -4       | 3        | 5        | 27       | 14        | 26        | 1       | 4        | 4        | -1      | 22       | 7        |
| -1       | 85      | 33       | 42       | 22       | 26       | 6        | 12       | 7        | 3        | 11       | 74       | 55        | 80        | 9       | 3        | 3        | 0       | 57       | 63       |
| -1       | 1       | 3        | 2        | 0        | 5        | -6       | 2        | 2        | 1        | 18       | 15       | -1        | 0         | 1       | 5        | 2        | -2      | -1       | 8        |
| 3        | 0       | 9        | 1        | 3        | 5        | 6        | 14       | -3       | 4        | 7        | 10       | 30        | 21        | -1      | 3        | 2        | -3      | 2        | 24       |
| 2        | 3       | 7        | 2        | 3        | 1        | 12       | 7        | -3       | 6        | 5        | 0        | 4         | 5         | 5       | 5        | 4        | 2       | 3        | 23       |
| 2        | 4       | 14       | 12       | 15       | 16       | 6        | 11       | -7       | 8        | 41       | 28       | 21        | 36        | 21      | 18       | 13       | 3       | 18       | 72       |
| 1        | 3       | 5        | 0        | 2        | 2        | 5        | 9        | -2       | 5        | 5        | 7        | 1         | 9         | 7       | 6        | 2        | 3       | 1        | 7        |
| 1        | 3       | 5        | 1        | 2        | 3        | 4        | 7        | -1       | 2        | 2        | 6        | 4         | 2         | 2       | 5        | 5        | 0       | 0        | 10       |
| -1       | -1      | -1       | -1       | 1        | 0        | -4       | 1        | 2<br>-1  | 2<br>2   | 2        | 2        | 2         | 4         | -1      | -1<br>4  | 2        | 0       | 0        | 3        |
| 3        | 2       | 0        | 0        | 2        | 5        | 9        | 6        | -1       |          | 4        | 9        | 5         | 9         | 3       | 4        | 3        | 5       | 3        | 8        |

| TK        | TK       | TK        | ¥         | ¥         | TK        | TK       | TK          | TK       | TK           | TK           | ΤK           | TK       | TK       | TK       | TK       | TK        | TK         | ΤK         | TK         |
|-----------|----------|-----------|-----------|-----------|-----------|----------|-------------|----------|--------------|--------------|--------------|----------|----------|----------|----------|-----------|------------|------------|------------|
| FLT4      | FMS      | КІТ       | KIT-D816V | KIT-T6701 | KIT-V560G | FLT3     | FLT-3-D835Y | PDGFRa   | PDGFRa-D842V | PDGFRa-T674I | PDGFRa-V561D | PDGFRß   | TIE2     | TNK2     | TNK1     | EGFR      | EGFR-L858R | EGFR-L861Q | EGFR-T790M |
| 81        | 46       | 25        | 35        | 7         | 6         | 56       | 87          | 84       | 93           | 39           | 88           | 86       | 8        | 0        | 5        | 5         | 0          | 0          | -2         |
| 86        | 79       | 91        | 24        | 69        | 37        | 73       | 80          | 82       | 92           | 74           | 92           | 83       | 11       | 8        | 57       | 7         | 3          | -1         | 0          |
| 102<br>94 | 85<br>2  | 94        | 31<br>34  | 67<br>10  | 32<br>4   | 85<br>0  | 87<br>2     | 91<br>71 | 95<br>89     | 90<br>87     | 95<br>79     | 90<br>80 | 20<br>11 | 10<br>-2 | 53<br>-3 | 1<br>7    | 5<br>4     | 1<br>-2    | 3<br>-1    |
| 15        | 6        | 3<br>15   | 3         | 4         | 3         | 8        | 2           | 35       | 25           | 9            | 26           | 37       | 5        | 3        | 20       | 3         | 1          | 1          | -1<br>  -1 |
| 23        | 9        | 5         | 2         | 1         | 2         | 5        | 8           | 62       | 41           | 51           | 50           | 55       | 15       | 2        | 18       | 2         | 1          | -2         | -1         |
| 55        | 24       | 16        | 0         | 8         | 3         | 4        | 9           | 90       | 82           | 70           | 83           | 86       | 27       | 7        | 63       | 9         | 13         | 5          | 0          |
| 81        | 42       | 27        | 15        | 32        | 14        | 25       | 40          | 100      | 88           | 97           | 87           | 95       | 42       | 28       | 71       | 3         | 15         | 5          | 6          |
| 19        | 8        | 0         | -2        | 0         | 5         | 11       | 21          | 69       | 66           | 46           | 66           | 81       | 32       | 46       | 30       | 10        | 43         | 9          | 2          |
| 14        | 16       | 5         | 6         | 6         | -3        | 14       | 12          | 69       | 54           | 58           | 65           | 71       | 12       | 1        | 18       | 4         | 4          | 4          | 1          |
| 53        | 29       | 20        | 8         | 10        | 3         | 10       | 15          | 84       | 80           | 68           | 85           | 84       | 21       | 7        | 59       | 4         | 13         | 4          | 2          |
| 68        | 10       | 12        | 6         | 6         | 3         | 3        | 4           | 74       | 77           | 50           | 81           | 68       | 24       | 6        | 80       | 7         | 27         | 8          | 2          |
| 4         | 14       | 23        | 8         | 7         | 0         | 5        | 3           | 23       | 12           | 10           | 17           | 19       | 7        | 1        | 24       | -2        | 6          | 2          | 2          |
| 45        | 94       | 97        | 9         | 98        | 93        | 91       | 77          | 62       | 61           | 92           | 75           | 84       | 40       | 36       | 64       | 6         | 17         | 3          | -1         |
| 22        | 86       | 106       | 10        | 93        | 83        | 76       | 36          | 51       | 41           | 75           | 62           | 67       | 21       | 22       | 64       | 4         | 11         | 6          | 2          |
| 30        | 91       | 99        | 4         | 95        | 78        | 79       | 52          | 49       | 47           | 81           | 64           | 70       | 21       | 22       | 66       | 6         | 9          | 4          | 1          |
| 26        | 92       | 108       | 6         | 97        | 91        | 86       | 64          | 79       | 80           | 103          | 85           | 91       | 31       | 9        | 64       | 6         | 12         | 4          | -1         |
| 22        | 79       | 100       | 10        | 89        | 72        | 68       | 53          | 53       | 49           | 60           | 60           | 65       | 19       | 12       | 52       | 6         | 18         | 8          | 6          |
| 10        | 72<br>69 | 95        | 4         | 81        | 64        | 61<br>48 | 23          | 44       | 43           | 64           | 55           | 41<br>72 | 4        | 2        | 49       | 7<br>-2   | 8<br>-1    | 6          | 2          |
| 0         | 83       | 93        | 4         | 81        | 61        | 48<br>1  | 17<br>5     | 56       | 51           | 35           | 64           | 34       | 12<br>11 | 3<br>13  | 32<br>80 | -2<br>-20 |            | 2<br>9     | 1<br>55    |
| -17<br>0  | 22       | -26<br>68 | 3<br>12   | 4<br>9    | 9<br>68   | 14       | 5<br>2      | 26<br>67 | 3<br>5       | 3<br>94      | 14<br>85     | 34<br>21 | 9        | 13       | 4        | -20<br>0  | 21<br>4    | 9<br>1     | 3          |
| 9         | 45       | 91        | -2        | 57        | 91        | 57       | 2           | 77       | 8            | 86           | 93           | 29       | 9<br>45  | 0        | 8        | 8         | 2          | -1         | -1         |
| 2         | 2        | -4        | 0         | -2        | 1         | 0        | -5          | 13       | 9            | -2           | 7            | 8        | 7        | -2       | -7       | 0         | -2         | -3         | -1         |
| -13       | 1        | 13        | 5         | 5         | 0         | 6        | 1           | 28       | 16           | 9            | 20           | 23       | 8        | 2        | 7        | -2        | 6          | 2          | 3          |
| 2         | 5        | 9         | 3         | 0         | -1        | 3        | 7           | 21       | 10           | 8            | 16           | 17       | 8        | 2        | 6        | 6         | 5          | 1          | 1          |
| 61        | 7        | 63        | 10        | 5         | 11        | 26       | 27          | 67       | 55           | 24           | 65           | 41       | 26       | 4        | 20       | 7         | 10         | 8          | 5          |
| 2         | 3        | 4         | 2         | 3         | -1        | 3        | -3          | 8        | 4            | 6            | 2            | 6        | 3        | 2        | -3       | 12        | 5          | 4          | 4          |
| -4        | 1        | 1         | 3         | 2         | 4         | 2        | -3          | 12       | 5            | 10           | 7            | 9        | 6        | 1        | -2       | 4         | 3          | 1          | 0          |
| 3         | 5        | 3         | 1         | 0         | 2         | 2        | -2          | 6        | 2            | 6            | 4            | 5        | 2        | 2        | 0        | 2         | 3          | -1         | -1         |
| 2         | 2        | 8         | 4         | 4         | 0         | 3        | 2           | 13       | 5            | 9            | 6            | 9        | 3        | 2        | 16       | 3         | 13         | 6          | 4          |

| ТK               | ТК       | ТК       | TKL     | TKL      | TKL          | TKL       | TKL      | TKL        | STE      | STE    | STE     | STE    | STE    |
|------------------|----------|----------|---------|----------|--------------|-----------|----------|------------|----------|----------|----------|----------|----------|----------|----------|--------|---------|--------|--------|
| EGFR-T790M-L858R | ERBB2    | ERBB4    | IRAK4   | LRRK2    | LRRK2-G2019S | CRAF      | BRAF     | BRAF-V599E | MAP4K2   | MST1     | MST2     | MST4     | MAP4K4   | MINK     | ГОК      | PAK1   | PAK3    | PAK2   | PAK5   |
| 4                | 0        | -2<br>10 | 1       | 23       | 64           | 0<br>-13  | 33       | 34         | 14       | 82       | 78<br>88 | 11       | 65<br>82 | 54<br>76 | 13       | 2      | 0       | 0      | 6      |
| 5<br>10          | -3<br>-1 | 10       | 3<br>4  | 22<br>79 | 63<br>60     | -13<br>-2 | 60<br>61 | 61<br>61   | 50<br>66 | 89<br>80 | 88<br>78 | 73<br>79 | 82<br>79 | 76<br>79 | 13<br>27 | 8<br>8 | 4<br>7  | 4<br>5 | 3<br>5 |
| -1               | -2       | 4        | -1      | 12       | 36           | 0         | 5        | 7          | 25       | 16       | -25      | 11       | 20       | 11       | 20       | 14     | ,<br>16 | 49     | 62     |
| 0                | -2       | 3        | 1       | 16       | 31           | 0         | -2       | -1         | 5        | 22       | 19       | 13       | 4        | 4        | 81       | 2      | 0       | 0      | -1     |
| 0                | 1        | -2       | 0       | 17       | 29           | 6         | -1       | 0          | 16       | 34       | 26       | 1        | 4        | 3        | 86       | 1      | 0       | 0      | -4     |
| 1                | 2        | 9        | 1       | 14       | 55           | 1         | 2        | 3          | 31       | 46       | 42       | -3       | 57       | 51       | 99       | 1      | 1       | -1     | 0      |
| 7                | 8        | 14       | 4       | 22       | 52           | 2         | 4        | 4          | 47       | 77       | 74       | -21      | 19       | 17       | 88       | 5      | 7       | 0      | 4      |
| 19               | 0        | 0        | 10      | 26       | 31           | 2         | -3       | 1          | 12       | 75       | 57       | -27      | 1        | 0        | 91       | 0      | 0       | -2     | -2     |
| 6                | 3        | 7        | 4       | 7        | 13           | 1         | 8        | 3          | 18       | 20       | 13       | -11      | 8        | 6        | 81       | 7      | 10      | 3      | 6      |
| 5                | 4        | 12       | 2       | 16       | 40           | -1        | 5        | 4          | 18       | 56       | 53       | -13      | 30       | 26       | 88       | 7      | 5       | 2      | 3      |
| 5                | 7        | 14       | 2       | 50       | 64           | 4         | 5        | 5          | 20       | 40       | 35       | -7       | 32       | 29       | 80       | 10     | 5       | 3      | 5      |
| 5                | 3        | 4        | 2       | 10       | 20           | 1         | 5        | 3          | 11       | 13       | 13       | -5       | 6        | 5        | 59       | 7      | 7       | 1      | 4      |
| 16               | -1       | 9        | 19      | 24       | 63           | 10        | 29       | 29         | 73       | 36       | 30       | 5        | 79       | 72       | 27       | 3      | 3       | 3      | 9      |
| 7                | 3        | 12       | 8       | 20       | 61           | -10       | 33       | 31         | 56       | 19       | 16       | -1       | 52       | 40       | 24       | 5      | 5       | 3      | 15     |
| 10               | 2        | 3        | 11      | 21       | 55           | -1        | 32       | 31         | 60       | 30       | 25       | 3        | 63       | 58       | 17       | 2      | 2       | 3      | 6      |
| 9                | 3        | 15       | 32      | 18       | 47           | 10        | 22       | 22         | 56       | 23       | 10       | 1        | 65       | 55       | 47       | 40     | 17      | 38     | 43     |
| 9                | 5<br>3   | 19<br>12 | 15<br>2 | 20       | 40           | 0<br>2    | 65<br>14 | 65<br>12   | 46<br>23 | 28<br>20 | 24<br>19 | 3<br>3   | 64<br>19 | 53<br>15 | 16<br>8  | 7<br>4 | 5       | 4      | 13     |
| 2 5              | 3<br>4   | 5        | 4       | 18<br>9  | 44<br>19     | 2         | 18       | 14         | 23<br>21 | 16       | 10       | ა<br>1   | 20       | 15<br>17 | 8<br>18  | 9      | 2<br>6  | 1<br>3 | 2<br>5 |
| 78               | 2        | 35       | -1      | 86       | 61           | -5        | 2        | 0          | 12       | 8        | -17      | 0        | 15       | 17       | 17       | 1      | 7       | 2      | -3     |
| 2                | 3        | 8        | 1       | 7        | 4            | 17        | 4        | 5          | 1        | 5        | 6        | 0        | 13       | 11       | 15       | 3      | 4       | 1      | -4     |
| 1                | 5        | 10       | 0       | 14       | 7            | 5         | 17       | 15         | 7        | 2        | 4        | 1        | 4        | 5        | 27       | 1      | 2       | 0      | 4      |
| -2               | -4       | 8        | 0       | 5        | 5            | 16        | 3        | 3          | 3        | 4        | 4        | 1        | 6        | 7        | 10       | 3      | 1       | 0      | -15    |
| 1                | 7        | 8        | 2       | 2        | 5            | 3         | 16       | 14         | 25       | 15       | 13       | 21       | 35       | 28       | 14       | 5      | 5       | 1      | -9     |
| -1               | 5        | 9        | 1       | 7        | 5            | -8        | 15       | 9          | 20       | 2        | 4        | 20       | 22       | 15       | 9        | 3      | 2       | -1     | 1      |
| 8                | 5        | 22       | 3       | 14       | 22           | 4         | 13       | 13         | 34       | 10       | 11       | 35       | 75       | 68       | 61       | 8      | 6       | 4      | 9      |
| 7                | 8        | 23       | 3       | 5        | 2            | -2        | 7        | 6          | 2        | 3        | 6        | 3        | 3        | 5        | 7        | 10     | 5       | 2      | -11    |
| 0                | 0        | 9        | 1       | 3        | 4            | 3         | 6        | 5          | 4        | 4        | 4        | 1        | 14       | 11       | 6        | 4      | 3       | 1      | -10    |
| 0                | 0        | 2        | 0       | 5        | 6            | -3        | 3        | 4          | 1        | 0        | 0        | 2        | 20       | 13       | 1        | 3      | 1       | 0      | -1     |
| 2                | 4        | 9        | 1       | 8        | 8            | 2         | 6        | 4          | 2        | 8        | 6        | 0        | 7        | 6        | 9        | 6      | 4       | 0      | -4     |

| STE     | STE      | CK1      | CK1      | CK1      | CK1      | Other    | AGC      | AGC    | AGC     | AGC          |
|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------|---------|--------------|
| PAK6    | MEK1     | СК1а     | CK1-g2   | CK1-g1   | CK1-g3   | PLK1     | GRK7     | GRK6     | PDK1     | MSK1     | MSK2     | RSK1     | RSK2     | RSK4     | RSK3     | P70S6K1  | AKT2   | AKT1    | АКТЗ         |
| 0       |          | 2        | 14       | 8        | 21       | 3        | 9        | 10       | 69       | 12       | 21       | 32       | 36       | 39       | 36       | 18       | 2      | 2       | 7            |
| 1<br>-2 | 61<br>68 | 21<br>22 | 7<br>19  | 8<br>18  | 13<br>26 | 3<br>7   | 19<br>22 | 16<br>36 | 68<br>78 | 15<br>23 | 61<br>64 | 31<br>53 | 39<br>57 | 55<br>77 | 62<br>80 | 12<br>26 | 2<br>3 | 1<br>0  | 2 3          |
| 68      | 6        | 4        | 4        | 7        | 10       | 0        | 114      | 2        | 28       | 51       | 61       | 72       | 69       | 23       | 70       | 58       | 96     | 96      | 95           |
| -9      | -1       | 2        | -1       | 0        | 1        | 99       | 5        | 1        | 2        | 0        | 2        | 4        | 7        | 10       | 3        | 0        | 0      | -1      | 0            |
| -6      | 0        | 3        | 0        |          | 1        | 94       | 3        | 4        | 1        | -1       | 2        | 3        | 6        | 13       | 3        | 2        | 0      | -1      | 0            |
| -8      | 2        | 1        | 2        | 2<br>2   | 3        | 96       | 9        | 6        | 6        | -5       | 3        | 4        | 8        | 17       | 8        | 1        | 1      | 0       | -1           |
| 12      | 4        | 3        | 3        | 4        | 3        | 97       | 11       | 15       | 15       | 4        | 14       | 19       | 16       | 26       | 11       | 5        | 2      | 2       |              |
| -1      | 0        | -1       | -3       | -1       | -4       | 94       | -2       | -1       | 5        | -1       | 3        | 33       | 52       | 55       | 31       | 6        | -1     | -1      | 2<br>2<br>-2 |
| -10     | 3        | 6        | 0        | 0        | -4       | 97       | 4        | 6        | 4        | 2        | 6        | 12       | 22       | 40       | 20       | 5        | -2     | -4      | -2           |
| 0       | 3        | 4        | 1        | 2        | 2        | 96       | 7        | 1        | 8        | 1        | 5        | 10       | 11       | 24       | 8        | 3        | -3     | -2      | -2           |
| -1      | 4        | 4        | 5        | 5        | 4        | 98       | 5        | 2        | 8        | 12       | 5        | 5        | 5<br>0   | 7        | 7        | 2        | 2      | 1       | 1<br>-1      |
| 2 -2    | 3        | 2        | 0        | -1       | -3       | 97       | 2        | 0        | 0        | 1        | 3        | 0        |          | 4        | 2        | 3        | -3     | -3      |              |
| 10      | 26<br>28 | 45<br>45 | 39<br>47 | 20<br>22 | 35<br>38 | 37<br>29 | 9        | 0        | 8        | 7<br>7   | 16<br>7  | 3<br>7   | 5<br>4   | 6<br>9   | 5        | 7<br>6   | 0      | 0       | 1            |
| 5       | 28<br>29 | 45<br>48 | 47<br>47 | 21       | 39       | 29       | 3<br>-2  | 4<br>0   | 6<br>6   | 4        | ,<br>11  | 4        | 2        | 9<br>4   | 5<br>2   | 4        | 1<br>1 | 1<br>0  | 2            |
| 7       | 18       | 92       | 77       | 61       | 80       | 6        | 9        | 4        | 8        | 22       | 7        | 19       | 24       | 28       | 20       | 8        | 2      | 0       | 3            |
| -5      | 63       | 70       | 41       | 28       | 43       | 9        | 22       | 8        | 6        | 9        | 8        | 7        | 4        | 9        | 4        | 4        | 2      | 1       | 5            |
| 3       | 10       | 13       | 25       | 9        | 14       | 5        | 3        | 3        | 4        | 1        | 3        | 4        | 2        | 2        | 3        | 2        | 1      | 1       | 2            |
| -3      | 13       | 54       | 14       | 6        | 11       | 8        | 4        | 1        | 3        | 3        | 7        | 3        | 2        | 10       | 4        | 8        | -2     | -2      | -1           |
| 5       | -6       | 4        | -8       | 6        | 10       | 97       | 60       | 83       | 1        | 0        | 0        | 35       | -1       | 16       | 8        | 1        | 1      | 0       | 5            |
| -3      | 2        | 3        | 2        | 2        | 2        | 4        | 15       | 11       | 2        | 2        | 4        | 4        | 4        | 0        | 2        | 3        | 1      | 0       | 1            |
| -1      | 1        | 1        | 2        | 1        | 1        | 1        | 17       | 0        | -1       | -1       | -1       | 0        | 1        | -1       | 1        | 1        | 1      | 0       | 2            |
| -5      | 1        | 2        | 1        | 3        | 1        | 2        | 2        | -1       | 1        | 1        | 3        | -1       | 1        | 2        | 2        | 2        | 0      | 0       | -3           |
| -28     | 5        | 6        | 3        | 4        | 3        | 3        | 17       | 20       | 1        | 4        | 6        | 6        | 7        | 13       | 8        | 3        | -2     | -3      | -1           |
| -5      | 2        | 3        | 2        | 2        | 0        | 3        | 0        | 6        | 3        | 1        | 1        | 1        | 2        | 10       | 6        | 0        | 1      | 0       | 3            |
| 9       | 8        | 6        | 7        | 6        | 5        | 6        | 17       | 33       | 15       | 14       | 6        | 33       | 45       | 60       | 71       | 7        | 3      | 2       | 13           |
| 5       | 5        | 7        | 5        | 5        | 5        | 11       | 5<br>7   | 5        | 3        | 5<br>7   | 3        | 2        | 2        | 3        | 3        | 4        | 3      | 1       | 1            |
| -5      | 3<br>3   | 2<br>-2  | 3        | 3<br>0   | 3<br>0   | 10<br>2  | -1       | 3<br>0   | 3<br>-1  | 7<br>-1  | 3<br>1   | 0<br>0   | 1        | 1<br>0   | 2<br>2   | 3<br>0   | 2<br>0 | 0<br>-1 | 2<br>5       |
| 5       | 4        | 3        | 3        | 3        | 5        | 2        | 6        | 8        | 2        | 1        | 3        | 3        | 1        | 0        | 2        | 2        | 2      | 1       | 2            |

| AGC      | AGC     | AGC     | AGC    | AGC     | AGC      | AGC     | AGC     | AGC     | AGC     | AGC      | AGC      | AGC     | AGC     | AGC      | AGC      | AGC     | AGC      | S-T-PK   | S-T-PK   |
|----------|---------|---------|--------|---------|----------|---------|---------|---------|---------|----------|----------|---------|---------|----------|----------|---------|----------|----------|----------|
| SGK1     | SGK3    | SGK2    | РКС-ŋ  | PKC-γ   | PKC-α    | РКС-β1  | РКС-β2  | ∞ PKC-θ | PKC-ı   | PRKG2    | PRKG1    | PRKX    | PKA     | ROCK1    | ROCK2    | MRCK-B  | MRCK-α   | AURORA-B | AURORA-C |
| 19<br>50 | 3<br>10 | 2<br>21 | 2 3    | 9<br>12 | 7<br>4   | 6<br>0  | 6<br>4  | 8<br>12 | 2<br>2  | 54<br>46 | 14<br>23 | 14<br>2 | 12<br>3 | 30<br>38 | 44<br>60 | 13<br>7 | 7<br>13  | 48<br>68 | 83<br>92 |
| 64       | 19      | 36      | 3<br>4 | 10      | 9        | 3       | 6       | 12      | 5       | 62       | 23<br>29 | 12      | ە<br>12 | 55       | 69       | ,<br>15 | 21       | 70       | 92       |
| 34       | 94      | 3       | 99     | 81      | 70       | 71      | 81      | 85      | 26      | 84       | 81       | 88      | 82      | 52       | 59       | 66      | 73       | 7        | 1        |
| 1        | 1       | 1       | 1      | 3       | 0        | 1       | 0       | -1      | 0       | 1        | 1        | 0       | 1       | 0        | 0        | 2       | 3        | 8        | 0        |
| 1        | 1       | 3       | 0      | 0       | 3        | 2       | 2       | 1       | 1       | 0        | 0        | -8      | -1      | 1        | 1        | 4       | 4        | 1        | -2       |
| 2        | 0       | 0       | 2      | 2       | 1        | 1       | 1       | 1       | 1       | 2        | 4        | -3      | -1      | 1        | 2        | 2       | 2        | 30       | 41       |
| 7        | 7       | 6       | 4      | 4       | 0        | 6       | 4       | 5       | 0       | 6        | 5        | -16     | 2       | 4        | 14       | 1       | 6        | 38       | 51       |
| 2        | -3      | 0       | 5      | 8       | 10       | 6       | 19      | 19      | 0       | 0        | 0        | -1      | 1       | 12       | 12       | 1       | 5        | 2        | 1 -1     |
| 1        | 2       | 1       | 5      | 5       | 1        | 4       | 8       | 10      | 3       | 4        | 4        | -2      | -4      | 5        | 5        | 3       | 6        | 2        |          |
| 1        | 2       | 1       | 6      | 1       | -2       | 1       | 2       | 3       | 3       | 1        | 1        | 3       | -1      | 4        | 8        | 0       | -3       | 27       | 36       |
| 5        | 7       | 4       | 3      | 2       | 4        | 5       | 5       | 3       | 5       | 5        | 5        | 4       | 4       | 3        | 5        | 3       | 1        | 39       | 49       |
| 2        | 6       | 2       | 4      | 2       | -1       | 3       | 3       | 3       | 4       | 4        | 3        | 2       | -1      | 3        | 3        | 3       | 1        | 1        | 2        |
| 4<br>7   | 2       | 0       | 4      | 17      | 64       | 9       | 17      | 7       | 1       | 24       | 57       | 0       | 11      | 8        | 15       | 3       | 3        | 71       | 94       |
|          | 0       | 2<br>7  | 8<br>8 | 10<br>9 | 20<br>43 | 4       | 5<br>7  | 6       | 2<br>-1 | 9<br>15  | 19<br>38 | 2       | 7<br>6  | 10<br>6  | 19<br>15 | 2<br>-2 | 1        | 65<br>72 | 97       |
| 10<br>18 | 2<br>0  | 3       | 62     | 9<br>37 | 77       | 6<br>26 | 7<br>36 | 5<br>57 | 2       | 61       | 30<br>25 | 0       | 14      | 26       | 39       | 22      | 22       | 56       | 97<br>88 |
| 10       | 7       | 5       | 32     | 31      | 73       | 20      | 30      | 14      | 2       | 26       | 50       | 3       | 13      | 5        | 12       | 1       | 3        | 64       | 97       |
| 3        | 1       | 3       | 4      | 5       | 7        | 2       | 1       | 3       | 0       | 3        | 4        | 1       | 2       | 11       | 25       | -1      | -1       | 43       | 75       |
| 8        | 3       |         | 7      | 8       | 18       | -6      | 6       | 5       | 2       | 14       | 15       | 4       | 4       | 9        | 14       | 5       | 4        | 64       | 85       |
| 2        | 0       | 5<br>3  | 3      | -10     | 10       | 2       | 2       | 10      | -1      | 2        | 0        | 1       | 4       | 26       | 23       | 0       | 0        | 3        | 3        |
| 5        | 5       | 4       | 6      | 5       | 1        | 2       | 1       | 3       | -1      | 2        | 3        | 4       | 2       | 6        | 17       | 0       | 3        | 25       | 43       |
| 0        | 1       | -2      | 0      | -1      | -1       | -5      | 1       | 0       | 0       | -1       | -1       | -1      | 1       | 6        | 6        | -1      | -1       | 23       | 35       |
| 1        | -1      | 0       | 3      | 2       | 2        | 0       | 1       | -1      | 1       | 2        | 2        | -1      | 1       | 0        | -1       | 1       | 2        | 4        | 16       |
| 10       | 6       | 7       | 9      | 8       | 7        | 14      | 31      | 8       | 8       | 8        | 8        | 7       | 1       | 2<br>-1  | 8        | 13      | 22       | 5        | -8       |
| 4        | 0       | 6       | 4      | 9       | 11       | 10      | 31      | 3       | 6       | 4        | 6        | 2       | 3       |          | 1        | 13      | 20       | 7        | 5        |
| 12       | 17      | 25      | 13     | 48      | 37       | 36      | 58      | 33      | 19      | 28       | 6        | 4       | 5       | 1        | 6        | 16      | 13       | 13       | 9        |
| 4        | 1       | 0       | 5      | 4       | 2        | 1       | 3       | 2       | 3       | 4        | 6        | 3       | 2       | 3        | 5        | 2       | -1       | 6        | 5        |
| 0        | 2       | 1       | 4<br>3 | 1       | 1<br>2   | -1<br>1 | 2<br>3  | 1<br>1  | 2<br>-1 | 4<br>7   | 3<br>0   | 2       | 2<br>0  | 2<br>1   | 1        | 2<br>1  | 0<br>-1  | 4        | 3        |
| 0        | 3       | 3<br>-1 | 3<br>4 | 2<br>4  | 2        | 3       | 3<br>2  | 3       | 0       | 3        | 5        | 2       | 1       | 4        | 1<br>6   | -2      | -1<br>-1 | 4<br>4   | -7       |

| S-T-PK   | CAMK     | CAMK    | CAMK     | CAMK    | CAMK     | CAMK     | CAMK     | CAMK    | CAMK     | CAMK     | CAMK     | CAMK     | CAMK    | CAMK     | CAMK     | CAMK     | CAMK     | CAMK     | CAMK                    |
|----------|----------|---------|----------|---------|----------|----------|----------|---------|----------|----------|----------|----------|---------|----------|----------|----------|----------|----------|-------------------------|
| AURORA-A | СНЕК2    | DCAMKL2 | CAMK4    | CAMK1D  | PHKG1    | PHKG2    | CAMK2D   | CAMK2A  | PRAK     | MAPKAPK2 | МАРКАРКЗ | MNK2     | MKNK1   | PRKD3    | PRKD1    | PRKD2    | MARK4    | MARK3    | <mark>12</mark> PAR-1Bα |
| 61<br>92 | 14<br>26 | 10<br>8 | 4<br>3   | 8<br>9  | 51<br>50 | 16<br>14 | 37<br>18 | 18<br>8 | 1<br>9   | -1<br>2  | -3<br>4  | 14<br>20 | 7<br>19 | 46<br>51 | 56<br>62 | 62<br>56 | 78<br>52 | 89<br>41 | 35                      |
| 90       | 33       | 7       | 6        | 9       | 66       | 32       | 31       | 14      | 9<br>14  | 4        | 6        | 18       | 39      | 76       | 78       | 79       | 59       | 61       | 46                      |
| 6        | 27       | 19      | 5        | 29      | 12       | -1       | 14       | 2       | -1       | -1       | 0        | 33       | 6       | 64       | 62       | 66       | 91       | 101      | 91                      |
| 6        | 0        | -2      | 3        | 2       | 3        | 0        | 5        | 1       | 0        | 0        | -1       | 4        | 3       | 0        | 1        | 2        | 5        | 2        | 5                       |
| 2        | -2       | -7      | 1        | 1       | 4        | -1       | 7        | 2       | -1       | -1       | -1       | 3        | 3       | 0        | 0        | 2        | 5        | 6        | 5                       |
| 24       | -1       | 5       | 0        | 4       | 6        | 1        | 3        | 0       | 1        | -4       | -3       | 8        | 7       | 0        | 1        | 2        | 9        | 10       | 6                       |
| 30       | -1       | 1       | -1       | 2       | 7        | 13       | 19       | 7       | 4        | -1       | 0        | 12       | 12      | 3        | 4        | 4        | 32       | 37       | 18                      |
| 0        | -1<br>-  | 0       | 2        | 4       | 7        | 11       | 50       | 14      | -1       | -1       | -2       | 4        | 2       | 17       | 12       | 22       | 50       | 58       | 43                      |
| 0        | 5<br>6   | -2      | 2<br>-1  | 4<br>-2 | 5        | 5<br>7   | 44       | 14      | 2<br>2   | 2        | 4        | 21       | 18      | 4        | 4<br>1   | 1<br>-2  | 6        | 8        | 10                      |
| 14<br>18 | ь<br>12  | -1<br>4 | -1<br>-4 | 2       | 9<br>8   | 7        | 7<br>5   | 0<br>-1 | 1        | 1<br>5   | 4<br>11  | 8<br>8   | 7       | 5        | 7        | 3        | 18<br>8  | 22<br>8  | 12<br>5                 |
| 0        | 2        | -3      | -3       | -2      | 8        | 5        | 4        | -1      | 1        | 2        | 2        | 3        | 3<br>2  | -1       | -1       | -3       | 2        | 3        | 0                       |
| 94       | 14       | -3      | 0        | 6       | 39       | 16       | 36       | 15      | 2        | 0        | 1        | 17       | 10      | 20       | 16       | 16       | 22       | 34       | 20                      |
| 85       | 9        | 2       |          | 6       | 28       | 17       | 36       | 15      |          | 2        | 4        | 26       | 14      | 51       | 45       | 38       | 16       | 25       | 14                      |
| 86       | 11       | 3       | 2<br>-2  | 5       | 28       | 19       | 35       | 14      | 3<br>3   | 0        | 3        | 23       | 11      | 41       | 38       | 37       | 17       | 30       | 21                      |
| 74       | 10       | 39      | 8        | 19      | 69       | 26       | 57       | 23      | 0        | 1        | 2        | 25       | 18      | 84       | 79       | 81       | 27       | 46       | 32                      |
| 74       | 11       | 1<br>-2 | 0        | 4       | 58       | 22       | 63       | 35      | 4        | 2        | 5        | 33       | 23      | 55       | 49       | 47       | 10       | 13       | 10                      |
| 66       | 3        | -2      | 3        | 2       | 8        | 4        | 8        | 4       | 1        | 0        | 6        | 15       | 12      | 16       | 16       | 16       | 3        | 4        | 1                       |
| 34       | 8        | 2       | 0        | 4       | 28       | 15       | 14       | 4       | 2<br>1   | 2        | 3        | 9        | 10      | 63       | 66       | 64       | 19       | 25       | 16                      |
| -11      | 12       | 0       | 12       | -16     | 41       | -1       | 13       | -5      |          | -2       | 6        | 0        | 0       | 51       | 20       | 40       | 1        | 5        | 5<br>-1                 |
| 4        | 3<br>1   | 5<br>1  | -3<br>-1 | -1<br>1 | 6<br>5   | 6<br>2   | 2<br>0   | 2<br>-2 | 3<br>-1  | 1<br>-1  | 2<br>5   | 4<br>0   | 7<br>4  | 3<br>3   | 3<br>3   | 2<br>2   | 1<br>0   | 3<br>0   |                         |
| 12       | 1        | 1       | 1        | 2       | 5<br>6   | 0        | 3        | 3       | -1<br>-1 | 0        | ว<br>1   | 3        | 4<br>14 | 2        | 2        | 4        | 3        | 7        | 0<br>3                  |
| 4        | 6        | 5       | -2       | 16      | 16       | 9        | 12       | 6       | 4        | 1        | 3        | 37       | 78      | 3        | 6        | 5        | 4        | 3        | 3                       |
| 4        | 4        | 10      | 1        | 16      | 3        | 3        | 11       | 5       | 1        | 1        | 2        | 35       | 85      | 3        | 6        | 3        | 1        | 3        | 0                       |
| 38       | 4        | 4       | 2        | 14      | 11       | 7        | 20       | 8       | 3        | 3        | 6        | 35       | 76      | 6        | 8        | 6        | 5        | 9        | 5                       |
| 5        | 3        | 1       | 1        | 0       | 1        | 3        | 3        | 3       | 1        | 1        | 4        | 0        | 3       | 6        | 6        | 4        | 2        | -4       | -1                      |
| 5        | 7        | 0       | 2<br>0   | 3       | 5        | 1        | 5        | 2<br>2  | 0        | 4        | 8        | 2<br>2   | 5<br>0  | 4        | 4        | 3        | 2        | 1        | 1                       |
| 0        | 0        |         |          | 1       | 0        | -2       | 1        |         | 0        | 0        | 0        |          |         | 0        | 1        | 1        | 1        | 1        | 2                       |
| 7        | 5        | 3       | 2        | 1       | 8        | 5        | 5        | 3       | 2        | 1        | 7        | 26       | 18      | 3        | 3        | 5        | 2        | 0        | -1                      |

| CAMK     | CAMK          | CAMK         | CAMK     | CAMK     | CAMK     | CAMK            | CAMK            | CAMK     | CAMK    | CAMK     | CAMK     | CAMK    | CAMK     | CAMK     | CAMK        | CAMK     | Other    | Other   | Other    |
|----------|---------------|--------------|----------|----------|----------|-----------------|-----------------|----------|---------|----------|----------|---------|----------|----------|-------------|----------|----------|---------|----------|
| WARK1    | SNF1LK2 (QIK) | SNF1LK (SIK) | ARK5     | BRSK1    | BRSK2    | AMPKA1 (A1B1G1) | AMPKA2 (A2B1G1) | MELK     | TSSK2   | TSSK1    | DAPK1    | PIM2    | PIM3     | PIM1     | CHEK1       | PASK     | NEK1     | NEK2    | NEK9     |
| 87       | 40            | 72           | 76       | 38       | 50       | 72              | 36              | 93       | 1       | 50       | 3        | 6       | 49       | 28       | 18          | 3        | 2        | 1       | 0        |
| 53<br>67 | 32<br>41      | 31           | 85       | 76       | 81       | 83              | 62<br>53        | 93       | 4       | 35       | 63<br>25 | 10      | 12       | 16       | 41          | -2<br>-1 | 6<br>7   | 5       | 41<br>32 |
| 93       | 15            | 34<br>8      | 70<br>70 | 60<br>38 | 64<br>59 | 68<br>88        | 68              | 94<br>90 | 4<br>15 | 33<br>96 | 25<br>2  | 5<br>21 | 13<br>39 | 10<br>35 | 48<br>31    | 16       | 7<br>17  | 8<br>33 | -1       |
| 6        | 5             | 16           | 44       | 26       | 36       | 3               | 3               | 3        | 1       | 2        | -2       | 1       | 8        | 8        | 0           | 1        | 43       | 12      | 84       |
| 6        | 11            | 7            | 39       | 56       | 68       | 6               | 2               | 3        | 1       | 1        | -5       | 2       | 22       | 19       | -2          | 2        | 55       | 20      | 91       |
| 9        | 27            | 28           | 59       | 41       | 49       | 11              | 4               | 9        | 2       | 5        | -15      | 5       | 9        | 3        | -4          | -1       | 15       | 37      | 55       |
| 32       | 25            | 53           | 72       | 65       | 69       | 24              | 9               | 24       | 4       | 8        | -10      | 1       | 12       | 4        | -1          | 5        | 68       | 49      | 92       |
| 51       | 30            | 66           | 77       | 61       | 75       | 33              | 14              | 22       | 0       | 22       | 4        | 2       | 48       | 68       | 0           | 3        | 61       | 69      | 102      |
| 8        | 14            | 19           | 67       | 58       | 71       | 22              | 9               | 27       | 2       | 10       | 2        | -4      | 45       | 65       | 8           | 0        | 38       | 39      | 97       |
| 22       | 35            | 57           | 66       | 41       | 52       | 19              | 6               | 10       | 3       | 6        | -4       | -3      | 6        | 3        | 3           | 0        | 19       | 17      | 59       |
| 9        | 12            | 18           | 22       | 44       | 59       | 11              | 5               | 10       | 1       | 6        | 9        | 1       | 4        | 2        | 11          | 1        | 19       | 10      | 38       |
| 3        | 0             | 11           | 16       | 18       | 28       | 2               | 1               | 6        | 1       | 3        | 1        | -3      | 4        | 3        | 0           | 1        | 25       | 10      | 84       |
| 32       | 39            | 32           | 85       | 5        | 7        | 17              | 17              | 44       | 0       | 17       | 1        | 7       | 11       | 6        | 8           | 0        | 19       | 12      | 70       |
| 24       | 18            | 20           | 83       | 7        | 9        | 12              | 13              | 52       | 4       | 18       | 4        | 4       | 16       | 8        | 7           | 1        | 20       | 15      | 50       |
| 28       | 14            | 21           | 71       | 7        | 10       | 11              | 8               | 52       | 1       | 13       | 0        | 2       | 18       | 7        | 4           | -2       | 18       | 6       | 26       |
| 35       | 47            | 39           | 92       | 7        | 9        | 27              | 35              | 77       | 3       | 45       | 2        | 52      | 71       | 68       | 11          | 19       | 11       | 12      | 45       |
| 15<br>4  | 12<br>11      | 15<br>9      | 73<br>49 | 7<br>3   | 12<br>4  | 10<br>4         | 13<br>4         | 56<br>26 | 3<br>1  | 11<br>6  | 4<br>-2  | 8<br>2  | 34<br>6  | 12<br>2  | 4<br>-2     | 0<br>-1  | 11<br>14 | 6<br>8  | 16<br>11 |
| 21       | 47            | 24           | 84       | 3        | 11       | 10              | 13              | 55       | 2       | 26       | 1        | -1      | 37       | 23       | 12          | 0        | 4        | 3       | 14       |
| 6        | 6             | 0            | 2        | 2        | 0        | 0               | 2               | 11       | 91      | 95       | 4        | 3       | 38       | 80       | -12         | 1        | 1        | 7       | -4       |
| 4        | 9             | 8            | -1       | 0        | 2        | 3               | 1               | 2        | 4       | 4        | 3        | 1       | 1        | 0        | 4           | 1        | 2        | 2       | 7        |
| 3        | 2             | 4            | 0        | 0        | 1        | 1               | 2               | -3       | 0       | 1        | 0        | -1      | -2       | -1       | -8          | 1        | 0        | 0       | 3        |
| 3        | 9             | 5            | 2        | 19       | 19       | 2               | 6               | 4        | -1      | 0        | 3        | 1       | -3       | 0        |             | 0        | 1        | 0       | 3        |
| 9        | 10            | 9            | 12       | 32       | 36       | 19              | 10              | 12       | 6       | 8        | 3        | 15      | 49       | 35       | 2<br>5<br>2 | 1        | 6        | 3       | 14       |
| 2        | 5             | 8            | 3        | 26       | 27       | 11              | 5               | 9        | 2       | 3        | 1        | 16      | 45       | 33       |             | 0        | 3        | 2       | 6        |
| 10       | 20            | 17           | 30       | 67       | 70       | 20              | 12              | 13       | 5       | 6        | 3        | 75      | 74       | 66       | 17          | 1        | 11       | 9       | 13       |
| 3        | 13            | 12           | 2        | 1        | 1        | 2               | 5               | 10       | 3       | 5        | 7        | 0       | -2       | 1        | 6           | -2       | 3        | 6       | 14       |
| 3        | 12            | 10           |          | 4        | 6        | 3               | 6               | 7        | 1       | 2        | 9        | 0       | -2       | 0        | 10          | -1       | 1        | 4       | 5        |
| 0        | -2            | 5            | 1        | -3       | 2        | 0               | 0               | 1        | 1       | 2        | -2       | 29      | 70       | 75       | -3          | 0        | 2        | -2      | 1        |
| 4        | 4             | 10           | 0        | 0        | 3        | 3               | 2               | 4        | 3       | 4        | 1        | -1      | 1        | 1        | 0           | 0        | 2        | 3       | 8        |

| Other | Other    | CAMK     | Other    | Other    | Other     | CMGC     | CMGC         | CMGC         | CMGC         | CMGC         | CMGC          | CMGC         | CMGC     | CMGC      | CMGC   | CMGC     | CMGC   | CMGC      | CMGC   |
|-------|----------|----------|----------|----------|-----------|----------|--------------|--------------|--------------|--------------|---------------|--------------|----------|-----------|--------|----------|--------|-----------|--------|
| NEK7  | o NEK6   | TBK1     | IKKE     | ІККВ     | ω<br>IKKA | CDK5/p35 | CDK1/cyclinB | CDK2/cyclinA | CDK2/cyclinE | CDK3/cyclinE | CDK6/cyclinD3 | CDK4/cyclinD | JNK2     | Ρ38α      | P38ß   | P385     | Ρ38γ   | MAPK1     | MAPK3  |
| 0     |          | 83       | 93       | 7        |           | 80       | 76           | 87           | 83           | 91           | 69            | 67           | 11       | -2        | 8      | 1        | -1     | 31        | 14     |
| 8     | 0        | 50       | 45       | 26       | 20        | 83       | 80           | 87           | 84           | 99           | 81            | 76           | 34       | 12        | 27     | 10       | 19     | 56        | 31     |
| 14    | 8<br>-1  | 66<br>68 | 65<br>99 | 19<br>-3 | 23<br>-2  | 75<br>5  | 70<br>5      | 109          | 77           | 98<br>0      | 78<br>3       | 71           | 36<br>1  | 19        | 27     | 9<br>0   | 6<br>0 | 47<br>5   | 28     |
| 1     | -1<br>-2 | -1       | 1        | 2        | -2<br>-6  | ວ<br>1   | 3            | 4<br>1       | 4<br>1       | -2           | ა<br>-1       | 5<br>3       | -1       | 1<br>0    | 3<br>0 | -1       | 0      | 5<br>0    | 1 0    |
| 0     | -2<br>-4 | 0        | -1       | -2       | -6<br>-3  | 2        | 3            | 3            | 4            | 2            | 0             | ა<br>1       | -1<br>-1 | 4         | 2      | -1<br>-3 | -1     | -2        | -2     |
| 1     | -4<br>-4 | 29       | 3        | 1        | 5         | 4        | 6            | 6            | 5            | -1           | 0             | 5            | 4        | 18        | 4      | 1        | 1      | 1         | 2      |
| 4     | 5        | 6        | 7        | 7        | 9         | 1        | 6            | 15           | 14           | 6            | -1            | 3            | 4        | 6         | 5      | 4        | 4      | 5         |        |
| -1    | 0        | -1       | -1       | -3       | -4        | 3        | 3            |              | 1            | 1            | -2            | 1            | -1       | 2         | 3      | -4       | -2     | 0         | 5      |
| 9     | 2        | 4        | 6        | 5        | 7         | -2       | -2           | 3<br>-1      | 2            | 0            | -3            | 0            |          | 11        | 4      | 6        | 6      | 7         | 5      |
| 5     | 2        | 14       | 6        | 6        | 4         | -1       | -1           | 2            | 5            | 0            | -2            | 1            | 5<br>2   | 10        | 8      | 5        | 6      | 6         | 4      |
| 5     | 1        | 27       | 8        | 5        | 9         | 2        | 3            | 6            | 7            | 0            | 2             | 4            | 8        | 7         | 2      | 4        | 4      | 7         | 3      |
| 6     | 0        | 4        | 4        | 5        | 6         | -2       | -2           | -1           | 2            | -3           | -2            | 0            | 0        | 6         | 4      | 4        | 4      | 5         | 3      |
| 4     | 2        | 33       | 28       | 24       | 71        | 90       | 91           | 110          | 90           | 74           | 76            | 78           | 48       | 10        | 11     | 12       | 5      | 20        | 9      |
| 6     | 5        | 24       | 21       | 30       | 61        | 90       | 93           | 86           | 94           | 86           | 85            | 86           | 54       | 13        | 10     | 16       | 6      | 24        | 12     |
| 4     | 1        | 23       | 18       | 27       | 54        | 78       | 79           | 105          | 79           | 91           | 80            | 77           | 46       | 9         | 8      | 15       | 9      | 26        | 13     |
| 1     | -1       | 57       | 49       | 18       | 39        | 92       | 95           | 93           | 95           | 91           | 79            | 93           | 37       | 14        | 9      | 21       | 8      | 14        | 5      |
| 4     | 6        | 22       | 28       | 20       | 31        | 87       | 89           | 121          | 87           | 100          | 84            | 84           | 44       | 15        | 14     | 47       | 26     | 59        | 36     |
| 5     | 3        | 14       | 8        | 23       | 64        | 51       | 64           | 79           | 65           | 39           | 19            | 39           | 27       | 28        | 5      | 5        | 4      | 9         | 3      |
| 9     | 0<br>0   | 12<br>25 | 18<br>9  | 18<br>-1 | 35<br>-1  | 67<br>0  | 68<br>7      | 82<br>6      | 70<br>-1     | 79<br>-1     | 62<br>6       | 70           | 31<br>8  | 13<br>-18 | 5<br>7 | 9<br>0   | 7<br>3 | 16<br>-30 | 8      |
| 2     | 1        |          | 9<br>6   | 5        | 9         | 1        |              | 0            | 3            | -1<br>-3     | -1            | 6<br>1       | 3        | 7         | 8      | 1        | ა<br>1 |           | 2<br>5 |
| 2     | -1       | 2<br>-2  | 1        | 5<br>1   | 6         | 0        | 2<br>0       | -1           | 0            | 0            | 4             | 0            | 6        | 12        | 9      | 0        | 0      | 2<br>2    | 0      |
| 1     | -1       | 4        | 3        | 4        | -6        | 3        | 3            | 7            | 5            | 4            | 6             | 3            | 0        | 6         | 10     | 1        | 1      | 1         | 1      |
| 10    | 7        | 6        | 10       | 13       | -2        | 13       | 44           | 63           | 39           | 56           | 77            | 77           | 17       | 13        | 18     | 14       | 7      | 12        | 7      |
| 9     | 1        | 2        | 5        | 4        | 2         | 11       | 43           | 63           | 33           | 53           | 74            | 78           | 14       | 11        | 9      | 12       | 7      | 4         | 1      |
| 46    | 15       | 23       | 12       | 10       | 12        | 55       | 64           | 108          | 73           | 78           | 75            | 74           | 19       | 16        | 39     | 33       | 17     | 10        | 6      |
| 5     | 1        | 4        | 6        | 5        | 12        | 1        | 1            | 0            | 6            | -3           | 2             | 3            | 12       | 8         | 5      | 5        | 3      | 6         | 4      |
| 4     | 1        | 7        | 2        | 2        | 6         | 6        | 5            | 1            | 7            | -1           | 5             | 7            | 25       | 5         | 4      | 4        | 3      | 4         | 0      |
| 2     | 0        | 1        | 1        | 1        | -1        | 69       | 73           | 91           | 75           | 81           | 65            | 56           | 1        | -1        | 2      | 5        | 3      | 3         | 1      |
| 5     | 3        | 3        | 2        | 22       | 9         | -1       | 0            | 2            | 2            | 0            | 3             | 1            | 6        | 8         | 7      | 4        | 2      | 3         | 3      |

|          |          |          |          |          |          |          |          |         |          |          |          |                |          |           |                    |          | _            |
|----------|----------|----------|----------|----------|----------|----------|----------|---------|----------|----------|----------|----------------|----------|-----------|--------------------|----------|--------------|
| O        | ပ        | S        | C        | C        | C        | C        | ပ        | S       | S        | C        | J.       | ٦              | 7        | -         | -                  | _        | 73           |
| CMGC     | CMGC    | CMGC     | CMGC     | Other    | Other          | Lipid    | Lipid     | Lipid              | Lipid    | Lipid        |
| ਹ        | Ö        | Ö        | S        | S        | Ö        | S        | ਹ        | Ö       | Ö        | Ö        | 0        | 0              | _        |           |                    |          |              |
|          |          |          |          |          |          |          |          |         |          |          |          |                |          |           |                    |          |              |
|          |          |          |          |          |          |          |          |         |          |          |          |                |          |           |                    |          |              |
|          |          |          |          |          |          |          |          |         |          |          |          |                |          |           |                    |          |              |
|          |          |          |          |          |          |          |          |         |          |          |          |                |          |           |                    |          |              |
|          |          |          |          |          |          |          |          |         |          |          |          |                |          |           |                    |          |              |
| 4        | m        | 1        | 1        |          |          |          |          | 1B      | 14       | 2        |          |                | α        | Ю         | β                  | _        | ~            |
| 3        | (3)      | λ        | SK       | (3       | 2        | X        | <u> </u> | X       | X        | K.       | <u> </u> |                | ÷        | ÷         | Ϋ́                 | ¥        | ᄎ            |
| GSK3A    | GSK3B    | SRPK1    | 1St      | сгкз     | CLK2     | нркі     | HIPK4    | DYRK1B  | DYRK1A   | ΥF       | CK2      | ΧШ             | р-3-К-α  | 13-       | 4                  | ļ        | ٦.           |
| 81       | 83       | -2       | MSSK1    | 11       | 72       | 17       | 17       | 54      | 57       | N DYRK2  | 47       | <del>7</del> 0 | -1       | ω PI3-K-δ | الا <mark>ن</mark> | SPHK1    | 0)           |
| 81       | 80       | -3       | -1       | 15       | 72       | 65       | 40       | 55      | 62       | 36       | 32       | 68             | 7        | 8         | 0                  | -1       | 0 SPHK2      |
| 71       | 72       | -2       | -1       | 17       | 80       | 47       | 22       | 58      | 63       | 46       | 46       | 76             | 13       | 27        | 5                  | 4        | 2            |
| 86       | 85       | -3       | -2       | 2        | 56       | 55       | 36       | 10      | 8        | 0        | 4        | 9              | 0        | 3         | 2                  | -1       | -1           |
| 5        | 5        | -1       | -1       | 1        | 5        | 2        | 3        | 2       | 2        | 1        | 5        | 6              | 5        | 12        | 2<br>-1            | 2        | -3           |
| 4        | 4        | -1       | 0        | 1        | 8        | 5        | 9        | 3       | 4        | 2        | 10       | 2              | 13       | 35        |                    | 0        | 0            |
| 9        | 10       | -1       | -1       | 4        | 3        | 5        | 45       | 0       | 4        | 3        | 10       | 1              | 20       | 18        | 2                  | -3       | -5           |
| 20       | 23       | 8        | 8        | 8        | 5        | 12       | 30       | 0       | 4        | 6        | 20       | 13             | 36       | 60        | -1                 | -4       | -2           |
| 3        | 3        | 1<br>-1  | 0<br>-1  | 4<br>-2  | 10<br>7  | 10       | 32<br>29 | 2<br>-3 | 2<br>1   | -3<br>7  | 7        | 1<br>9         | 13       | 56<br>63  | 0                  | 2<br>-1  | 0            |
| 5        | 7        | 0        | 6        | -2<br>-2 | 7        | 2<br>4   | 41       | -3      | 2        | 7<br>3   | 8<br>9   | 10             | 20<br>19 | 16        | 4<br>2             | -1<br>-5 | -2<br>-2     |
| 6        | 6        | -2       | 0        |          | 1        | 5        | 22       | 5       | 8        | 3        | 3        | 10             | 12       | 11        | -6                 | -3<br>-2 | 0            |
| 2        | 0        | -1       | 0        | 2<br>-2  | 0        | -2       | 6        | -2      | 1        | 3        | 3        | 9              | 5        | 17        | -3                 | -2       | 1            |
| 87       | 90       | 5        | -1       | 77       | 100      | 94       | 76       | 92      | 91       | 30       | 43       | 15             | 20       | 35        | 15                 | 1        | 0            |
| 92       | 91       | 3        | 2        | 52       | 98       | 93       | 80       | 89      | 88       | 51       | 48       | 35             | 30       | 26        | 9                  | -2       | 0            |
| 79       | 79       | 5        | 1        | 65       | 98       | 93       | 87       | 90      | 88       | 38       | 41       | 23             | 17       | 19        | 11                 | -2       | -1           |
| 95       | 93       | -3       | -3       | 42       | 100      | 94       | 91       | 93      | 93       | 45       | 47       | 32             | 30       | 84        | 2                  | -3       | 0            |
| 89       | 88       | 23       | 3        | 78       | 97       | 89       | 88       | 87      | 86       | 72       | 64       | 35             | 23       | 21        | 15                 | -1       | -6           |
| 76<br>66 | 75<br>62 | -1       | 1<br>0   | 14<br>5  | 65<br>92 | 88<br>72 | 51<br>59 | 82      | 81<br>88 | 14       | 43       | 22             | 5<br>11  | 7<br>40   | 3                  | 7        | 0            |
| 1        | 3        | -1<br>-1 | 0        | 3        | 92<br>72 | 6        | 5<br>5   | 69<br>5 | 1        | 26<br>-3 | 31<br>38 | 29<br>36       | -1       | 0         | 5<br>-3            | 8<br>0   | 3            |
| 8        | 8        | -1       | 1        | 2        | -1       |          | 2        |         | 3        | 1        | 8        | 5              | 0        | 0         | 2                  | 3        | 1            |
| 4        | 5        | -3       | 1        | -1       | -2       | 2<br>-1  | 15       | 2       | -3       | -2       | 2        | 3              | 4        | 4         | -4                 | -1       | 0            |
| 10       | 10       | -5       | -1       | 0        | 4        | 1        | -1       | 0       | 3        | 1        | -4       | 5              | -1       | 5         | 4                  | -1       | 0            |
| 83       | 82       | 1        | -1       | 4        | 3        | 20       | 6        | 67      | 43       | 34       | 13       | 19             | 2        | 2         | -1                 | 0        | 1            |
| 82       | 80       | -1       | -1       | 5        | 3        | 19       | 4        | 67      | 52       | 34       | 1        | 6              | 2        | 1         | 1                  | -1       | 0            |
| 86       | 83       | 0        | 8        | 8        | 6        | 58       | 10       | 72      | 55       | 53       | 6        | 15             | 6        | 7         | 3                  | 0        | -1           |
| 3        | 1        | -3       | -3       | 3        | 1        | 0        | 1        | 0       | 3        | 5        | -2       | 3              | 4        | 4         | -1                 | -2       | -1           |
| 7<br>82  | 7<br>82  | -3<br>0  | -3<br>-5 | 1        | 0<br>43  | 2<br>74  | 2<br>9   | 1<br>81 | 4<br>93  | 3<br>75  | 0<br>5   | 1              | 5<br>1   | 5         | -1<br>2            | -1<br>-2 | 0<br>-2      |
| 82<br>5  | 82       | 0        | -5<br>4  | 4        | 43<br>2  | 74<br>5  | 9<br>7   | 2       | 93<br>5  | 75<br>3  | 5<br>13  | 2<br>9         | 1<br>5   | 2         | 3<br>0             | -2<br>-2 | - <u>-</u> 2 |
|          |          |          |          |          |          |          |          |         |          |          | - 1      |                |          |           |                    |          |              |

articular kinase is represented in colour (less than 0% inhibition - blue, 0-50% inhibition - gre

|                          |             | Comp<br>Conc.      |  |
|--------------------------|-------------|--------------------|--|
| Compound ID              |             | (μM)               | Chemotype  |
| GW575808A                | 2.416773858 | <u>(μινι)</u><br>1 | . 16:2,4-diamino_pyrimidines                               |
| GW874091X                | 2.200130929 | 1                  | . 28:Imidazotriazine                                       |
| GW627512B                | 2.072046415 | 1                  | . 26.IIIIdazottiazine<br>08:2-amino_oxazoles               |
| GW627512B<br>GW612286X   | 1.985612551 | 1                  |  |
| GSK466314A               | 1.838355728 | 1                  | . 16:2,4-diamino_pyrimidines<br>25:Indazole-5-carboxamides |
| GSK270822A               | 1.833188223 | <u></u>            | 25:Indazole-5-carboxamides<br>25:Indazole-5-carboxamides   |
| GSK270622A<br>GSK614526A | _           | <u></u>            |  |
| GSK614526A<br>GW396574X  | 1.748711727 | <u></u>            | 03:Furazan_benzimidazoles                                  |
|                          | 1.74269662  |                    | 02:Oxindoles   |
| GW435821X                | 1.712367168 | 1                  | 12:3-vinyl_pyridines                                       |
| GSK466317A               | 1.692568646 | 1                  | 25:Indazole-5-carboxamides                                 |
| GW782612X                | 1.616308645 | 1                  | 16:2,4-diamino_pyrimidines                                 |
| GW627834A                | 1.577146883 | 1                  | 08:2-amino_oxazoles  |
| GW632046X                | 1.554601222 | 1                  | 08:2-amino_oxazoles  |
| GW861893X                | 1.535310142 | 1                  | 28:Imidazotriazine   |
| GSK949675A               | 1.372460629 | 1                  | 03:Furazan_benzimidazoles                                  |
| GW275944X                | 1.357218661 | 1                  | 02:Oxindoles   |
| GW432441X                | 1.333521309 | 11                 | 12:3-vinyl_pyridines                                       |
| GSK299115A               | 1.323097818 | 1                  | 25:Indazole-5-carboxamides                                 |
| GW559768X                | 1.305668826 | 1                  | . 29:4-anilino_quinolines                                  |
| GSK571989A               | 1.240976912 | 1                  | 05:Benzimidazole_N-thiophenes                              |
| GSK1511931A              | 1.215675479 | 1                  | 10:2,4-dianilino_pyrrolopyrimidines                        |
| GW771127A                | 1.213996207 | 1                  | 16:2,4-diamino_pyrimidines                                 |
| GW335962X                | 1.171052746 | 1                  | 02:Oxindoles   |
| SB-236687                | 1.152990985 | 1                  | 01:4-pyrimidinyl_ortho-aryl_azoles                         |
| GW846105X                | 1.106251272 | 1                  | 23:3-cyano_thiophenes                                      |
| GW621431X                | 1.069107266 | 1                  | 08:2-amino_oxazoles  |
| SB-376719                | 1.060072211 | 1                  | 17:Maleimide   |
| SB-220025-A              | 1.048834639 | 1                  | 01:4-pyrimidinyl_ortho-aryl_azoles                         |
| GW352430A                | 1.045075353 | 1                  | 02:Oxindoles   |
| GSK319347A               | 1.008477028 | 1                  | 05:Benzimidazole_N-thiophenes                              |
| GW759710A                | 0.968926534 | 1                  | 16:2,4-diamino_pyrimidines                                 |
| GSK269962B               | 0.953762771 | 1                  | 03:Furazan_benzimidazoles                                  |
| GW644007X                | 0.931214464 | 1                  | 09:4-hydrazinly_pyrazolopyrimidines                        |
| GW278681X                | 0.924931199 | 1                  | 02:Oxindoles   |
| GSK180736A               | 0.924920506 | 1                  | 25:Indazole-5-carboxamides                                 |
| GW830365A                | 0.918187008 | 1                  | 16:2,4-diamino_pyrimidines                                 |
| GSK317354A               | 0.908398348 | 1                  | 25:Indazole-5-carboxamides                                 |
| GW772405X                | 0.878031184 | 1                  | . 22:4-anilino_5-alkynyl_pyrimidines                       |
| GW621970X                | 0.874085694 | 1                  | 08:2-amino_oxazoles  |
| SB-223133                | 0.850147644 | 1                  | . 01:4-pyrimidinyl_ortho-aryl_azoles                       |
| GW831091X                | 0.846248342 | 1                  | 27:3-amino_pyrazoles                                       |
| GW678313X                | 0.84014397  | 1                  | 08:2-amino_oxazoles  |

| GW799251X     | 0.830140226 <u>1</u> | 22:4-anilino_5-alkynyl_pyrimidines    |
|---------------|----------------------|---------------------------------------|
| SB-772077-B   | 0.829822517 1        | 03:Furazan_benzimidazoles             |
| GSK2163632A   | 0.821603498 1        | 10:2,4-dianilino_pyrrolopyrimidines   |
| SKF-62604     | 0.764984642 1        | 17:Maleimide                          |
| GW566221A     | 0.763898119 1        | 04:4-anilino_quinazolines_and_related |
| GW577921A     | 0.758488408 1        | 08:2-amino_oxazoles                   |
| GSK619487A    | 0.727202681 1        | 03:Furazan_benzimidazoles             |
| SB-751399     | 0.709792668 1        | 03:Furazan_benzimidazoles             |
| SB-360741     | 0.708764162 1        | 17:Maleimide                          |
| GW406731X     | 0.700877947 1        | 12:3-vinyl_pyridines                  |
| GSK259178A    | 0.7001293 1          | 13:Anilino_thienopyrimidines          |
| GW830900A     | 0.693914556 1        | 16:2,4-diamino_pyrimidines            |
| GW876790X     | 0.664527263 1        | 03:Furazan_benzimidazoles             |
| GW445012X     | 0.657401746 1        | 12:3-vinyl_pyridines                  |
| GSK248233A    | 0.653197436 1        | 03:Furazan_benzimidazoles             |
| GSK980961A    | 0.645977877 1        | 30:6-phenyl_isoquinolines             |
| GW631581B     | 0.621812252 1        | 08:2-amino_oxazoles                   |
| GW578748X     | 0.598008002 1        | 09:4-hydrazinly_pyrazolopyrimidines   |
| SB-390527     | 0.597514284 1        | 17:Maleimide                          |
| SB-409514     | 0.571279027 1        | 17:Maleimide                          |
| GW683134A     | 0.570907279 1        | 14:Benzimidazolyl_diaryl_ureas        |
| SB-590885-AAD | 0.568347415 1        | 06:4-pyridyl_ortho-aryl_azoles        |
| GW450241X     | 0.564646535 1        | 12:3-vinyl_pyridines                  |
| GW701427A     | 0.564461504 1        | 14:Benzimidazolyl_diaryl_ureas        |
| GW427984X     | 0.561377631 1        | 12:3-vinyl_pyridines                  |
| GW300653X     | 0.545707652 1        | 02:Oxindoles                          |
| GW576484X     | 0.544034175 1        | 04:4-anilino_quinazolines_and_related |
| GW837331X     | 0.521535037 1        | 28:Imidazotriazine                    |
| GW580496A     | 0.512994518 1        | 04:4-anilino_quinazolines_and_related |
| GSK586581A    | 0.506057767 1        | 24:Phenyl_carboxamides                |
| SB-682330-A   | 0.501601736 1        | 06:4-pyridyl_ortho-aryl_azoles        |
| GW284408X     | 0.497093129 1        | 02:Oxindoles                          |
| GW809897X     | 0.495011374 1        | 16:2,4-diamino_pyrimidines            |
| GW301789X     | 0.493546524 1        | 02:Oxindoles                          |
| GW831090X     | 0.49289653 1         | 27:3-amino_pyrazoles                  |
| GW853609X     | 0.490087229 1        | 05:Benzimidazole_N-thiophenes         |
| GW574782A     | 0.480689646 1        | 04:4-anilino_quinazolines_and_related |
| GW442130X     | 0.46544783 1         | 02:Oxindoles                          |
| GW301784X     | 0.460149114 1        | 02:Oxindoles                          |
| GSK620503A    | 0.457741232 1        | 24:Phenyl_carboxamides                |
| GW770220A     | 0.457513416 1        | 16:2,4-diamino_pyrimidines            |
| GW659386A     | 0.455652866 1        | 14:Benzimidazolyl_diaryl_ureas        |
| GW280670X     | 0.454118697 1        | 02:Oxindoles                          |
| GR105659X     | 0.451739079 1        | 02:Oxindoles                          |
| GW806776X     | 0.450519081 1        | 11:Biaryl_amides                      |
| SB-358518     | 0.448744243 1        | 17:Maleimide                          |
| GSK1819799A   | 0.441302263 1        | 10:2,4-dianilino_pyrrolopyrimidines   |
| GW568326X     | 0.433646341 1        | 01:4-pyrimidinyl_ortho-aryl_azoles    |
| GW439255X     | 0.431611511 1        | 12:3-vinyl_pyridines                  |
| GI261520A     | 0.431050604 1        | 04:4-anilino_quinazolines_and_related |
| GSK204925A    | 0.422940933 1        | 05:Benzimidazole_N-thiophenes         |
| GW869810X     | 0.422216359 1        | 13:Anilino_thienopyrimidines          |
| GW576924A     | 0.406475676 1        | 04:4-anilino_quinazolines_and_related |
| GSK1751853A   | 0.404954289 1        | 10:2,4-dianilino_pyrrolopyrimidines   |
| SB-738561     | 0.394813493 1        | 03:Furazan_benzimidazoles             |
| SB-251505     | 0.388711016 1        | 01:4-pyrimidinyl_ortho-aryl_azoles    |
| SB-437013     | 0.383644722 1        | 06:4-pyridyl_ortho-aryl_azoles        |
| GSK2220400A   | 0.38067894 1         | 10:2,4-dianilino_pyrrolopyrimidines   |
|               |                      |                                       |

| GW445015X    | 0.379571001 | 1 | 12:3-vinyl_pyridines                          |
|--------------|-------------|---|---|
| GW642138X    | 0.376997383 | 1 | 18:Furopyrimidines_and_related                |
| SB-264866    | 0.369867946 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| SB-750140    | 0.355596334 | 1 | 03:Furazan_benzimidazoles                     |
| GW693917A    | 0.34812041  | 1 | 14:Benzimidazolyl_diaryl_ureas                |
| SB-210313    | 0.347513054 | 1 | 06:4-pyridyl_ortho-aryl_azoles                |
| GW829874X    | 0.337938877 | 1 | 09:4-hydrazinly_pyrazolopyrimidines           |
| GSK200398A   | 0.330210554 | 1 | 13:Anilino_thienopyrimidines                  |
| GSK969786A   | 0.326431814 | 1 | 13:Anilino_thienopyrimidines                  |
| SB-253228    | 0.315461136 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| GW616030X    | 0.314241725 | 1 | 04:4-anilino_quinazolines_and_related         |
| GW458787A    | 0.312643751 | 1 | 04:4-anilino_quinazolines_and_related         |
| GW743024X    | 0.312440941 | 1 | 11:Biaryl_amides                              |
| GW567808A    | 0.307163031 | 1 | 04:4-anilino_quinazolines_and_related         |
| GW829877X    | 0.29941706  | 1 | 09:4-hydrazinly_pyrazolopyrimidines           |
| GSK2219385A  | 0.294081916 | 1 | 10:2,4-dianilino_pyrrolopyrimidines           |
| GSK943949A   | 0.2934662   | 1 | 03:Furazan_benzimidazoles                     |
| GW279320X    | 0.289825206 | 1 | 02:Oxindoles                                  |
| GW458344A    | 0.285278237 | 1 | 12:3-vinyl_pyridines                          |
| GSK1000163A  | 0.285259829 | 1 | 03:Furazan_benzimidazoles                     |
| GW810372X    | 0.284848288 | 1 | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| SB-278538    | 0.279417194 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| GW441756X    | 0.27792719  | 1 | 02:Oxindoles                                  |
| SB-239272    | 0.27686594  | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| SB-253226    | 0.267721433 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| SB-251527    | 0.242543243 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| SB-242719    | 0.233980709 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| SB-226879    | 0.229127852 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| GW284372X    | 0.229040796 | 1 | 04:4-anilino_quinazolines_and_related         |
| GW654652C    | 0.228366784 | 1 | 16:2,4-diamino_pyrimidines                    |
| GSK2213727A  | 0.22033482  | 1 | 10:2,4-dianilino_pyrrolopyrimidines           |
| GSK711701A   | 0.215814392 | 1 | 24:Phenyl_carboxamides                        |
| SB-409513    | 0.2157848   | 1 | 17:Maleimide                                  |
| GW828529X    | 0.213932603 | 1 | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| GW549390X    | 0.211741808 | 1 | 08:2-amino_oxazoles                           |
| GW684626B    | 0.202586534 | 1 | 13:Anilino_thienopyrimidines                  |
| SB-333612    | 0.200699667 | 1 | 17:Maleimide                                  |
| GW643971X    | 0.200085932 | 1 | 09:4-hydrazinly_pyrazolopyrimidines           |
| GW572401X    | 0.198345425 | 1 | 08:2-amino_oxazoles                           |
| GW853606X    | 0.197750718 | 1 | 05:Benzimidazole_N-thiophenes                 |
| GW701032X    | 0.190801839 | 1 | 11:Biaryl_amides                              |
| SB-278539    | 0.18906862  | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| SB-759335-B  | 0.186973957 | 1 | 03:Furazan_benzimidazoles                     |
| GSK554170A   | 0.183751685 | 1 | 03:Furazan benzimidazoles                     |
| SB-264865    | 0.182207285 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| GSK561866B   | 0.181324731 | 1 | 03:Furazan_benzimidazoles                     |
| SB-741905    | 0.179075798 | 1 | 19:Indazole-3-carboxamides                    |
| GSK192082A   | 0.17588616  | 1 | 13:Anilino_thienopyrimidines                  |
| SB-739452    | 0.173660255 | 1 | 20:3-amino_pyrazolopyridines                  |
| SB-245392    | 0.159360267 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| GW300657X    | 0.155921837 | 1 | 02:Oxindoles                                  |
| GSK1030058A  | 0.154774724 | 1 | 05:Benzimidazole_N-thiophenes                 |
| SB-361058    | 0.153636166 | 1 | 17:Maleimide                                  |
| GW575533A    | 0.15348926  | 1 | 08:2-amino_oxazoles                           |
| GW607049C    | 0.149992537 | 1 | 14:Benzimidazolyl_diaryl_ureas                |
| GW410563A    | 0.146870804 | 1 | 04:4-anilino_quinazolines_and_related         |
| SB-284847-BT | 0.14045169  | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| GW445017X    | 0.137942567 | 1 | 12:3-vinyl_pyridines                          |
| 3.1.10017A   | 357 5 12007 | • | . 2.5 Viriyi_pyridirilos                      |

|               | _            |   | <del>_</del>                                   |
|---------------|--------------|---|--|
| SB-736302     | 0.137881548  | 1 | _ 03:Furazan_benzimidazoles                    |
| SB-736302     | 0.137881548  | 1 | _ 03:Furazan_benzimidazoles                    |
| SB-739245-AC  | 0.134319539  | 1 | _ 20:3-amino_pyrazolopyridines                 |
| GW673715X     | 0.132284718  | 1 | _ 14:Benzimidazolyl_diaryl_ureas               |
| GW794607X     | 0.116452925  | 1 | _ 09:4-hydrazinly_pyrazolopyrimidines          |
| GSK1030061A   | 0.116372525  | 1 | 05:Benzimidazole_N-thiophenes                  |
| GW813360X     | 0.113248866  | 1 | _ 09:4-hydrazinly_pyrazolopyrimidines          |
| SB-738482     | 0.107170069  | 1 | 19:Indazole-3-carboxamides                     |
| GSK635416A    | 0.104342308  | 1 | _ 24:Phenyl_carboxamides                       |
| GW441806A     | 0.10173642   | 1 | _ 12:3-vinyl_pyridines                         |
| GW459057A     | 0.100998808  | 1 | 12:3-vinyl_pyridines                           |
| GW290597X     | 0.09462216   | 1 | 02:Oxindoles                                   |
| GW796920X     | 0.091498657  | 1 | <br>11:Biaryl_amides                           |
| GW580509X     | 0.08089029   | 1 | 08:2-amino_oxazoles                            |
| GW568377A     | 0.07078921   | 1 | 04:4-anilino_quinazolines_and_related          |
| GSK182497A    | 0.066222036  | 1 | 13:Anilino_thienopyrimidines                   |
| GSK605714A    | 0.063406682  | 1 | 24:Phenyl_carboxamides                         |
| GW807930X     | 0.058390532  | 1 | 22:4-anilino_5-alkynyl_pyrimidines             |
| GW276655X     | 0.057016401  | 1 | 02:Oxindoles                                   |
| GW633459A     | 0.056876417  | 1 | 04:4-anilino_quinazolines_and_related          |
| GW615311X     | 0.048958032  | 1 | 04:4-anilino_quinazolines_and_related          |
| GSK1030062A   | 0.046480444  | 1 | 05:Benzimidazole_N-thiophenes                  |
| SB-250715     | 0.046024276  | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles             |
| GW680191X     | 0.033856669  | 1 | 04:4-anilino_quinazolines_and_related          |
| GW811168X     | 0.032816577  | 1 | 09:4-hydrazinly_pyrazolopyrimidines            |
| SB-242717     | 0.031804031  | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles             |
| GW445014X     | 0.028573384  | 1 | 12:3-vinyl_pyridines                           |
| SB-610251-B   | 0.027306967  | 1 | 06:4-pyridyl_ortho-aryl_azoles                 |
| GW785404X     | 0.026661965  | 1 | 03:Furazan_benzimidazoles                      |
| GW780159X     | 0.015615266  | 1 | 21:2-pyridinyl_imidazoles_and_related          |
| SB-657836-AAA | 0.014117095  | 1 | 23:3-cyano_thiophenes                          |
| SB-390523     | 0.012723882  | 1 | 17:Maleimide                                   |
| GW693481X     | 0.011790396  | 1 | 21:2-pyridinyl_imidazoles_and_related          |
| GSK238583A    | 0.00963596   | 1 | 13:Anilino_thienopyrimidines                   |
| GW824645A     | 0.003870959  | 1 | 27:3-amino_pyrazoles                           |
| GSK238063A    | -0.003643629 | 1 | 13:Anilino_thienopyrimidines                   |
| GW820759X     | -0.004208573 | 1 | 11:Biaryl_amides                               |
| GW461104A     | -0.005620923 | 1 | 04:4-anilino_quinazolines_and_related          |
| GW827105X     | -0.009181085 | 1 | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines  |
| GW618013A     | -0.009674542 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles             |
| SB-285234-W   | -0.024796258 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles             |
| GW300660X     | -0.038089205 | 1 | 02:Oxindoles                                   |
| GW703087X     | -0.040894659 | 1 | 22:4-anilino_5-alkynyl_pyrimidines             |
| GW434756X     | -0.049924633 | 1 | 06:4-pyridyl_ortho-aryl_azoles                 |
| GW282449A     | -0.054655478 | 1 | 04:4-anilino_quinazolines_and_related          |
| GW829055X     | -0.055808935 | 1 | _15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| GSK1030059A   | -0.056006538 | 1 | 05:Benzimidazole_N-thiophenes                  |
| SB-242718     | -0.058910114 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles             |
| GW583373A     | -0.084854293 | 1 | 04:4-anilino_quinazolines_and_related          |
| GW549034X     | -0.08619167  | 1 | _ 03:Furazan_benzimidazoles                    |
| GW795486X     | -0.093363938 | 1 | _ 18:Furopyrimidines_and_related               |
| GW680908A     | -0.096659801 | 1 | 14:Benzimidazolyl_diaryl_ureas                 |
| SB-678557-A   | -0.101559189 | 1 | 26:3-amino_pyrazolopyridazines                 |
| GW785804X     | -0.10656013  | 1 | 21:2-pyridinyl_imidazoles_and_related          |
| GW700494A     | -0.107876368 | 1 | 14:Benzimidazolyl_diaryl_ureas                 |
| GW305074X     | -0.108256361 | 1 | 02:Oxindoles                                   |
| SB-221466     | -0.110626749 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles             |
| GSK1713088A   | -0.111006185 | 1 | 10:2,4-dianilino_pyrrolopyrimidines            |

| GW407323A    | -0.113913232 | 1 | 02:Oxindoles                                  |
|--------------|--------------|---|---|
| GW734508X    | -0.118080311 | 1 | 11:Biaryl_amides                              |
| GW622055X    | -0.118978477 | 1 | 08:2-amino_oxazoles                           |
| GW782907X    | -0.139956334 | 1 | 11:Biaryl_amides                              |
| GW828525X    | -0.144143449 | 1 | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| GW794726X    | -0.151329371 | 1 | 22:4-anilino_5-alkynyl_pyrimidines            |
| GW817396X    | -0.151425963 | 1 | 09:4-hydrazinly_pyrazolopyrimidines           |
| GW574783B    | -0.155215129 | 1 | . 04:4-anilino_quinazolines_and_related       |
| GW817394X    | -0.159820042 | 1 | . 09:4-hydrazinly_pyrazolopyrimidines         |
| GSK1392956A  | -0.170363151 | 1 | . 10:2,4-dianilino_pyrrolopyrimidines         |
| GW607117X    | -0.171340775 | 1 | 11:Biaryl_amides                              |
| GW561436X    | -0.177207824 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| GW809885X    | -0.183580329 | 1 | 09:4-hydrazinly_pyrazolopyrimidines           |
| GW275616X    | -0.184062033 | 1 | 02:Oxindoles                                  |
| GW796921X    | -0.186679269 | 1 | 11:Biaryl_amides                              |
| GSK300014A   | -0.187090916 | 1 | 13:Anilino_thienopyrimidines                  |
| GW683768X    | -0.190878672 | 1 | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| SB-431542-A  | -0.195548743 | 1 | 21:2-pyridinyl_imidazoles_and_related         |
| GW513184X    | -0.19767302  | 1 | 09:4-hydrazinly_pyrazolopyrimidines           |
| GW829115X    | -0.210306441 | 1 | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| GW642125X    | -0.214816612 | 1 | 18:Furopyrimidines_and_related                |
| GW811761X    | -0.216367548 | 1 | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| SB-220455    | -0.221689675 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| SB-216385    | -0.223827153 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| SB-698596-AC | -0.234040406 | 1 | 26:3-amino_pyrazolopyridazines                |
| SKF-86002-A2 | -0.243445401 | 1 | 06:4-pyridyl_ortho-aryl_azoles                |
| GW785974X    | -0.254453414 | 1 | 11:Biaryl_amides                              |
| GW659893X    | -0.255477575 | 1 | 22:4-anilino_5-alkynyl_pyrimidines            |
| GW416469X    | -0.258966214 | 1 | 02:Oxindoles                                  |
| GW651576X    | -0.271673073 | 1 | 22:4-anilino_5-alkynyl_pyrimidines            |
| GW807982X    | -0.273680305 | 1 | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| SB-254169    | -0.28761919  | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| SB-737198    | -0.289660875 | 1 | 03:Furazan_benzimidazoles                     |
| SB-614067-R  | -0.292348425 | 1 | 06:4-pyridyl_ortho-aryl_azoles                |
| GW819077X    | -0.298703659 | 1 | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| GW282536X    | -0.306313009 | 1 | 02:Oxindoles                                  |
| GW694234A    | -0.306755798 | 1 | 14:Benzimidazolyl_diaryl_ureas                |
| GW576609A    | -0.309045451 | 1 | 04:4-anilino_quinazolines_and_related         |
| GW819230X    | -0.324498832 | 1 | 18:Furopyrimidines_and_related                |
| SB-431533    | -0.326166984 | 1 | 21:2-pyridinyl_imidazoles_and_related         |
| GW632580X    | -0.338467482 | 1 | 31:3-benzyl_pyrimidines                       |
| GR269666A    | -0.349584468 | 1 | . 04:4-anilino_quinazolines_and_related       |
| GW784684X    | -0.355798615 | 1 | 13:Anilino_thienopyrimidines                  |
| GW784684X    | -0.355798615 | 1 | 13:Anilino_thienopyrimidines                  |
| GW708893X    | -0.357765135 | 1 | 11:Biaryl_amides                              |
| SB-742865    | -0.358964461 | 1 | 19:Indazole-3-carboxamides                    |
| GW569293E    | -0.366706546 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| SB-347804    | -0.371165097 | 1 | 23:3-cyano_thiophenes                         |
| GW782912X    | -0.382452669 | 1 | 11:Biaryl_amides                              |
| SB-744941    | -0.388028691 | 1 | . 03:Furazan_benzimidazoles                   |
| GW572738X    | -0.39196538  | 1 | 23:3-cyano_thiophenes                         |
| SB-633825    | -0.411014998 | 1 | 06:4-pyridyl_ortho-aryl_azoles                |
| SB-400868-A  | -0.42058237  | 1 | 21:2-pyridinyl_imidazoles_and_related         |
| GW832467X    | -0.430397951 | 1 | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| GW282974X    | -0.43775124  | 1 | 04:4-anilino_quinazolines_and_related         |
| GSK1023156A  | -0.450324767 | 1 | 05:Benzimidazole_N-thiophenes                 |
| GW682841X    | -0.45858838  | 1 | 06:4-pyridyl_ortho-aryl_azoles                |
| GW621823A    | -0.459316596 | 1 | 04:4-anilino_quinazolines_and_related         |
|              |              | • |   |

|                        | _                            |               | <u>.</u>                                      |
|------------------------|------------------------------|---------------|---|
| GW827099X              | -0.469364336                 | 1             | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| SB-476429-A            | -0.472863321                 | 1             | 06:4-pyridyl_ortho-aryl_azoles                |
| GW405841X              | -0.475340924                 | 1             | . 02:Oxindoles                                |
| GW301888X              | -0.47912894                  | 1             | 04:4-anilino_quinazolines_and_related         |
| GW830263A              | -0.482833885 <u> </u>        | 11            | 16:2,4-diamino_pyrimidines                    |
| GW641155A              | -0.483248881 <u> </u>        | 11            | 08:2-amino_oxazoles                           |
| GW827396X              | -0.493156603 <u> </u>        | 11            | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| SB-630812              | -0.501225216                 | 1             | 06:4-pyridyl_ortho-aryl_azoles                |
| SB-686709-A            | -0.511565687                 | 1             | 26:3-amino_pyrazolopyridazines                |
| GSK312948A             | -0.525284667 <u> </u>        | 1             | 05:Benzimidazole_N-thiophenes                 |
| SB-735465              | -0.544290577 <u> </u>        | 1             | 19:Indazole-3-carboxamides                    |
| GW693881A              | -0.581024151                 | 1             | 13:Anilino_thienopyrimidines                  |
| GW827102X              | -0.621275354                 | 1             | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| GW569530A              | -0.63805317                  | 1             | 04:4-anilino_quinazolines_and_related         |
| GW708336X              | -0.654900974                 | 1             | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| GW406108X              | -0.655339844                 | 1             | 02:Oxindoles                                  |
| SB-743899              | -0.6584495                   | 1             | 20:3-amino_pyrazolopyridines                  |
| GW804482X              | -0.66025709                  | 1             | 05:Benzimidazole_N-thiophenes                 |
| GW827106X              | -0.705276988                 | 1             | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| SB-711237              | -0.715805908                 | 1             | 20:3-amino_pyrazolopyridines                  |
| GW784752X              | -0.725887923                 | 1             | 09:4-hydrazinly_pyrazolopyrimidines           |
| GW680975X              | -0.743648528                 | 1             | 06:4-pyridyl_ortho-aryl_azoles                |
| GW769076X              | -0.752829798                 | 1             | 11:Biaryl_amides                              |
| GW581744X              | -0.754454018                 | 1             | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| GW709042A              | -0.75651772                  | 1             | 14:Benzimidazolyl_diaryl_ureas                |
| SB-751148              | -0.773771855                 | 1             | 03:Furazan_benzimidazoles                     |
| SB-735467              | -0.794219247                 | <u>·</u><br>1 | 19:Indazole-3-carboxamides                    |
| SB-242721              | -0.847844226                 | 1             | 01:4-pyrimidinyl_ortho-aryl_azoles            |
| GW440139A              | -0.862303156                 | 1             | 29:4-anilino_quinolines                       |
| GW768505A              | -0.867427492                 | 1             | 18:Furopyrimidines_and_related                |
| GSK2186269A            | -0.946694707                 | 1             | 10:2,4-dianilino_pyrrolopyrimidines           |
| GSK625137A             | -0.977988237                 | 1             | 24:Phenyl_carboxamides                        |
| GW429374A              | -0.994882477                 | 1             | 02:Oxindoles                                  |
| GW572399X              | -1.00668174                  | 1             | . 02:Oxindoles<br>08:2-amino_oxazoles         |
| SB-736290              | -1.021493927                 | 1             | . 03:Furazan_benzimidazoles                   |
| SB-730290<br>SB-732941 |                              | <u> </u>      | . 19:Indazole-3-carboxamides                  |
|                        | -1.029006859<br>-1.039715515 |               |   |
| GSK1220512A            |                              | 1             | 10:2,4-dianilino_pyrrolopyrimidines           |
| GW296115X              | -1.068060494                 | 1             | 17:Maleimide                                  |
| GW711782X              | -1.08262417                  | 1             | 06:4-pyridyl_ortho-aryl_azoles                |
| GW806742X              | -1.184965891                 | 1             | 16:2,4-diamino_pyrimidines                    |
| GW784307A              | -1.207651294                 | 1             | 09:4-hydrazinly_pyrazolopyrimidines           |
| GW683109X              | -1.21511901                  | 1             | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
| GSK994854A             | -1.225914986                 | 1             | 10:2,4-dianilino_pyrrolopyrimidines           |
| GW695874X              | -1.26461248                  | 1             | 06:4-pyridyl_ortho-aryl_azoles                |
| GW679410X              | -1.26667381                  | 1             | _ 06:4-pyridyl_ortho-aryl_azoles              |
| GW775608X              | -1.275839775                 | 1             | _ 11:Biaryl_amides                            |
| GW770249X              | -1.301473159 <u> </u>        | 1             | 18:Furopyrimidines_and_related                |
| GW833373X              | -1.356463631 <u> </u>        |               | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| SKF-86055              | -1.369339564                 | 1             | 06:4-pyridyl_ortho-aryl_azoles                |
| GSK1326255A            | -1.440607043 <u> </u>        | 1             | 10:2,4-dianilino_pyrrolopyrimidines           |
| GW770249A              | -1.443746972                 | 1             | 18:Furopyrimidines_and_related                |
| GW856804X              | -1.459262622                 | 1             | 18:Furopyrimidines_and_related                |
| GSK718429A             | -1.467016484                 | 1             | 06:4-pyridyl_ortho-aryl_azoles                |
| GW786460X              | -1.524934645                 | 1             | 21:2-pyridinyl_imidazoles_and_related         |
| GSK938890A             | -1.526063338                 | 1             | 03:Furazan_benzimidazoles                     |
| GSK1173862A            | -1.585815461                 | 1             | 10:2,4-dianilino_pyrrolopyrimidines           |
| GW829906X              | -1.614579425                 | 1             | 15:2-aryl_3-pyridimidinyl_pyrazolopyridazines |
| GW781673X              | -1.615567914                 | 1             | 07:2H-3_pyrimidinyl_pyrazolopyridazines       |
|                        |                              |               |   |

| GW683003X   | -1.669248959 | 1 | 07:2H-3_pyrimidinyl_pyrazolopyridazines |
|-------------|--------------|---|---|
| GW814408X   | -1.850126041 | 1 | 09:4-hydrazinly_pyrazolopyrimidines     |
| GW795493X   | -2.453957701 | 1 | 18:Furopyrimidines_and_related          |
| SB-220025-R | -2.530824545 | 1 | 01:4-pyrimidinyl_ortho-aryl_azoles      |
| SB-734117   | -3.140110193 | 1 | 03:Furazan_benzimidazoles               |
| GW297361X   | -3.169797691 | 1 | 02:Oxindoles                            |

| en, 51-75% inhibiti | TK   | TK   | TK   | TK   | TK  | TK       | TK              | TK        | TK        | TK        | TK        | TK        | TK   | TK  | TK  | TK  |
|---------------------|------|------|------|------|-----|----------|-----------------|-----------|-----------|-----------|-----------|-----------|------|-----|-----|-----|
| Pubmed ID           | JAK1 | TYK2 | JAK2 | JAK3 | FER | FES      | ABL-E255K       | ABL-H396P | ABL-M351T | АВС-Q252Н | ABL-T315I | ABL-Y253F | ABL1 | ARG | CSK | BMX |
| 17600705            | 33   | 17   | 46   | 14   | 23  | 11       | 93              | 94        | 95        | 91        | 40        | 94        | 80   | 77  | 35  | 57  |
| 18929484            | 5    | 1    | 2    | 0    | 3   | 3        | 2               | 4         | 1         | 3         | 7         | 4         | 5    | 4   | 2   | 6   |
| 15743202            | -1   | 7    | 5    | 13   | 3   | -1       | 37              | 61        | 61        | 58        | 22        | 69        | 52   | 52  | -1  | 8   |
| 18620382            | 67   | 33   | 72   | 28   | 36  | 11       | 67              | 78        | 76        | 73        | 14        | 84        | 70   | 70  | 68  | 65  |
| 17201405            | 71   | 37   | 82   | 69   | 3   | 2        | 3               | 4         | 5         | 3         | 3         | 1         | 9    | 7   | 6   | 5   |
| 17201405            | 29   | 5    | 26   | 31   | 7   | 3        | 4               | 12        | 15        | 17        | 22        | 5         | 7    | 9   | 8   | 4   |
| 18800763            | 2    | -2   | -2   | 0    | 1   | 4        | -1              | 7         | 1         | 0         | 1         | 0         | 0    | 2   | -1  | -1  |
| 11728181            | 18   | 21   | 34   | 54   | 20  | 2        | 9               | 14        | 27        | 18        | 18        | 22        | 13   | 14  | 1   | 7   |
| 16890436            | 3    | -1   | 3    | 1    | 2   | 2        | 61              | 70        | 69        | 68        | 7         | 74        | 66   | 59  | 26  | 37  |
| 17201405            | 52   | -1   | 29   | 42   | 3   | 2        | 3               | 3         | 5         | 5         | 3         | 4         | 2    | 4   | 2   | 4   |
| 17600705            | 20   | 39   | 57   | 25   | 22  | 11       | 96              | 97        | 96        | 95        | 25        | 99        | 85   | 89  | 27  | 74  |
| 15743202            | 11   | -2   | 0    | -1   | 5   | 2        | 14              | 27        | 27        | 21        | 10        | 22        | 21   | 20  | 5   | 4   |
| 15743202            | 0    | -4   | 3    | 0    | 8   | 3        | 8               | 19        | 22        | 13        | 6         | 20        | 14   | 18  | 1   | 6   |
| 18929484            | -5   | -3   | 3    | 2    | 7   | 3        | 2               | 2         | 2         | 1         | 3         | 3         | 4    | 1   | 1   | 4   |
| 19179070            | 3    | -3   | 3    | -1   | 1   | 4        | 3               | 5         | 4         | 5         | 4         | 5         | 5    | 4   | 6   | 7   |
| 11728181            | -2   | 2    | 0    | 4    | 0   | 1        | 4               | 6         | 8         | 8         | 7         | 8         | 8    | 12  | -7  | -1  |
| 16890436            | -2   | 0    | 1    | -1   | 4   | 8        | 51              | 67        | 65        | 59        | 4         | 69        | 56   | 64  | 23  | 48  |
| 17201405            | 37   | 3    | 24   | 18   | 1   | 2        | -2              | 0         | 1         | 3         | 3         | 1         | 7    | 4   | 4   | 2   |
| 17884497            | 12   | 10   | 2    | 0    | 19  | 39       | 96              | 96        | 94        | 96        | 18        | 97        | 85   |     | 94  | 93  |
| 19237286            | 6    | -4   | 2    | 29   | 7   | 8        | 5               | 9         | 5         | 8         | 10        | 11        | 14   | 12  | 4   | 3   |
| 19081716            | 0    | 2    | 1    | 2    | 44  | 10       | 1               | 4         | 4         | 4         | 0         | 3         | 10   | 8   | -2  | -1  |
| 18620382            | 10   | -3   | 6    | 0    | 74  | 56       | 68              | 82        | 85        | 84        | 52        | 83        | 64   | 63  | 19  | 17  |
| 11728181            | -1   | 7    | 0    | 6    | 11  | -3       | 3               | 7         | 15        | 14        | 12        | 13        | 12   | 10  | -4  | 0   |
| 11597418            | 8    | 1    | 0    | 1    | 5   | 3        | 5               | 14        | 10        | 9         | 5         | 10        | 11   | 10  | 6   | 5   |
| 17194588            | 16   | -5   |      | -1   | 8   | 4        | 4               | 6         | 4         | 5         | 7         | 6         | 4    | -1  | 8   | 4   |
| 15743202            | 7    | -1   | 2    | 2    | 3   | 3        | 62              | 67        | 69        | 78        | 8         | 72        | 60   | 61  | 10  | 16  |
| 11266159            | 19   | -2   | 3    | 54   | 10  | 4        | 7               | 18        | 17        | 17        | 20        | 8         | 22   | 10  | 5   | 4   |
| 11597418            | 3    | 1    | 2    | 3    | 3   | 0        | 1               | 1         | 1         | 3         | 2         | 5         | 5    | 19  | 3   | 0   |
| 11728181            | 2    | -2   | 1    | 6    | 6   | 0        | 4               | 7         | 8         | 8         | 6         | 8         | 4    | 4   | 0   | 5   |
| 16997559            | 5    | 1    | 29   | 55   | 10  | 3        | 47              | 49        | 50        | 44        | 33        | 49        | 49   | 18  | 4   | 33  |
| 17600705            | 32   | 32   | 47   | 3    | 15  | 8        | 47              | 56        | 58        | 54        | 17        | 64        | 56   | 52  | 9   | 38  |
| 17201404            | 12   | -1   | 1    | 0    | 2   | 3        | 4               | 4         | 3         | 4         | 4         | 4         | 11   | 8   | 3   | 3   |
| 15080992            | 14   | 5    | 1    | 3    | 7   | 5        | 71              | 81        | 81        | 82        | 48        | 82        | 74   | 69  | -2  | 17  |
| 15013000            | 5    | 9    | 1    | 8    | 5   | -2       | 3               | 11        | 16        | 11        | 18        | 12        | 11   | 9   | -6  | 1   |
| 17201405            | 70   | 26   | 35   | 31   | 2   | 0        | 4               | 2         | 4         | 3         | 3         | 5         | 9    | 20  | 1   | 1   |
| 15990302            | 15   | -1   | 10   | 7    | 21  | 8        | 14              | 26        | 37        | 39        | 30        | 22        | 22   | 36  | 13  | 23  |
| 18842034            | 2    | -3   | 2    | 1    | 2   | 2        | 4               | 2         | 4         | 4         | 2         | 3         | 10   | 8   | 7   | 3   |
| 16483772            | 8    | 0    | 1    | 2    | 2   | 1        | 1               | 1         | 2         | 3         | 2         | 3         | 6    | 5   | 3   | 1   |
| 15743202            | 10   | -2   | 2    | 0    | 9   | 5        | 80              | 86        | 85        | 86        | 25        | 90        | 77   | 75  | 18  | 33  |
| 11597418            | -2   | 0    | 0    | 3    | 20  | -3       | 17              | 34        | 37        | 34        | 43        | 24        | 37   | 30  | -1  | 4   |
| 12941317            | 7    | 6    | 0    | 8    | 14  | -3<br>-1 | 15              | 27        | 31        | 20        | 23        | 36        | 35   | 17  | -6  | -1  |
| 15743202            | 2    | 1    | 2    | 14   | 2   | 0        | 84              | 82        | 87        | 85        | 18        | 91        | 78   | 65  | 5   | 9   |
| 10170202            |      |      |      | 17   |     | J        | U <del>-1</del> | UZ        | UT        | 00        | 10        | O I       | 70   | 00  | J   | 9   |

| 16483772   | 2  | -1   | 2   | 4   | 3   | 5   | 4   | 3   | 1   | 1   | 3  | 3   | 10  | 3  | 3   | 9  |
|--|--|--|---|---|---|---|---|---|---|---|--|---|---|--|---|--|
| 17018693   | 22   | 0  | 1   | 0   | 4   | 2   | 2   | 3   | -1  | 2   | 3  | 4   | 4   | 7  | 5   | 1  |
| 19081716   | 3  | -1   | 0   | 1   | 95  | 79  | 4   | 3   | 2   | 3   | 4  | 4   | 6   | 4  | 1   | 6  |
| 11266159   | 10   | -3   | 4   | 12  | 6   | 4   | 8   | 9   | 8   | 7   | 7  | 8   | 15  | 6  | 4   | 4  |
| 16777410   | 1  | 1  | 2   | 1   | 1   | 4   | 0   | 4   | 2   | 4   | 4  | 3   | 7   | 4  | 5   | 6  |
| 15743202   | 5  | -1   | -1  | -2  | 11  | 4   | 8   | 15  | 11  | 10  | 6  | 14  | 14  | 11   | 3   | 7  |
| 18800763   | 4  | -1   | 2   | -1  | 4   | 6   | 0   | 2   | 1   | 0   | 2  | 1   | 3   | 4  | 1   | 8  |
| 15955699   | 6  | -2   | 1   | 0   | 4   | 3   | 4   | 1   | 4   | 3   | 1  | 5   | 5   | -6   | 2   | 3  |
| 11266159   | -8   | 0  | 0   | 3   | 2   | -3  | -2  | 2   | 5   | 2   | 3  | 1   | 8   | 7  | -5  | -3   |
| 16890436   | 4  | -4   | 2   | 1   | 2   | 3   | 38  | 60  | 66  | 64  | 6  | 61  | 63  | 57   | 25  | 30   |
| 19208477   | 2  | -1   | 2   | 0   | 6   | 4   | 4   | 9   | 4   | 4   | 4  | 4   | 3   | 1  | 3   | 5  |
| 15990302   | -2   | -3   | 3   | 0   | 12  | 7   | 10  | 12  | 15  | 17  | 14   | 15  | 20  | 17   | 1   | 10   |
| 18800763   | 2  | -4   | 1   | -2  | 3   | 5   | 4   | 7   | 3   | 6   | 5  | 8   | 5   | 4  | 5   | 5  |
| 16890436   | -1   | 1  | 2   | -1  | 3   | -1  | 50  | 62  | 64  | 60  | 3  | 70  | 57  | 51   | 25  | 42   |
| 17201404   | 3  | 0  | 0   | -1  | 3   | 1   | 9   | 2   | 5   | 2   | 1  | 6   | 4   | 2  | -1  | 2  |
| 19348415   | 3  | -5   | 1   | 1   | 4   | 7   | 4   | 10  | 8   | 6   | 3  | 5   | 12  | 15   | 5   | 4  |
| 15743202   | 6  | -2   | 2   | -2  | 3   | 4   | 23  | 40  | 41  | 34  | 13   | 51  | 35  | 29   | 5   | 7  |
| 15080992   | 9  | 4  | 4   | 3   | 14  | 7   | 83  | 88  | 88  | 88  | 47   | 87  | 79  | 66   | 25  | 32   |
| 11266159   | 1  | -3   | 5   | 22  | 3   | 3   | 1   | 1   | 3   | 2   | 6  | 3   | 9   | 1  | 3   | 4  |
| 11266159   | 8  | 20   | 2   | 51  | 6   | 1   | -1  | 1   | 1   | 3   | 0  | 3   | 8   | 8  | -6  | 1  |
| 17676829   | 0  | -4   | 7   | -3  | 5   | 0   | 67  | 92  | 93  | 92  | 94   | 84  | 72  | 66   | 35  | 2  |
| 18621524   | 2  | -5   | 1   | 1   | 6   | 3   | 17  | 34  | 30  | 45  | 42   | 40  | 41  | 19   | 3   | 3  |
| 16890436   | -10  | -4   | 2   | 1   | 2   | 2   | 18  | 37  | 32  | 12  | 5  | 22  | 46  | 13   | 1   | 5  |
| 17676829   | 2  | 0  | 5   | 1   | 2   | 1   | 4   | 9   | 20  | 14  | 15   | 8   | 6   | 4  | -42   | 0  |
| 16890436   | 5  | -3   | 3   | 1   | 2   | 1   | 5   | 8   | 7   | 9   | 1  | 14  | 18  | 12   | 7   | 6  |
| 11728181   | 1  | 1  | 0   | 1   | 1   | 0   | 12  | 34  | 38  | 27  | 7  | 29  | 33  | 26   | 1   | 6  |
| 16777410   | 13   | -4   | 1   | 0   | 2   | 3   | 3   | 4   | 1   | 2   | 4  | 3   | 3   | 4  | 2   | 4  |
| 18929484   | 9  | -1   | 11  | 5   | 17  | 5   | 8   | 13  | 11  | 13  | 13   | 16  | 15  | 13   | 13  | 12   |
| 16777410   | 3  | -4   | -1  | -6  | 5   | 2   | 2   | 5   | 2   | 4   | 2  | 4   | 3   | 4  | 5   | 0  |
|  | _  |  |   |   |   | _   | _   | _   | _   |   | _  |   |   |  |   | _  |
| 17502144   | 3  | -3   | 4   | 1   | 1   | 2   | 2   | 4   | 3   | 3   | 1  | 3   | 7   | 7  | 1   | 1  |
| 18621524   |  |  |   |   |   |   |   |   |   |   |  |   |   |  |   |  |
| 18621524<br>15013000   | 3  | -3   | 4   | 1   | 1   | 2<br>-2<br>5  | 2   | 4   | 3   | 3   | 1  | 3   | 7   | 7  | 1<br>-1<br>9  | 1<br>1<br>8  |
| 18621524<br>15013000<br>15990302   | 3<br>1<br>21<br>20   | -3<br>0<br>19<br>2   | 4<br>-2   | 1<br>2  | 1<br>-1<br>12<br>77   | 2<br>-2<br>5<br>23  | 2<br>8<br>15<br>36  | 4<br>21<br>23<br>69   | 3<br>20<br>25<br>82   | 3<br>34<br>26<br>72   | 1<br>19<br>24<br>73  | 3<br>22<br>23<br>56   | 7<br>20<br>26<br>53   | 7<br>19<br>19<br>55  | 1<br>-1<br>9<br>19  | 1<br>1<br>8<br>73  |
| 18621524<br>15013000<br>15990302<br>15013000   | 3<br>1<br>21<br>20<br>30   | -3<br>0<br>19<br>2<br>12   | 4<br>-2<br>2<br>21<br>1   | 1<br>2<br>9   | 1<br>-1<br>12<br>77<br>11   | 2<br>-2<br>5  | 2<br>8<br>15<br>36<br>9   | 4<br>21<br>23<br>69<br>13   | 3<br>20<br>25   | 3<br>34<br>26<br>72<br>13   | 1<br>19<br>24<br>73<br>17  | 3<br>22<br>23<br>56<br>13   | 7<br>20<br>26<br>53<br>14   | 7<br>19<br>19<br>55<br>8   | 1<br>-1<br>9<br>19<br>7   | 1<br>1<br>8<br>73<br>5   |
| 18621524<br>15013000<br>15990302<br>15013000<br>12941317   | 3<br>1<br>21<br>20<br>30<br>7  | -3<br>0<br>19<br>2<br>12<br>-3   | 4<br>-2<br>2<br>21  | 1<br>2<br>9<br>3  | 1<br>-1<br>12<br>77   | 2<br>-2<br>5<br>23  | 2<br>8<br>15<br>36<br>9<br>7  | 4<br>21<br>23<br>69   | 3<br>20<br>25<br>82   | 3<br>34<br>26<br>72<br>13<br>6  | 1<br>19<br>24<br>73<br>17<br>7   | 3<br>22<br>23<br>56<br>13<br>12   | 7<br>20<br>26<br>53<br>14<br>11   | 7<br>19<br>19<br>55<br>8<br>7  | 1<br>-1<br>9<br>19<br>7<br>5  | 1<br>1<br>8<br>73<br>5<br>5  |
| 18621524<br>15013000<br>15990302<br>15013000<br>12941317<br>19097784   | 3<br>1<br>21<br>20<br>30<br>7<br>5   | -3<br>0<br>19<br>2<br>12<br>-3<br>-3   | 4<br>-2<br>2<br>21<br>1<br>2<br>0   | 1<br>2<br>9<br>3<br>6<br>1  | 1<br>-1<br>12<br>77<br>11<br>7<br>6   | 2<br>-2<br>5<br>23<br>3<br>4<br>2   | 2<br>8<br>15<br>36<br>9<br>7<br>3   | 4<br>21<br>23<br>69<br>13<br>6<br>4   | 3<br>20<br>25<br>82<br>14<br>4<br>3   | 3<br>34<br>26<br>72<br>13<br>6<br>3   | 1<br>19<br>24<br>73<br>17<br>7<br>2  | 3<br>22<br>23<br>56<br>13<br>12<br>5  | 7<br>20<br>26<br>53<br>14<br>11<br>4  | 7<br>19<br>19<br>55<br>8<br>7<br>5   | 1<br>-1<br>9<br>19<br>7   | 1<br>1<br>8<br>73<br>5<br>5  |
| 18621524<br>15013000<br>15990302<br>15013000<br>12941317<br>19097784<br>16777410   | 3<br>1<br>21<br>20<br>30<br>7<br>5<br>4  | -3<br>0<br>19<br>2<br>12<br>-3<br>-3<br>-4   | 4<br>-2<br>2<br>21<br>1<br>2<br>0<br>0  | 1<br>2<br>9<br>3<br>6<br>1<br>1   | 1<br>-1<br>12<br>77<br>11<br>7<br>6<br>2  | 2<br>-2<br>5<br>23<br>3<br>4<br>2<br>3  | 2<br>8<br>15<br>36<br>9<br>7<br>3<br>3  | 4<br>21<br>23<br>69<br>13<br>6<br>4<br>4  | 3<br>20<br>25<br>82<br>14<br>4<br>3<br>1  | 3<br>34<br>26<br>72<br>13<br>6<br>3<br>2  | 1<br>19<br>24<br>73<br>17<br>7<br>2<br>2   | 3<br>22<br>23<br>56<br>13<br>12<br>5  | 7<br>20<br>26<br>53<br>14<br>11<br>4<br>5   | 7<br>19<br>19<br>55<br>8<br>7<br>5<br>5  | 1<br>-1<br>9<br>19<br>7<br>5<br>-1<br>4   | 1<br>1<br>8<br>73<br>5<br>5<br>1   |
| 18621524<br>15013000<br>15990302<br>15013000<br>12941317<br>19097784<br>16777410<br>15013000   | 3<br>1<br>21<br>20<br>30<br>7<br>5<br>4<br>1   | -3<br>0<br>19<br>2<br>12<br>-3<br>-3<br>-4<br>-1   | 4<br>-2<br>2<br>21<br>1<br>2<br>0<br>0  | 1<br>2<br>9<br>3<br>6<br>1<br>1<br>-2<br>5  | 1<br>-1<br>12<br>77<br>11<br>7<br>6<br>2<br>9   | 2<br>-2<br>5<br>23<br>3<br>4<br>2<br>3<br>4   | 2<br>8<br>15<br>36<br>9<br>7<br>3<br>3  | 4<br>21<br>23<br>69<br>13<br>6<br>4<br>4<br>4<br>22   | 3<br>20<br>25<br>82<br>14<br>4<br>3<br>1  | 3<br>34<br>26<br>72<br>13<br>6<br>3<br>2<br>20  | 1<br>19<br>24<br>73<br>17<br>7<br>2<br>2<br>5  | 3<br>22<br>23<br>56<br>13<br>12<br>5<br>3<br>20   | 7<br>20<br>26<br>53<br>14<br>11<br>4<br>5<br>28   | 7<br>19<br>19<br>55<br>8<br>7<br>5<br>5<br>5   | 1<br>-1<br>9<br>19<br>7<br>5<br>-1<br>4   | 1<br>1<br>8<br>73<br>5<br>5<br>1<br>2<br>6   |
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| 18621524<br>15013000<br>15990302<br>15013000<br>12941317<br>19097784<br>16777410<br>15013000<br>11728181<br>17502144   | 3<br>1<br>21<br>20<br>30<br>7<br>5<br>4<br>1<br>2  | -3<br>0<br>19<br>2<br>12<br>-3<br>-3<br>-4<br>-1<br>4  | 4<br>-2<br>2<br>21<br>1<br>2<br>0<br>0<br>3<br>1  | 1<br>2<br>9<br>3<br>6<br>1<br>1<br>-2<br>5<br>13  | 1<br>-1<br>12<br>77<br>11<br>7<br>6<br>2<br>9<br>-11<br>2   | 2<br>-2<br>5<br>23<br>3<br>4<br>2<br>3<br>4<br>0<br>4   | 2<br>8<br>15<br>36<br>9<br>7<br>3<br>3<br>22<br>9   | 4<br>21<br>23<br>69<br>13<br>6<br>4<br>4<br>22<br>10<br>6   | 3<br>20<br>25<br>82<br>14<br>4<br>3<br>1<br>20<br>10<br>3   | 3<br>34<br>26<br>72<br>13<br>6<br>3<br>2<br>20<br>9<br>6  | 1<br>19<br>24<br>73<br>17<br>7<br>2<br>2<br>5<br>9<br>5  | 3<br>22<br>23<br>56<br>13<br>12<br>5<br>3<br>20<br>13<br>5  | 7<br>20<br>26<br>53<br>14<br>11<br>4<br>5<br>28<br>11<br>6  | 7<br>19<br>19<br>55<br>8<br>7<br>5<br>5<br>15<br>3<br>5  | 1<br>-1<br>9<br>19<br>7<br>5<br>-1<br>4<br>4<br>0<br>5  | 1<br>1<br>8<br>73<br>5<br>5<br>1<br>2<br>6<br>1<br>8   |
| 18621524<br>15013000<br>15990302<br>15013000<br>12941317<br>19097784<br>16777410<br>15013000<br>11728181<br>17502144<br>18620382   | 3<br>1<br>21<br>20<br>30<br>7<br>5<br>4<br>1<br>2<br>12<br>55  | -3<br>0<br>19<br>2<br>12<br>-3<br>-3<br>-4<br>-1<br>4<br>-3<br>2   | 4<br>-2<br>2<br>21<br>1<br>2<br>0<br>0<br>3<br>1<br>1   | 1<br>2<br>9<br>3<br>6<br>1<br>1<br>-2<br>5<br>13<br>-2<br>27  | 1<br>-1<br>12<br>77<br>11<br>7<br>6<br>2<br>9<br>-11<br>2<br>36   | 2<br>-2<br>5<br>23<br>3<br>4<br>2<br>3<br>4<br>0<br>4<br>6  | 2<br>8<br>15<br>36<br>9<br>7<br>3<br>22<br>9<br>4<br>74   | 4<br>21<br>23<br>69<br>13<br>6<br>4<br>4<br>22<br>10<br>6   | 3<br>20<br>25<br>82<br>14<br>4<br>3<br>1<br>20<br>10<br>3   | 3<br>34<br>26<br>72<br>13<br>6<br>3<br>2<br>20<br>9<br>6<br>85  | 1<br>19<br>24<br>73<br>17<br>7<br>2<br>2<br>5<br>9<br>5  | 3<br>22<br>23<br>56<br>13<br>12<br>5<br>3<br>20<br>13<br>5<br>85  | 7<br>20<br>26<br>53<br>14<br>11<br>4<br>5<br>28<br>11<br>6<br>75  | 7<br>19<br>19<br>55<br>8<br>7<br>5<br>5<br>15<br>3<br>5  | 1 -1 9 19 7 5 -1 4 4 0 5 22   | 1<br>1<br>8<br>73<br>5<br>5<br>1<br>2<br>6<br>1<br>8<br>35   |
| 18621524<br>15013000<br>15990302<br>15013000<br>12941317<br>19097784<br>16777410<br>15013000<br>11728181<br>17502144<br>18620382<br>17676829   | 3<br>1<br>21<br>20<br>30<br>7<br>5<br>4<br>1<br>2<br>12<br>55<br>4   | -3<br>0<br>19<br>2<br>12<br>-3<br>-3<br>-4<br>-1<br>4<br>-3<br>2   | 4<br>-2<br>2<br>21<br>1<br>2<br>0<br>0<br>3<br>1<br>1<br>1<br>60  | 1<br>2<br>9<br>3<br>6<br>1<br>1<br>-2<br>5<br>13<br>-2<br>27<br>2   | 1<br>-1<br>12<br>77<br>11<br>7<br>6<br>2<br>9<br>-11<br>2<br>36<br>2  | 2<br>5<br>23<br>3<br>4<br>2<br>3<br>4<br>0<br>4<br>6<br>1   | 2<br>8<br>15<br>36<br>9<br>7<br>3<br>3<br>22<br>9<br>4<br>74<br>7   | 4<br>21<br>23<br>69<br>13<br>6<br>4<br>4<br>22<br>10<br>6<br>90<br>42   | 3<br>20<br>25<br>82<br>14<br>4<br>3<br>1<br>20<br>10<br>3<br>90<br>69   | 3<br>34<br>26<br>72<br>13<br>6<br>3<br>2<br>20<br>9<br>6<br>85<br>69  | 1<br>19<br>24<br>73<br>17<br>7<br>2<br>2<br>5<br>9<br>5<br>68<br>13  | 3<br>22<br>23<br>56<br>13<br>12<br>5<br>3<br>20<br>13<br>5<br>85<br>20  | 7<br>20<br>26<br>53<br>14<br>11<br>4<br>5<br>28<br>11<br>6<br>75<br>25  | 7<br>19<br>19<br>55<br>8<br>7<br>5<br>5<br>15<br>3<br>5<br>74<br>41  | 1 -1 9 19 7 5 -1 4 4 0 5 22 2   | 1<br>1<br>8<br>73<br>5<br>5<br>1<br>2<br>6<br>1<br>8<br>35<br>-2   |
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| 18621524<br>15013000<br>15990302<br>15013000<br>12941317<br>19097784<br>16777410<br>15013000<br>11728181<br>17502144<br>18620382<br>17676829<br>11728181<br>15013000<br>18614366<br>11266159<br>19081716<br>16209527<br>16890436<br>14684309   | 3<br>1<br>21<br>20<br>30<br>7<br>5<br>4<br>1<br>2<br>12<br>55<br>4<br>12<br>13<br>-7<br>5<br>9<br>2<br>7<br>3                                  | -3<br>0<br>19<br>2<br>12<br>-3<br>-3<br>-4<br>-1<br>4<br>-3<br>2<br>2<br>0<br>7<br>-6<br>3<br>-3<br>-3<br>-3<br>-4<br>-1   | 4<br>-2<br>2<br>21<br>1<br>2<br>0<br>0<br>3<br>1<br>1<br>60<br>0<br>2<br>4<br>1<br>-1<br>2<br>-2<br>4<br>0  | 1<br>2<br>9<br>3<br>6<br>1<br>1<br>-2<br>5<br>13<br>-2<br>27<br>2<br>1<br>13<br>0<br>24<br>1<br>0<br>6<br>1                         | 1<br>-1<br>12<br>77<br>11<br>7<br>6<br>2<br>9<br>-11<br>2<br>36<br>2<br>7<br>22<br>-2<br>0<br>76<br>7<br>3<br>5   | 2<br>-2<br>5<br>23<br>3<br>4<br>2<br>3<br>4<br>0<br>4<br>6<br>1<br>3<br>7<br>2<br>1<br>64<br>4<br>2                 | 2<br>8<br>15<br>36<br>9<br>7<br>3<br>22<br>9<br>4<br>74<br>7<br>6<br>9<br>3<br>1<br>6<br>-1<br>22<br>3  | 4<br>21<br>23<br>69<br>13<br>6<br>4<br>4<br>22<br>10<br>6<br>90<br>42<br>13<br>15<br>3<br>1<br>4<br>0<br>35<br>5                            | 3<br>20<br>25<br>82<br>14<br>4<br>3<br>1<br>20<br>10<br>3<br>90<br>69<br>13<br>15<br>4<br>2<br>2<br>1<br>46<br>3  | 3<br>34<br>26<br>72<br>13<br>6<br>3<br>2<br>20<br>9<br>6<br>85<br>69<br>10<br>13<br>4<br>1<br>5<br>0<br>53<br>5                                     | 1<br>19<br>24<br>73<br>17<br>7<br>2<br>2<br>5<br>9<br>5<br>68<br>13<br>12<br>16<br>2<br>1<br>8<br>1<br>4<br>3                                | 3<br>22<br>23<br>56<br>13<br>12<br>5<br>3<br>20<br>13<br>5<br>85<br>20<br>11<br>16<br>4<br>0<br>6<br>0<br>38<br>1                                 | 7<br>20<br>26<br>53<br>14<br>11<br>4<br>5<br>28<br>11<br>6<br>75<br>25<br>11<br>15<br>9<br>1<br>6<br>0<br>32<br>5                                 | 7<br>19<br>19<br>55<br>8<br>7<br>5<br>5<br>15<br>3<br>5<br>74<br>41<br>12<br>9<br>6<br>4<br>5<br>4<br>36<br>5  | 1 -1 9 19 7 5 -1 4 4 0 5 22 2 7 4 -4 1 7 1 33 8   | 1<br>1<br>8<br>73<br>5<br>5<br>1<br>2<br>6<br>1<br>8<br>35<br>-2<br>5<br>8<br>3<br>0<br>4<br>1<br>47<br>3  |
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| 18621524<br>15013000<br>15990302<br>15013000<br>12941317<br>19097784<br>16777410<br>15013000<br>11728181<br>17502144<br>18620382<br>17676829<br>11728181<br>15013000<br>18614366<br>11266159<br>19081716<br>16209527<br>16890436<br>14684309<br>19097784<br>19208477<br>16777410<br>19071018<br>15950465<br>11354358 | 3<br>1<br>21<br>20<br>30<br>7<br>5<br>4<br>1<br>2<br>12<br>55<br>4<br>12<br>13<br>-7<br>5<br>9<br>2<br>7<br>3<br>-6<br>14<br>1<br>-4<br>7<br>3 | -3<br>0<br>19<br>2<br>12<br>-3<br>-3<br>-4<br>-1<br>4<br>-3<br>2<br>2<br>0<br>7<br>-6<br>3<br>-3<br>-2<br>-1<br>-3<br>-4<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1   | 4<br>-2<br>2<br>2<br>1<br>1<br>2<br>0<br>0<br>3<br>1<br>1<br>1<br>60<br>0<br>2<br>4<br>1<br>-1<br>2<br>-2<br>4<br>0<br>0<br>1<br>1<br>2<br>1<br>2<br>1<br>3 | 1<br>2<br>9<br>3<br>6<br>1<br>1<br>-2<br>5<br>13<br>-2<br>27<br>2<br>1<br>13<br>0<br>6<br>1<br>0<br>6<br>1<br>0<br>7<br>3<br>0<br>7 | 1<br>-1<br>12<br>77<br>11<br>7<br>6<br>2<br>9<br>-11<br>2<br>36<br>2<br>7<br>22<br>-2<br>0<br>76<br>7<br>3<br>5<br>1<br>5<br>6<br>6<br>5<br>3<br>0<br>1<br>1<br>5<br>6<br>0<br>1<br>1<br>1<br>5<br>6<br>0<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | 2<br>-2<br>5<br>23<br>3<br>4<br>0<br>4<br>6<br>1<br>3<br>7<br>2<br>1<br>64<br>4<br>2<br>1<br>2<br>4<br>3<br>59<br>2 | 2<br>8<br>15<br>36<br>9<br>7<br>3<br>22<br>9<br>4<br>7<br>6<br>9<br>3<br>1<br>6<br>-1<br>22<br>3<br>6<br>5<br>3<br>-1<br>-2<br>3  | 4<br>21<br>23<br>69<br>13<br>6<br>4<br>4<br>22<br>10<br>6<br>90<br>42<br>13<br>15<br>3<br>1<br>4<br>0<br>35<br>5<br>10<br>6<br>11<br>0<br>7 | 3<br>20<br>25<br>82<br>14<br>4<br>3<br>1<br>20<br>10<br>3<br>90<br>69<br>13<br>15<br>4<br>2<br>2<br>1<br>46<br>3<br>12<br>5<br>0<br>0<br>3<br>3<br>3<br>1<br>2<br>3<br>1<br>3<br>1<br>3<br>1<br>3<br>1<br>3<br>1<br>3<br>3<br>3<br>3<br>3 | 3<br>34<br>26<br>72<br>13<br>6<br>3<br>2<br>20<br>9<br>6<br>85<br>69<br>10<br>13<br>4<br>1<br>5<br>0<br>53<br>5<br>11<br>3<br>1<br>4<br>0<br>5<br>5 | 1<br>19<br>24<br>73<br>17<br>7<br>2<br>2<br>5<br>9<br>5<br>68<br>13<br>12<br>16<br>2<br>1<br>8<br>1<br>4<br>3<br>8<br>7<br>-1<br>2<br>0<br>2 | 3<br>22<br>23<br>56<br>13<br>12<br>5<br>3<br>20<br>13<br>5<br>85<br>20<br>11<br>16<br>4<br>0<br>6<br>0<br>38<br>1<br>10<br>6<br>-1<br>1<br>1<br>6 | 7<br>20<br>26<br>53<br>14<br>11<br>4<br>5<br>28<br>11<br>6<br>75<br>25<br>11<br>15<br>9<br>1<br>6<br>0<br>32<br>5<br>14<br>3<br>6<br>0<br>4<br>12 | 7<br>19<br>19<br>55<br>8<br>7<br>5<br>5<br>5<br>15<br>3<br>5<br>74<br>41<br>12<br>9<br>6<br>4<br>5<br>4<br>3<br>6<br>5<br>8<br>1<br>4<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | 1 -1 9 19 7 5 -1 4 4 0 5 22 2 7 4 -4 1 7 1 33 8 3 7 -4 -3 -5 4  | 1<br>1<br>1<br>8<br>73<br>5<br>5<br>1<br>2<br>6<br>1<br>8<br>35<br>-2<br>5<br>8<br>3<br>0<br>4<br>1<br>47<br>3<br>3<br>6<br>6<br>3<br>6<br>6<br>6<br>7<br>6<br>7<br>6<br>7<br>6<br>7<br>6<br>7<br>6<br>7   |
| 18621524<br>15013000<br>15990302<br>15013000<br>12941317<br>19097784<br>16777410<br>15013000<br>11728181<br>17502144<br>18620382<br>17676829<br>11728181<br>15013000<br>18614366<br>11266159<br>19081716<br>16209527<br>16890436<br>14684309<br>19097784<br>19208477<br>16777410<br>19071018<br>15950465             | 3<br>1<br>21<br>20<br>30<br>7<br>5<br>4<br>1<br>2<br>12<br>55<br>4<br>12<br>13<br>-7<br>5<br>9<br>2<br>7<br>3<br>6<br>14<br>1<br>1             | -3<br>0<br>19<br>2<br>12<br>-3<br>-3<br>-4<br>-1<br>4<br>-3<br>2<br>2<br>0<br>7<br>-6<br>3<br>-3<br>-3<br>-2<br>-1<br>-3<br>-3<br>-4<br>-1<br>-1<br>-3<br>-3<br>-4<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1             | 4<br>-2<br>2<br>2<br>1<br>1<br>2<br>0<br>0<br>3<br>1<br>1<br>60<br>0<br>2<br>4<br>1<br>-1<br>2<br>-2<br>4<br>0<br>0<br>1<br>1<br>1<br>2                     | 1<br>2<br>9<br>3<br>6<br>1<br>1<br>-2<br>5<br>13<br>-2<br>27<br>2<br>1<br>13<br>0<br>24<br>1<br>0<br>6<br>1<br>0<br>7<br>3          | 1<br>-1<br>12<br>77<br>11<br>7<br>6<br>2<br>9<br>-11<br>2<br>36<br>2<br>7<br>22<br>-2<br>0<br>76<br>7<br>3<br>5<br>1<br>5<br>6<br>6<br>5<br>3   | 2<br>-2<br>5<br>23<br>3<br>4<br>0<br>4<br>6<br>1<br>3<br>7<br>2<br>1<br>64<br>4<br>2<br>1<br>2<br>4<br>3<br>59<br>2 | 2<br>8<br>15<br>36<br>9<br>7<br>3<br>22<br>9<br>4<br>7<br>6<br>9<br>3<br>1<br>6<br>-1<br>22<br>3<br>6<br>5<br>3<br>-1<br>-2<br>-1<br>-2<br>-1<br>-2<br>-1<br>-1<br>-2<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1 | 4<br>21<br>23<br>69<br>13<br>6<br>4<br>4<br>22<br>10<br>6<br>90<br>42<br>13<br>15<br>3<br>1<br>4<br>0<br>35<br>5<br>10<br>6<br>1<br>1<br>0  | 3<br>20<br>25<br>82<br>14<br>4<br>3<br>1<br>20<br>10<br>3<br>90<br>69<br>13<br>15<br>4<br>2<br>2<br>1<br>46<br>3<br>12<br>5<br>0<br>0<br>3  | 3<br>34<br>26<br>72<br>13<br>6<br>3<br>2<br>20<br>9<br>6<br>85<br>69<br>10<br>13<br>4<br>1<br>5<br>0<br>53<br>5<br>11<br>3<br>1<br>4                | 1<br>19<br>24<br>73<br>17<br>7<br>2<br>2<br>5<br>9<br>5<br>68<br>13<br>12<br>16<br>2<br>1<br>8<br>1<br>4<br>3<br>8<br>7<br>-1<br>2<br>0      | 3<br>22<br>23<br>56<br>13<br>12<br>5<br>3<br>20<br>13<br>5<br>85<br>20<br>11<br>16<br>4<br>0<br>6<br>0<br>38<br>1<br>10<br>6<br>-1<br>1           | 7<br>20<br>26<br>53<br>14<br>11<br>4<br>5<br>28<br>11<br>6<br>75<br>25<br>11<br>15<br>9<br>1<br>6<br>0<br>32<br>5<br>14<br>3<br>6<br>0<br>4       | 7<br>19<br>19<br>55<br>8<br>7<br>5<br>5<br>15<br>3<br>5<br>74<br>41<br>12<br>9<br>6<br>4<br>5<br>4<br>36<br>5<br>8<br>1<br>4<br>1<br>4<br>1<br>4<br>1<br>4<br>1<br>4<br>1<br>4<br>1<br>4<br>1<br>4<br>1<br>4<br>1          | 1<br>-1<br>9<br>19<br>7<br>5<br>-1<br>4<br>4<br>0<br>5<br>22<br>2<br>7<br>4<br>-4<br>1<br>7<br>1<br>33<br>8<br>3<br>7<br>-4<br>-3<br>-5 | 1<br>1<br>8<br>73<br>5<br>5<br>1<br>2<br>6<br>1<br>8<br>35<br>-2<br>5<br>8<br>3<br>0<br>4<br>1<br>47<br>3<br>3<br>6<br>3<br>6<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0   |

| 16890436   | 13   | -3   | 1  | 0   | 5  | 2  | 17   | 29  | 23  | 19  | 4   | 32   | 26   | 16   | 10  | 16   |
|--|--|--|--|---|--|--|--|---|---|---|---|--|--|--|---|--|
| 15837294   | 8  | 4  | 3  | 0   | 2  | -1   | 6  | 11  | 11  | 9   | 3   | 11   | 11   | 5  | -1  | 3  |
| 11354358   | -5   | 2  | -2   | 0   | 1  | -2   | 0  | 0   | 1   | 1   | -1  | 0  | -2   | -1   | -3  | 0  |
| 15955699   | 5  | -3   | 2  | 2   | 6  | 13   | 3  | 0   | 0   | 2   | 1   | 3  | 4  | 7  | 1   | 5  |
| 17676829   | 9  | 1  | 7  | 1   | 6  | 1  | 67   | 92  | 93  | 91  | 93  | 76   | 80   | 74   | 33  | 3  |
| 9873686  | -1   | -1   | 1  | 1   | -1   | -1   | 0  | 0   | 1   | 0   | -1  | 0  | 1  | 5  | -6  | 0  |
| 15080992   | 4  | -1   | 5  | -3  | 4  | 3  | 34   | 42  | 42  | 55  | 10  | 50   | 27   | 15   | 4   | 6  |
| 19208477   | 3  | 1  | -2   | 1   | 1  | -1   | 0  | 1   | 0   | 1   | 0   | 1  | 3  | 2  | 4   | 2  |
| 19111461   | 4  | -2   | 1  | -2  | 3  | 3  | 3  | 5   | 1   | 2   | 3   | 4  | 9  | 7  | 3   | 2  |
| 11354358   | 7  | -5   | 1  | -2  | 4  | 2  | 1  | 3   | 0   | 2   | 2   | 3  | -1   | 0  | 2   | 3  |
| 16777410   | 1  | -4   | 1  | -5  | 1  | 0  | 1  | 2   | 0   | 0   | 0   | 2  | -3   | -2   | 5   | 4  |
| 16777410   | 6  | -3   | 0  | -3<br>-1  | 0  | 4  | 3  | 5   | 5   | 5   | 5   | 4  | 6  | 5  | 9   | 9  |
| 18614366   | 3  | 0  | -1   | 0   | 0  | 2  | 0  | 2   | 2   | 1   | 2   | -1   | 1  | 2  | 0   | 2  |
| 16777410   | ა<br>1   | -4   | 3  | 0   | 1  | 4  | 3  | 4   | 1   | 5   | 2   | 4  | 9  | 8  | 3   |  |
|  |  |  |  | 1   |  |  |  |   |   |   | 23  |  |  |  |   | 6  |
| 15080992   | 4  | -1   | 2<br>2   |   | 17   | 10   | 65   | 74  | 74  | 81  |   | 76   | 62   | 41   | 8   | 11   |
| 19071018   | -5   | -2   |  | -3  | 23   | 11   | 2  | 0   | 0   | 0   | 0   | 1  | 0  | -4   | -2  | 2  |
| 19179070   | 0  | -4   | 2  | 0   | 7  | 8  | -1   | 2   | 2   | 2<br>7  | 8   | 3  | 3  | 4  | 2   | 5  |
| 11728181   | 13   | 1  | 0  | 1   | 5  | 0  | 5  | 8   | 7   |   | 5   | 6  | 8  | 8  | 4   | 3  |
| 16890436   | 3  | 3  | 0  | 0   | 8  | 2  | 2  | 4   | 4   | 4   | 2   | 4  | 5  | 9  | 3   | 3  |
| 19179070   | 3  | -1   | 0  | 1   | 0  | -1   | 0  | 1   | 3   | 3   | 1   | 0  | 3  | 6  | -4  | -2   |
| 15341487   | 13   | -2   | 11   | 3   | 17   | 9  | 4  | 16  | 12  | 10  | 6   | 8  | 17   | 19   | 12  | 8  |
| 11354358   | 5  | -2   | 2  | -1  | 0  | 3  | 4  | 5   | 3   | 5   | 4   | 5  | 5  | 4  | 3   | 4  |
| 15013000<br>11354358   | -6   | 1  | 3  | 5   | 21   | 2  | 28   | 37  | 36  | 33  | 44<br>-1  | 49   | 45   | 21   | -1  | 5  |
| 11354358   | 0<br>8   | -4<br>-2   | 0  | -6<br>2   | 0<br>3   | 1<br>5   | 1<br>5   | 2<br>6  | 0   | 2<br>5  | 4   | 3<br>6   | -5<br>8  | -3<br>8  | 3<br>6  | 2<br>5   |
| 11354358   | 7  | -2<br>-3   | 1  | 4   | 11   | 4  | 3  | 5   | 2   | 4   | 2   | 4  | 5  | 5  | 4   | 6  |
| 11354358   | 5  | -3<br>-2   | 3  | 0   | 3  | 4  | 5<br>5   | 4   | 2   | 3   | 4   | 3  | 7  | 5  | 10  | 6  |
| 11597418   | 7  | -2<br>-5   | ა<br>1   | 0   | 3<br>7   | 3  | 6  | 6   | 8   | 3<br>4  | 6   | 4  | 7  | 3  | 9   | 5  |
| 16777410   | 2  | -3<br>-2   | -1   | 0   | 4  | 2  | 0  | 1   | 2   | 0   | 1   | 0  | 1  | 4  | 2   | 2  |
| 10111710   | _  |  |  |   |  |  |  |   |   |   |   |  |  |  |   |  |
| 18620382   |  |  |  |   |  |  |  |   |   |   |   |  |  | _  |   |  |
| 18620382<br>19071018   | 5  | -3   | 0  | -2  | 34   | 6  | 89   | 90  | 88  | 90  | 15  | 92   | 79   | 74   | 15  | 23   |
| 19071018   | 5<br>-4  | -3<br>-2   | 0  | -2<br>-2  | 34<br>87   | 6<br>89  | 89   | 90  | 88<br>-1  | 90<br>0   | 15<br>0   | 92<br>0  | 79<br>5  | 74<br>0  | 15<br>0   | 23<br>3  |
| 19071018<br>17502144   | 5<br>-4<br>3   | -3<br>-2<br>-7   | 0 0 3  | -2<br>-2<br>-1  | 34<br>87<br>6  | 6<br>89<br>5   | 89<br>0<br>4   | 90<br>-1<br>6   | 88<br>-1<br>1   | 90<br>0<br>6  | 15<br>0<br>2  | 92<br>0<br>5   | 79<br>5<br>4   | 74<br>0<br>4   | 15<br>0<br>4  | 23<br>3<br>6   |
| 19071018<br>17502144<br>11266159   | 5<br>-4<br>3<br>14   | -3<br>-2<br>-7<br>-1   | 0<br>0<br>3<br>1   | -2<br>-2<br>-1  | 34<br>87<br>6<br>3   | 6<br>89<br>5<br>3  | 89<br>0<br>4<br>3  | 90<br>-1<br>6<br>6  | 88<br>-1<br>1<br>5  | 90<br>0<br>6<br>5   | 15<br>0<br>2<br>4   | 92<br>0<br>5<br>3  | 79<br>5<br>4<br>6  | 74<br>0<br>4<br>0  | 15<br>0<br>4<br>2   | 23<br>3<br>6<br>3  |
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| 19071018<br>17502144<br>11266159<br>15341487<br>15743202<br>19111461<br>11266159<br>15080992<br>15743202<br>19097784<br>17981461<br>11354358<br>18800763<br>11354358<br>18800763<br>12941333<br>19111461<br>12941333<br>11354358<br>11728181<br>19097784<br>11266159<br>15743202<br>17676829             | 5<br>-4<br>3<br>14<br>0<br>8<br>0<br>0<br>3<br>0<br>11<br>20<br>0<br>5<br>13<br>-3<br>14<br>-5<br>-1<br>-1<br>2<br>10<br>0<br>8<br>8<br>-1       | -3<br>-2<br>-7<br>-1<br>-3<br>-5<br>1<br>-4<br>-2<br>0<br>-4<br>2<br>-3<br>-2<br>2<br>-2<br>5<br>2<br>-3<br>-2<br>-4<br>1<br>-3<br>-5<br>0<br>-4<br>2<br>-2<br>0<br>-2<br>0<br>-2<br>0<br>-2<br>0<br>-2<br>0<br>-2<br>0<br>-3<br>0<br>-6<br>0<br>-6<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | 0<br>0<br>0<br>3<br>1<br>2<br>2<br>1<br>3<br>0<br>2<br>3<br>1<br>-1<br>3<br>1<br>-1<br>2<br>-1<br>3<br>2<br>4<br>1<br>5<br>3<br>3<br>2<br>4<br>1<br>5<br>3<br>3<br>2<br>4<br>1<br>5<br>3<br>3<br>2<br>4<br>1<br>5<br>3<br>3<br>2<br>4<br>4<br>1<br>5<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3 | -2<br>-2<br>-1<br>9<br>1<br>-2<br>1<br>1<br>4<br>2<br>1<br>3<br>0<br>-1<br>-3<br>1<br>5<br>2<br>2<br>1<br>0<br>6<br>11<br>2<br>1<br>2<br>1<br>2<br>1<br>2<br>1<br>2<br>1<br>2<br>1<br>2<br>1<br>2<br>1<br>2   | 34<br>87<br>6<br>3<br>4<br>1<br>9<br>7<br>4<br>5<br>2<br>5<br>9<br>1<br>7<br>4<br>7<br>4<br>0<br>1<br>6<br>5<br>4<br>1 | 6<br>89<br>5<br>3<br>5<br>0<br>7<br>-4<br>0<br>2<br>2<br>0<br>5<br>4<br>2<br>-2<br>-4<br>3<br>3<br>4<br>2<br>4<br>5<br>4 | 89<br>0<br>4<br>3<br>8<br>2<br>4<br>83<br>28<br>2<br>1<br>2<br>5<br>5<br>2<br>-4<br>8<br>3<br>9<br>2<br>10<br>23<br>4<br>33<br>4<br>33<br>15   | 90<br>-1<br>6<br>6<br>1<br>21<br>4<br>3<br>90<br>33<br>3<br>4<br>2<br>5<br>5<br>-2<br>-1<br>22<br>3<br>26<br>3<br>15<br>18<br>5<br>5  | 88<br>-1<br>1<br>5<br>2<br>18<br>3<br>89<br>38<br>3<br>5<br>3<br>0<br>5<br>-2<br>1<br>20<br>1<br>30<br>0<br>13<br>16<br>7<br>56<br>70       | 90<br>0<br>6<br>5<br>0<br>14<br>2<br>4<br>92<br>38<br>4<br>4<br>2<br>1<br>9<br>2<br>3<br>12<br>19<br>6<br>45<br>71                            | 15   0   2   4   1   8   1   2   62   9   3   6   1   2   25   2   27   2   13   5   6   19   72            | 92<br>0<br>5<br>3<br>2<br>16<br>3<br>5<br>91<br>42<br>2<br>5<br>6<br>1<br>-3<br>27<br>1<br>12<br>3<br>19<br>22<br>3<br>5<br>4<br>3<br>4<br>3<br>4<br>4<br>5<br>6<br>7<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | 79 5 4 6 5 17 6 8 72 28 4 6 1 3 2 5 2 1 5 24 3 15 12 10 58 33                                    | 74<br>0<br>4<br>0<br>4<br>23<br>5<br>8<br>49<br>37<br>3<br>4<br>0<br>4<br>-2<br>3<br>-1<br>1<br>5<br>18<br>4<br>9<br>6<br>12<br>57<br>59       | 15<br>0<br>4<br>2<br>0<br>4<br>3<br>1<br>3<br>5<br>5<br>6<br>-1<br>4<br>4<br>0<br>3<br>7<br>4<br>3<br>8<br>0<br>9<br>9<br>1<br>8<br>0<br>9<br>1<br>8<br>0<br>9<br>1<br>8<br>1<br>8<br>0<br>9<br>1<br>8<br>1<br>8<br>1<br>8<br>1<br>8<br>1<br>8<br>1<br>8<br>1<br>8<br>1<br>8<br>1<br>8<br>1   | 23<br>3<br>6<br>3<br>5<br>7<br>4<br>6<br>17<br>7<br>3<br>1<br>2<br>9<br>2<br>4<br>-3<br>1<br>3<br>5<br>6<br>4<br>7<br>5<br>6<br>6<br>4<br>7<br>5<br>6<br>6<br>6<br>7<br>7<br>8<br>7<br>8<br>7<br>8<br>7<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8   |

| 15950465 | 3   | -2 | 1  | -3 | 3   | 1  | 4  | 1  | 3  | 3  | 3  | 5  | 2  | -3 | 1   | 2  |
|----------|-----|----|----|----|-----|----|----|----|----|----|----|----|----|----|-----|----|
| 15950465 | 0   | -1 | 4  | 5  | 0   | 4  | 4  | 1  | -1 | 4  | 3  | 4  | 8  | 5  | 2   | 5  |
| 12941333 | -4  | 2  | -2 | 2  | 2   | -5 | 2  | 8  | 5  | 12 | 23 | 5  | 8  | 3  | -5  | -1 |
| 17676829 | 1   | -2 | 5  | 1  | 2   | 1  | 14 | 52 | 58 | 61 | 51 | 27 | 24 | 45 | 4   | 2  |
| 15080992 | 12  | 4  | 15 | 8  | 9   | 6  | 77 | 86 | 86 | 84 | 86 | 86 | 75 | 62 | 12  | 13 |
| 19097784 | 7   | -3 | 1  | 0  | 6   | 3  | 9  | 10 | 7  | 8  | 4  | 10 | 17 | 13 | 7   | 2  |
| 16460937 | 16  | 3  | 0  | -2 | 5   | -1 | 80 | 87 | 88 | 84 | 28 | 85 | 72 | 59 | 7   | 16 |
| 12941333 | -1  | -5 | 3  | 2  | 0   | 3  | 7  | 17 | 17 | 8  | 15 | 9  | 14 | 7  | 2   | 4  |
| 17502144 | 2   | -1 | 3  | 0  | 2   | 2  | 2  | 3  | 1  | 1  | 2  | 4  | 5  | 4  | 2   | 2  |
| 16890436 | 5   | -3 | 2  | -4 | 12  | 4  | 79 | 80 | 80 | 82 | 8  | 86 | 71 | 69 | 43  | 66 |
| 16890436 | 3   | -2 | 2  | 1  | 2   | 6  | 3  | 9  | 6  | 9  | 1  | 5  | 13 | 20 | 20  | 31 |
| 11728181 | 24  | -2 | 5  | 19 | -63 | 3  | 11 | 14 | 14 | 13 | 14 | 15 | 13 | 10 | 7   | 8  |
| 18614366 | 7   | -3 | 5  | 2  | 8   | 4  | 5  | 4  | 3  | 5  | 3  | 5  | 9  | 8  | 6   | 5  |
| 15743202 | -4  | -4 | 2  | 6  | 4   | 2  | 81 | 85 | 86 | 87 | 26 | 86 | 78 | 73 | 11  | 26 |
| 16777410 | -1  | 0  | -1 | 1  | 2   | 0  | 0  | 0  | 0  | 2  | 1  | -1 | 1  | 3  | 5   | 3  |
| 19111461 | 5   | -3 | 2  | 2  | 0   | 3  | 3  | 0  | 0  | 4  | 1  | 4  | 8  | 6  | 3   | 3  |
| 17502144 | 3   | -3 | 3  | 0  | 3   | 4  | 4  | 3  | 0  | 2  | 2  | 3  | 6  | 4  | 2   | 6  |
| 16483772 | 5   | 3  | -3 | 4  | 1   | 1  | 2  | -1 | 0  | -1 | 2  | 3  | 3  | -1 | -3  | 0  |
| 11728181 | 6   | 9  | 6  | 24 | 1   | 0  | 7  | 16 | 18 | 13 | 20 | 13 | 9  | 10 | 4   | 6  |
| 16777410 | 5   | -3 | 1  | -1 | 5   | 4  | 4  | 7  | 3  | 6  | 3  | 7  | 10 | 8  | 7   | 7  |
| 16777410 | 2   | 0  | 0  | 3  | -1  | 1  | 0  | 2  | 1  | 3  | 0  | 1  | 5  | 7  | 1   | 1  |
| 19097784 | 8   | 1  | 0  | 15 | 3   | 1  | 10 | 16 | 15 | 13 | 1  | 17 | 19 | 12 | 0   | 3  |
| 11354358 | 4   | -4 | 1  | -2 | 10  | 3  | 4  | 8  | 4  | 7  | 3  | 5  | 9  | 9  | 6   | 6  |
| 14684309 | 13  | -1 | 1  | -4 | 3   | 6  | 20 | 23 | 19 | 23 | 19 | 25 | 27 | 15 | 8   | 6  |
| 15080992 | 7   | 1  | 12 | 6  | 2   | 0  | 93 | 94 | 95 | 95 | 87 | 95 | 73 | 62 | 18  | 31 |
| 11354358 | -1  | -5 | 3  | -5 | 3   | 3  | 0  | 3  | 0  | 1  | 0  | 1  | -4 | -2 | 3   | 7  |
| 16890436 | 2   | -3 | 3  | -4 | 5   | 5  | 33 | 47 | 42 | 42 | 4  | 54 | 40 | 36 | 11  | 23 |
| 16260133 | 5   | -1 | 3  | 9  | 1   | 2  | 27 | 37 | 31 | 27 | 8  | 45 | 43 | 51 | 17  | 9  |
| 15950465 | 11  | -4 | 1  | -1 | 8   | 3  | 5  | 5  | 2  | 3  | 6  | 6  | 4  | 6  | 9   | 6  |
| 15317461 | 14  | -1 | 1  | -1 | 3   | 4  | 11 | 20 | 20 | 17 | 8  | 15 | 16 | 7  | 7   | 5  |
| 17194588 | 9   | -1 | 3  | 1  | 9   | 6  | 4  | 6  | 5  | 5  | 5  | 8  | 8  | 6  | 4   | 4  |
| 11266159 | 11  | -6 | 2  | 10 | 5   | 3  | 4  | 7  | 5  | 5  | 5  | 8  | 10 | 10 | 12  | 5  |
| 15317461 | 4   | -1 | 2  | -1 | 7   | 3  | 4  | 5  | 3  | 4  | 4  | 4  | 13 | 9  | 5   | 4  |
| 19208477 | 2   | -3 | -1 | -1 | -1  | 2  | 0  | 0  | -1 | 1  | 1  | 2  | 0  | 0  | 2   | 5  |
| 12941317 | 10  | -1 | 2  | 1  | 7   | 3  | 8  | 15 | 20 | 18 | 9  | 17 | 12 | 10 | 7   | 5  |
| 19111461 | 0   | 0  | 0  | 2  | -1  | 1  | 2  | -1 | 0  | 2  | 0  | 3  | 6  | 8  | -1  | 3  |
| 18789685 | -9  | 2  | -2 | 3  | 0   | -3 | -1 | 1  | 3  | 2  | 3  | 0  | 1  | 1  | -13 | -6 |
| 12639547 | 4   | -3 | 5  | 3  | 5   | 0  | 11 | 16 | 13 | 16 | 6  | 18 | 18 | 10 | 6   | 8  |
| 15341487 | 3   | 0  | 0  | 0  | 2   | 3  | 3  | 7  | 27 | 18 | 6  | 6  | 4  | 7  | 7   | -4 |
| 16209527 | -1  | 0  | 4  | -2 | 1   | 1  | 5  | 4  | 3  | 5  | 3  | 6  | 11 | 6  | -1  | 4  |
| 11354358 | 2   | -4 | 3  | -1 | 1   | 5  | 2  | 3  | 1  | 6  | 2  | 2  | 5  | 5  | 3   | 7  |
| 11728181 | 0   | 0  | 2  | 3  | -77 | 8  | 7  | 11 | 10 | 9  | 12 | 12 | 15 | 10 | 10  | 7  |
| 16483772 | 4   | 0  | 7  | 4  | 1   | 4  | 2  | 1  | 3  | 2  | 2  | 3  | 9  | 5  | -2  | 4  |
| 18818075 | -1  | 0  | 1  | 0  | 1   | 1  | 2  | 5  | 9  | 7  | 4  | 4  | 9  | 8  | 2   | 1  |
| 11378364 | 2   | -3 | 1  | 2  | 8   | 2  | 2  | 6  | 3  | 7  | 7  | 4  | 3  | 5  | 58  | 23 |
| 15341487 | -2  | -1 | 1  | 3  | 4   | 2  | 9  | 21 | 46 | 36 | 31 | 24 | 28 | 18 | 6   | 14 |
| 19097784 | 2   | 0  | 0  | -2 | 8   | 3  | 5  | 5  | 6  | 5  | 5  | 4  | 11 | 10 | 3   | 3  |
| 11354358 | 1   | -5 | 3  | -1 | 11  | 5  | 4  | 6  | 0  | 8  | 2  | 3  | 3  | 4  | 4   | 8  |
| 16777410 | 3   | -1 | 0  | 0  | 4   | 2  | 1  | 3  | 3  | 4  | 1  | 2  | 4  | 3  | 2   | 2  |
| 15950465 | 0   | 0  | 1  | 1  | 9   | 3  | 2  | 0  | -3 | 1  | 2  | 4  | 6  | 3  | 0   | 4  |
| 17276055 | -11 | -5 | 1  | 1  | 22  | 5  | 26 | 68 | 81 | 76 | 83 | 42 | 44 | 49 | 21  | 50 |
| 17676829 | -1  | 0  | 2  | 1  | 2   | 3  | -1 | 0  | 3  | 5  | 1  | 2  | 10 | 6  | -2  | 5  |
| 12699760 | 18  | -1 | 1  | 0  | 6   | 3  | 6  | 5  | 2  | 3  | 6  | 5  | 4  | 3  | 7   | 4  |
| 15317461 | 7   | -2 | 4  | 2  | 11  | 4  | 16 | 24 | 20 | 26 | 6  | 27 | 28 | 20 | 5   | 6  |
| 17676829 | 2   | 1  | 6  | 0  | 4   | 2  | 5  | 15 | 45 | 48 | 32 | 11 | 14 | 15 | -3  | 3  |
| 10698440 | 3   | 0  | 3  | -4 | 4   | 4  | 6  | 7  | 5  | 7  | 3  | 6  | 6  | 6  | 5   | 7  |
| 11597418 | 2   | 0  | 0  | -1 | 0   | -1 | 2  | 1  | 0  | 0  | 5  | 5  | 4  | 1  | -2  | 1  |
| 19071018 | -2  | 0  | 1  | 2  | 16  | 8  | 2  | 2  | 2  | 6  | 1  | 4  | 10 | 12 | 1   | 0  |

| 10698440             | 0        | 2            | -2     | 2       | 3      | -4     | 6       | 4      | 5       | 7       | 2       | 8       | 13       | 10      | -7     | 0      |
|----------------------|----------|--------------|--------|---------|--------|--------|---------|--------|---------|---------|---------|---------|----------|---------|--------|--------|
| 17981461             | 10       | -4           | 3      | 0       | 3      | 4      | 5       | 7      | 6       | 6       | 5       | 4       | 10       | 9       | 7      | 6      |
| 15743202             | -3       | -1           | 1      | 4       | 2      | 0      | 16      | 23     | 22      | 26      | 12      | 33      | 29       | 25      | 2      | 3      |
| 18614366             | 9        | -2           | 4      | 3       | 4      | 2      | 0       | 0      | 2       | 3       | -1      | 2       | 7        | 9       | 2      | 5      |
| 15341487             | 24       | 6            | -1     | 4       | 12     | 1      | 1       | 8      | 14      | 8       | 9       | 7       | 14       | 9       | 6      | 0      |
| 16483772             | 15       | 2            | 0      | 3       | 5      | -1     | 0       | 2      | 4       | 3       | 2       | 2       | 5        | 4       | 4      | 1      |
| 15080992             | 7        | -2           | 4      | 1       | 5      | 3      | 79      | 85     | 85      | 89      | 39      | 86      | 76       | 58      | 11     | 13     |
| 16777410             | 2        | 2            | 1      | 2       | 10     | 0      | 1       | 3      | 3       | 3       | 2       | 2       | 4        | 6       | 6      | 4      |
| 15080992             | 2        | 0            | 1      | 1       | 3      | 1      | 84      | 88     | 88      | 90      | 52      | 89      | 69       | 52      | 5      | 14     |
| 19056263             | 12       | -3           | 2      | -8      | 60     | 20     | 5       | 6      | 6       | 5       | 7       | 6       | 1        | 1       | 7      | 4      |
| 18006306             | 7        | -3<br>-1     | 0      | 1       | 2      | 20     | 4       | 4      | 3       | 4       | 3       | 4       | 6        | 7       | 6      | 3      |
| 16209527             | 0        | -2           | 0      | -1      | -1     | 1      | 1       | 4      | 4       | 5       | 3<br>1  | 4       | 7        | 5       | 3      | 3      |
| 15080992             | 4        | - <u>-</u> 2 | 2      | 0       | 2      | 0      | 2       | 4      | 4       | 3       | -1      | 5       | 9        | 6       | 0      | 4      |
| 15000992             | 6        | -1<br>-2     | 2      | 1       | 6      | 3      | 8       | 9      | 9       | 9       |         | 11      | 9<br>11  | 13      | 0      |        |
| 18614366             | 5        | -2<br>-1     | 1      | -1      | 1      | ა<br>3 | 3       |        | 1       |         | 9       | 3       | 3        |         | 4      | 6      |
|                      |          |              |        |         |        |        |         | 4      |         | 5       | 4       |         |          | 4       |        | 4      |
| 19111461             | 4        | -4           | 6      | 0       | 8      | 5      | 4       | 6      | 5       | 6       | 5       | 4       | 6        | 6       | 5      | 7      |
| 18835709             | 1        | 2            | 2      | 0       | 4      | 2      | 4       | 6<br>7 | 5       | 7       | 1       | 4       | 7        | 6       | 2      | 5      |
| 11855979             | 9        | 0            | 2      | 0       | 7      | 2      | 4       |        | 4       | 4       | 3       | 2       | 7        | 6       | 7      | 2      |
| 15080992             | 3        | 1            | 9      | 4       | 5      | 4      | 78      | 85     | 89      | 89      | 82      | 87      | 74       | 72      | 6      | 22     |
| 15341487             | 11       | 1            | -1     | -1      | 3      | 2      | 6       | 9      | 26      | 19      | 5       | 6       | 10       | 9       | 5      | 2      |
| 15837294             | 3        | -4           | 2      | 2       | 2      | 5      | 10      | 11     | 8       | 9       | 3       | 11      | 12       | 8       | 1      | 6      |
| 15341487             | 5        | 0            | 1      | 0       | 8      | 3      | 4       | 5      | 2       | 3       | 2       | 3       | 8        | 8       | 2      | 2      |
| 11597418             | 8        | 0            | 0      | -2      | 8      | 2      | 7       | 12     | 8       | 7       | 6       | 8       | 9        | 8       | 2      | 5      |
| 9873686              | 18       | -2           | 0      | -1      | 5      | 2      | 5       | 5      | 4       | 7       | 4       | 7       | 7        | 1       | 3      | 3      |
| 12699760             | 5        | 2            | 0      | 1       | 2      | 2<br>3 | 2       | 4      | 3       | 3       | 4       | 3       | 4        | 4       | 4      | 1      |
| 9873686              | 5        | -4           | 1      | -4      | 3      |        | 5       | 3      | 5       | 5       | 3       | 5       | 3        | 5       | 5      | 5      |
| 18614366<br>16483772 | -2       | 3            | -1     | 2       | -2     | -3     | -1      | -1     | 1       | -2      | 1       | -1      | 1        | 0       | -10    | -4     |
| 11728181             | 1        | -3           | 0      |         | 1      | 2      | 3       | 3      | 1       | 2       | 2       | 2       | 4        | 4<br>5  | 5      | 3      |
| 16483772             | 14<br>15 | 17<br>-1     | 2<br>2 | 20<br>0 | 8      | 0<br>4 | 13<br>5 | 14     | 16<br>5 | 18<br>4 | 18<br>5 | 19<br>5 | 21<br>11 | 2       | 1<br>7 | 2<br>5 |
| 15341487             | 6        | 2            | 5      | 9       | 6      | 0      |         | 4<br>6 | 5<br>7  |         |         | ა<br>8  | 11       | 10      | 0      | 3      |
| 11354358             | 5        | -2           | 0      | -2      | 8<br>4 |        | 4<br>4  | 5      | 4       | 6       | 3<br>4  | o<br>4  | 5        | 5       | 2      |        |
| 15955699             | ວ<br>19  | 1            | 1      | -2<br>5 | 7      | 2<br>2 | 3       | 5<br>7 | 6       | 5<br>6  | 6       | 7       | ວ<br>15  | ວ<br>11 | 7      | 3<br>2 |
| 18621524             | 0        | 0            | 0      | 3       | 0      | 1      | ა<br>1  | 3      | 1       | 2       | 2       | 2       | 4        | 6       | -7     | -2     |
| 15341487             | 1        | -6           | 0      | 0       | 4      | 2      | 2       | 5<br>5 | 3       | 6       | 2       | 4       | 6        | 4       | 1      | 1      |
| 11728181             | 1        | -0<br>-1     | 4      | 4       | 1      | 3      | 6       | 8      | 8       | 8       | 1       | 11      | 11       | 10      | 5      | 3      |
| 17676829             | 12       | 1            | 3      | 1       | 4      | 2      | 5       | 35     | 55      | 58      | 45      | 16      | 19       | 34      | 3      | 1      |
| 16777410             | 9        | -4           | 1      | 0       | 5      | 5      | 7       | 6      | 8       | 7       | 3       | 4       | 6        | 7       | 5      | 8      |
| 15225695             | 2        | -2           | 3      | 2       | 7      | 8      | ,<br>18 | 24     | 23      | 24      | 14      | 29      | 30       | 3       | 3      | 8      |
| 11855979             | 3        | -3           | 3      | 1       | 5      | 5      | 4       | 3      | 2       | 3       | 0       | 5       | 12       | J       | 4      | 5      |
| 16249345             | 0        | 0            | 4      | 4       | 2      | 2      | 1       | -1     | -1      | 0       | -2      | 1       | 7        | 6       | -3     | 2      |
| 11378364             | 5        | 0            | 2      | 2       | 6      | 3      | 4       | 4      | 5       | 6       | 4       | 6       | 11       | 10      | 31     | 6      |
| 19111461             | 18       | -1           | 1      | 0       | 15     | 7      | 8       | 18     | 18      | 21      | 20      | 16      | 11       | 11      | 18     | 4      |
| 19111461             | 3        | -8           | 1      | -2      | 7      | 6      | 7       | 14     | 15      | 16      | 16      | 12      | 9        | 5       | 13     | 5      |
| 17981461             | 17       | -4           | 1      | -5      | 4      | 2      | 6       | 12     | 2       | 4       | 4       | 5       | 2        | 3       | 6      | 2      |
| 12941333             | -1       | -2           | 3      | 1       | 11     | 4      | 6       | 18     | 20      | 9       | 17      | 9       | 10       | 5       | 0      | 5      |
| 16209527             | -4       | -2           | 1      | 1       | 3      | 3      | 3       | 3      | 3       | 4       | 2       | 5       | 11       | 7       | 2      | 3      |
| 17194588             | 6        | -1           | 1      | 3       | 1      | 1      | 2       | 0      | 3       | 2       | 0       | 1       | 4        | 2       | 1      | 0      |
| 18614366             | 1        | -2           | 1      | 1       | 3      | 2      | 2       | 0      | 0       | 2       | -2      | 0       | 6        | 0       | 1      | 3      |
| 15955699             | -3       | 4            | -2     | 2       | 2      | -4     | -1      | -2     | -1      | 0       | 1       | 2       | 1        | 7       | -3     | -1     |
| 17194588             | -1       | 1            | -1     | 2       | 2      | -2     | 1       | -1     | 1       | -1      | 0       | 0       | 1        | 2       | -5     | -2     |
| 17826092             | 11       | -1           | 1      | -1      | 7      | 3      | 11      | 18     | 18      | 22      | 43      | 18      | 13       | 12      | 8      | 4      |
| 11855979             | 5        | -1           | -1     | 0       | 2      | 0      | 4       | 2      | 4       | 4       | 6       | 4       | 6        | 5       | 2      | 1      |
| 15341487             | 1        | 0            | -1     | 1       | 0      | 0      | 3       | 3      | 3       | 4       | 0       | 4       | 5        | 5       | 0      | 1      |
| 11378364             | -1       | -6           | 2      | 1       | 7      | 3      | 2       | 1      | 1       | 4       | -1      | 3       | 5        | 8       | 28     | 21     |
| 19097784             | 4        | -5           | 3      | 0       | 3      | 4      | 4       | 7      | 3       | 5       | 4       | 6       | 10       | 7       | 2      | 5      |
| 16570917             | 1        | -1           | 0      | 1       | 3      | 1      | 17      | 40     | 39      | 21      | 0       | 22      | 46       | 17      | -4     | 2      |
| 16777410             | 5        | -1           | 3      | 3       | 5      | 1      | 3       | 2      | 4       | 3       | 2       | 3       | 6        | 5       | 6      | 4      |
|                      |          |              |        |         |        |        |         |        |         |         |         |         |          |         |        |        |

| 45044407             |         |          |          |          |         |         |         |         |          |                 |         |         |         |         | 4.0     |        |
|----------------------|---------|----------|----------|----------|---------|---------|---------|---------|----------|-----------------|---------|---------|---------|---------|---------|--------|
| 15341487             | 2       | -3       | 2        | -1       | 14      | 6       | 41      | 70      | 81       | 75              | 53      | 72      | 63      | 56      | 12      | 49     |
| 16260133             | 2       | -2       | 1        | 1        | 3       | 2       | 43      | 49      | 44       | 38              | 24      | 55      | 53      | 56      | 8       | 29     |
| 10698440             | 12      | 52       | 6        | 7        | 7       | 4       | 13      | 15      | 13       | 16              | 3       | 16      | 21      | 15      | 6       | 8      |
| 11378364             | 8       | -8       | 1        | -1       | 11      | 3       | 3       | 4       | 3        | 6               | 5       | 6       | 10      | 7       | 55      | 22     |
| 15990302             | 21      | 22       | 50       | 26       | 64      | 43      | 30      | 68      | 73       | 70              | 61      | 48      | 44      | 57      | 13      | 68     |
| 15743202             | 4       | -1       | 2        | 4        | 2       | 0       | 1       | 1       | 1        | 1               | 1       | 4       | 7       | 1       | 1       | 2      |
| 15341487             | 15      | -1       | 1        | 1        | 8       | 3       | 10      | 23      | 58       | 47              | 17      | 17      | 15      | 12      | 8       | 7      |
| 17826092             | 4       | 1        | 0        | 1        | 3       | -1      | 6       | 18      | 20       | 18              | 54      | 16      | 16      | 12      | -1      | 1      |
| 12699760             | -1      | -4       | 0        | 1        | 1       | -1      | 0       | -1      | 0        | -1<br>4C        | 2       | -1      | 1       | 1       | 0       | 1      |
| 19097784             | 20      | 1        | 1        | 0        | 13      | 1       | 30      | 52      | 50       | 46              | 60      | 42      | 42      | 18      | 10      | 4      |
| 12941333<br>19111461 | 8<br>14 | -2<br>1  | 2<br>4   | -1<br>-2 | 3<br>3  | 3<br>2  | 31      | 52      | 54<br>-  | 36              | 74<br>- | 50      | 51      | 19      | 2       | 3<br>2 |
| 15341487             | -1      | -3       | 1        | 1        | ა<br>11 | 4       | 7<br>9  | 6<br>37 | 5<br>50  | 6<br>4 <i>E</i> | 5       | 8<br>31 | 11      | 9<br>32 | 1       | 30     |
| 12639547             | 4       | -3<br>-1 | 3        | 2        | 7       | 3       | 2       | 2       | 1        | 45<br>2         | 32<br>1 | 1       | 30<br>7 | 3∠<br>5 | 4<br>3  | 6      |
| 18835709             | -7      | -1<br>-5 | 2        | 0        | 2       | 5<br>5  | 3       | 5       | 5        | 7               | 3       | 6       | 14      | 9       | 5<br>5  | 2      |
| 10698440             | 7       | -5<br>26 | 6        | 67       | 11      | 3       | ა<br>15 | ว<br>14 | ່ວ<br>13 | 7<br>18         | 9       | 18      | 22      | 9<br>15 | ა<br>8  | 5      |
| 12941333             | 0       | -1       | 2        | 2        | 3       | 2       | 6       | 10      | 15       | 9               | 13      | 7       | 14      | 6       | 5       | 2      |
| 19097784             | 0       | -1       | -2       | -1       | 4       | 1       | 0       | 3       | 3        | 3               | 1       | 3       | 1       | 1       | 1       | -1     |
| 15341487             | 1       | -1<br>-2 | -2<br>-1 | 0        | 12      | 8       | 14      | 35      | 63       | 55              | 32      | 33      | 26      | 33      | 2       | 9      |
| 12941332             | 11      | 0        | 0        | 0        | 4       | 1       | 9       | 28      | 27       | 14              | 21      | 10      | 19      | 8       | 5       | 3      |
| 16460937             | 15      | 1        | 14       | 11       | 12      | 6       | 94      | 95      | 94       | 96              | 85      | 95      | 89      | 83      | 17      | 47     |
| 16570917             | 14      | -5       | 1        | -4       | 5       | 3       | 14      | 30      | 28       | 16              | 6       | 17      | 30      | 8       | 6       | 4      |
| 18602262             | 5       | -3       | 2        | 2        | 2       | 5<br>5  | 5       | 2       | 9        | 12              | 3       | 4       | 5       | 7       | 0       | 5      |
| 16209527             | 5       | -5<br>-5 | 2        | -1       | 7       | 5       | 7       | 8       | 10       | 10              | 6       | 9       | 13      | 10      | 8       | 9      |
| 17676829             | 7       | -1       | 4        | 9        | 8       | 2       | ,<br>27 | 71      | 80       | 75              | 83      | 52      | 62      | 66      | 12      | 3      |
| 15955699             | -3      | -3       | 3        | 1        | 7       | 1       | 1       | 1       | 3        | 4               | 0       | 2       | 7       | 9       | -3      | 3      |
| 12941333             | 4       | -4       | 2        | -1       | 2       | 2       | 23      | 47      | 55<br>55 | 34              | 69      | 40      | 40      | 12      | 6       | 6      |
| 11354358             | 3       | 0        | 1        | 2        | 4       | 4       | 4       | 6       | 4        | 6               | 5       | 6       | 5       | 7       | 1       | 4      |
| 17884497             | 3       | -4       | 4        | 1        | 8       | 9       | 96      | 97      | 98       | 98              | 51      | 98      | 89      | 96      | 57      | 69     |
| 17276055             | 43      | 0        | 14       | 3        | 64      | 17      | 23      | 58      | 76       | 76              | 64      | 54      | 52      | 68      | 61      | 60     |
| 19081716             | -3      | -3       | 0        | 0        | 85      | 62      | 2       | -1      | -1       | 2               | -1      | 4       | 7       | 5       | 0       | 4      |
| 17502144             | 4       | -3       | 2        | -1       | 5       | 4       | 31      | 39      | 37       | 39              | 3       | 41      | 40      | 54      | 16      | 50     |
| 10698440             | 2       | 6        | 4        | 16       | 9       | 3       | 9       | 7       | 7        | 8               | 3       | 8       | 9       | 6       | -2      | 4      |
| 15743202             | 6       | 2        | 4        | 4        | 5       | 5       | 18      | 39      | 40       | 28              | 18      | 27      | 38      | 42      | 6       | 5      |
| 15950465             | 2       | -2       | 1        | 0        | 7       | 4       | 1       | 3       | 3        | 2               | 2       | 0       | 5       | 8       | -1      | 4      |
| 12941333             | 8       | -5       | 1        | 0        | 6       | 3       | 47      | 68      | 69       | -<br>48         | 83      | 68      | 64      | 31      | 5       | 5      |
| 19056263             | 2       | -3       | 3        | 12       | 83      | 82      | 2       | 2       | 2        | 3               | 7       | 2       | 3       | 3       | 0       | 5      |
| 10048786             | 6       | -1       | -1       | 13       | 68      | 10      | 36      | 45      | 48       | 72              | 34      | 52      | 34      | 12      | 10      | 17     |
| 16570917             | 7       | 0        | 3        | 5        | 2       | -1      | 71      | 88      | 87       | 73              | 7       | 79      | 69      | 56      | 2       | 1      |
| 15990302             | 13      | -2       | 1        | -2       | 60      | 22      | 65      | 87      | 91       | 90              | 86      | 81      | 71      | 72      | 29      | 26     |
| 15080992             | 18      | 6        | 14       | 15       | 1       | 4       | 95      | 95      | 95       | 95              | 95      | 94      | 83      | 82      | 22      | 46     |
| 18835709             | 5       | -3       | 1        | -3       | 2       | 6       | 2       | 4       | 1        | 2               | 3       | 2       | 7       | 1       | 2       | 2      |
| 19056263             | 3       | -1       | 3        | 0        | 69      | 57      | 5       | 7       | 5        | 9               | 12      | 8       | 16      | 13      | 2       | 8      |
| 16570917             | 5       | 2        | 0        | 6        | 5       | 1       | 48      | 71      | 69       | 52              | 2       | 57      | 70      | 34      | -4      | 0      |
| 16570917             | 7       | -4       | 4        | -1       | 8       | 4       | 41      | 64      | 63       | 41              | 5       | 48      | 60      | 36      | 10      | 5      |
| 18602262             | -2      | 3        | 2        | 2        | 0       | 0       | 1       | 3       | 26       | 24              | 2       | 3       | 10      | 19      | 1       | -2     |
| 17276055             | -2      | 0        | 8        | 1        | 18      | -1      | 18      | 58      | 76       | 74              | 85      | 29      | 36      | 56      | 19      | 57     |
| 15341487             | -6      | -2       | 3        | 3        | 8       | 6       | 16      | 36      | 56       | 50              | 20      | 42      | 36      | 34      | 14      | 43     |
| 11855979             | 10      | 1        | 5        | 2        | 2       | 1       | 5       | 4       | 5        | 4               | 4       | 5       | 2       | 2       | 5       | 1      |
| 19056263             | 21      | -3       | 3        | 0        | 82      | 81      | 7       | 9       | 8        | 9               | 19      | 8       | 9       | 6       | 6       | 6      |
| 17276055             | 8       | -7       | 19       | 1        | 29      | 3       | 33      | 73      | 85       | 79              | 91      | 45      | 59      | 64      | 41      | 70     |
| 17027260             | 7       | -3       | 1        | -1       | 30      | 7       | 85      | 94      | 94       | 91              | 35      | 92      | 88      | 78      | 73      | 57     |
| 18662874             | 2       | 1        | -2       | 0        | 6       | 3       | -1      | 4       | 3        | 3               | -1      | 1       | 3       | 6       | 3       | 0      |
| 15317461             | Λ       | 1        | 0        | 3        | 0       | 0       | 29      | 36      | 35       | 30              | 2       | 26      | 37      | 8       | 1       | 1      |
| 13317401             | 4       |          |          |          |         |         |         |         |          |                 |         |         |         |         |         |        |
| 19179070             | 2       | 0        | 6        | 4        | 5       | 5       | 2       | 0       | 1        | 0               | 3       | 3       | 10      | 2       | -2      | 0      |
| 19179070<br>19056263 |         |          |          | 4<br>-3  | 5<br>84 | 5<br>81 | 2<br>6  | 0<br>5  | 1<br>5   | 0<br>7          | 3<br>12 | 3<br>10 | 10<br>9 | 2<br>4  | -2<br>5 | 0<br>6 |
| 19179070             | 2       | 0        | 6        |          |         |         |         |         |          |                 |         |         |         |         |         |        |

| 18835709 | 2  | -3 | -1 | -2 | 1  | 2  | 1  | 2  | 1  | 2  | 0  | 2  | 4  | 3  | 1  | 2  |   |
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| 16460937 | 15 | 10 | 15 | 25 | 9  | 3  | 91 | 94 | 93 | 93 | 58 | 93 | 82 | 79 | 17 | 45 | ı |
| 17276055 | 12 | -4 | 10 | -2 | 34 | 5  | 39 | 77 | 85 | 82 | 89 | 48 | 56 | 65 | 44 | 71 |   |
| 11597418 | 1  | 3  | -2 | 3  | -2 | -4 | -2 | 4  | 4  | 5  | 1  | 3  | 8  | 3  | -4 | -1 |   |
| 15950465 | 3  | 7  | 0  | 4  | 2  | -2 | -1 | -1 | 4  | 2  | 0  | 3  | 7  | 4  | -7 | -2 |   |
| 11728181 | 27 | 41 | 11 | 54 | 13 | 7  | 21 | 32 | 31 | 39 | 41 | 33 | 33 | 22 | 4  | 6  |   |

|  | TK       | ¥        | ¥         | ¥        | ¥       | ¥           |
|--|----------|----------|-----------|----------|---------|-------------|
|  |          |          |           |          |         |             |
| BTK TEC TTEC TTEC TTEC TTEC TTEC TTEC TTE  | SRC      | YES      | EPHA2     | EPHA4    | EPHA3   | 29<br>EPHB4 |
| 29     44     57     0     92     41     88     71     72     83     90     89     73     89       1     4     3     2     2     2     3     4     5     5     3     3     4     5 | 91<br>7  | 79<br>7  | 23<br>-1  | 63<br>9  | 34<br>4 | 29<br>5     |
| 0 16 5 3 4 4 4 41 25 31 48 47 29 38  | 72       | 47       | -1<br>-1  | 1        | -6      | 3           |
| 35 62 63 7 55 13 12 69 82 68 87 86 57 85   | 92       | 71       | 71        | 75       | 15      | 55          |
| 2 6 8 8 23 -2 6 17 19 9 6 4 4 3  | 23       | 12       | 2         | 6        | 2       | 4           |
| 11 8 10 14 7 1 17 59 64 18 31 26 15 2<br>1 2 2 0 2 1 1 2 4 1 1 2 2 1   | 65<br>-3 | 63<br>2  | 0<br>0    | 10<br>3  | 6<br>-1 | 4<br>1      |
| 4 13 10 5 -2 4 5 31 15 21 36 30 25 27  | 46       | 18       | 3         | 11       | 3       | 2           |
| 3 28 32 2 <mark>73</mark> 32 14 23 44 <u>65 61 57</u> 38 36  | 54       | 32       | 47        | 69       | 20      | 46          |
| 0 2 6 2 10 3 8 33 27 6 11 9 5 4<br>20 55 63 1 100 42 94 66 82 85 91 89 77 96   | 31<br>95 | 27<br>83 | -2<br>54  | 7<br>81  | 2<br>73 | 0<br>72     |
| -1 3 2 2 3 3 4 5 2 7 10 9 13 11  | 20       | 18       | 1         | 8        | 2       | 0           |
| 1 5 5 3 0 0 4 6 6 10 8 7 10 9  | 19       | 11       | 2         | 6        | 3       | 4           |
| 2 4 5 2 2 0 1 5 5 5 5 4 4 8  | 22       | 7        | 0         | 4        | 2       | 3           |
| -1 2 3 0 3 -2 3 3 2 9 6 3 4 5<br>4 4 4 1 -3 -3 1 11 4 6 5 5 10 1   | 12<br>6  | 3<br>5   | -1<br>-11 | -5       | 3<br>2  | 2<br>1      |
| 7 35 39 2 66 19 13 18 41 51 57 52 25 32  | 49       | 23       | 50        | 61       | 18      | 50          |
| 3 1 6 1 3 -3 7 18 30 7 10 7 6 2  | 25       | 20       | 1         | 4        | 3       | 2           |
| 77 84 83 1 103 69 96 91 97 90 97 96 82 94  | 95       | 99       | 96        | 93       | 81      | 96          |
| 1 9 6 3 6 -1 4 10 30 30 18 14 14 15<br>0 4 0 2 -3 1 1 3 3 2 3 2 3 2  | 33<br>0  | 16<br>2  | 2<br>-2   | 12<br>0  | 4<br>3  | 4<br>1      |
| 1 59 50 2 51 18 46 56 67 74 84 81 65 60  | 83       | 63       | 2         | 14       | 3       | 10          |
| -1 -1 -2 5 -1 4 1 12 4 6 8 7 11 3  | 1        | 14       | -3        | -2       | -2      | -2          |
| 1 5 3 2 13 3 2 7 20 11 23 14 34 8  | 12       | 42       | 0         | 13       | 4       | 13          |
| -1 2 5 1 3 -3 1 3 3 4 8 6 0 4<br>9 50 27 3 19 18 14 36 25 71 46 41 44 71   | 8<br>71  | 7<br>66  | 1<br>2    | 13<br>17 | 4<br>7  | 1<br>7      |
| 1 5 6 2 4 5 2 13 23 16 21 17 9 13  | 27       | 20       | 1         | 13       | 4       | 2           |
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| 0 8 5 3 -1 1 0 10 6 6 7 5 11 5   | 10       | 11       | -2        | 5        | 1       | 1           |
| 12 42 35 11 10 27 4 72 69 62 66 61 60 77 7 29 34 2 36 6 12 14 15 31 36 31 30 43  | 50<br>65 | 39<br>23 | 34<br>18  | 57<br>29 | 14<br>8 | 17<br>5     |
| 7 29 34 2 36 6 12 14 15 31 36 31 30 43<br>-2 6 6 1 4 -1 1 2 5 5 5 3 6 5  | 8        | 23<br>5  | -2        | 8        | o<br>5  | 3           |
| 1 14 14 5 5 5 2 45 <mark>53</mark> 33 <mark>59 53</mark> 40 40   | 73       | 51       | 21        | 33       | 8       | 21          |
| -1 2 0 4 <mark>-2</mark> 1 1 18 6 14 12 11 15 5  | 8        | 10       | -2        | -3       | -4      | -1          |
| -2     4     2     1     6     3     1     4     3     3     3     2     1     5       2     58     25     9     9     1     1     9     11     14     15     14     11     2      | 4<br>18  | 4<br>9   | -2<br>3   | 5<br>20  | 2<br>6  | 1<br>4      |
| 0 4 7 2 3 1 2 4 2 12 5 4 7 3   | 9        | 9<br>4   | 0         | 6        | 4       | 3           |
| 0 3 3 0 3 1 0 1 1 3 6 3 6 5  | 5        | 4        | 0         | 7        | 0       | 0           |
| 29 56 37 6 30 18 46 74 64 74 79 75 76 72   | 89       | 96       | 10        | 34       | 17      | 32          |
| 1 19 5 1 14 3 5 6 29 13 24 18 17 7   | 18       | 40       | 2         | 14       | -1<br>1 | 15          |
| -1 0 0 12 -9 2 1 12 8 11 20 17 14 9<br>4 31 13 2 11 30 12 55 56 64 62 56 52 86   | 9<br>75  | 12<br>73 | -1<br>-1  | -6<br>3  | -1<br>4 | 9           |

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|---------|---------|---------|---------|----------|----------|---------|----------|----------|----------|----------|----------|-----------|---------|----------|----------|----------|----------|---------|---------|
| -1      | 2       | 4       | 1       | 9        | -1       | 2       | 3        | 4        | 10       | 8        | 6        | 1         | 3       | 7        | 6        | 0        | 10       | 6       | 3       |
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| 3       | 4<br>7  | 6<br>7  | 2<br>3  | 11<br>7  | 3<br>2   | 0<br>5  | 11<br>6  | 14<br>10 | 10<br>13 | 9<br>8   | 7<br>6   | 15<br>12  | 12<br>8 | 11<br>11 | 26       | 0<br>2   | 6<br>13  | 5<br>5  | 4<br>5  |
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| Ö       | 4       | 4       | 1       | 3        | -4       | 2       | 3        | 5        | 6        | 7        | 2        | 2         | 2       | 7        | 0        | 0        | 4        | 5       | 2       |
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| 3       | 22      | 21      | 2       | 50       | 13       | 7       | 14       | 31       | 37       | 46       | 42       | 21        | 20      | 38       | 19       | 40       | 67       | 16      | 39      |
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| 7       | 36<br>3 | 38<br>2 | -3<br>1 | 62<br>-1 | 9<br>6   | 17<br>1 | 16<br>2  | 30<br>1  | 59<br>4  | 72<br>2  | 68<br>1  | 30<br>-23 | 30<br>2 | 59<br>2  | 33<br>2  | 44<br>-3 | 81<br>0  | 16<br>4 | 46<br>1 |
| 1       | 3<br>10 | 9       | 4       | 5        | -3       | 2       | 6        | 5        | 11       | 6        | 4        | 7         | 5       | 11       | 3        | 2        | 5        | 4       | 3       |
| 1       | 9       | 8       | 4       | 8        | 4        | 5       | 20       | 14       | 20       | 27       | 22       | 30        | 27      | 50       | 40       | 2        | 14       | 9       | 5       |
| 8       | 25      | 39      | 8       | 30       | 7        | 4       | 60       | 55       | 54       | 64       | 60       | 53        | 41      | 83       | 58       | 21       | 55       | 16      | 21      |
| 1       | 5       | 5       | 2       | 3        | -2       | 0       | 5        | 5        | 5        | 4        | 3        | 2         | 2       | 8        | -2       | 2        | 2        | 3       | 3       |
| 2       | 4       | 1       | 1       | -2       | -2       | 2       | 6        | 7        | 3        | 3        | 4        | 4         | 2       | 6        | 3        | 1        | -9       | -2      | 0       |
| -3      | -1      | 0       | 0       | 4        | 0        | 3       | 2        | 39       | 47       | 66       | 61       | 10        | 20      | 37       | 22       | 83       | 87       | 16      | 64      |
| 1       | 3       | 6       | 2       | 12       | -1       | 2       | 6        | 14       | 8        | 9        | 7        | 6         | 9       | 12       | 16       | 1        | 9        | 4       | 2       |
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| 0       | 4       | 4       | 2       | 1        | 0        | 3       | 14       | 9        | 11       | 12       | 11       | 16        | 8       | 14       | 9        | -2       | 5        | 2       | 0       |
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| 4       | 17      | 17      | 14      | 5        | 0        | 0       | 25       | 20       | 23       | 28       | 22       | 14        | 40      | 74       | 43       | 17       | 56       | 11      | 31      |
| 0       | 2       | 1       | -3      | 12       | 2        | 3       | 3        | 5        | 10       | 8        | 6        | 11        | 1       | 7        | 21       | -2       | 11       | 1       | 0       |
| -2      | 2       | 1       | 1       | 4        | -2       | 2       | 4        | 2        | 5        | 3        | 1        | 1         | -1      | 5        | 5        | -3       | 4        | 0       | 1       |
| 3       | 3       | 1       | 0       | 15       | 4        | 0       | 6        | 25       | 3        | 4        | 3        | 7         | 8       | 3        | 9        | -3       | 1        | -2      | 1       |
| 4       | 7       | 14      | 5       | 8        | 3        | 8       | 33       | 12       | 22       | 30       | 23       | 27        | 11      | 31       | 27       | 4        | 16       | 9       | 6       |
| 26      | 21<br>5 | 21<br>5 | 71<br>5 | 44<br>6  | 4<br>0   | 15<br>3 | 75<br>20 | 61<br>9  | 49<br>12 | 65<br>22 | 61<br>17 | 52<br>13  | 12<br>7 | 65<br>19 | 28<br>16 | 8<br>2   | 34<br>12 | 7<br>4  | 9<br>3  |
| 0       | 3       | 6       | 4       | 6        | -7       | 2       | 7        | 5        | 12       | 8        | 4        | 7         | 2       | 12       | 6        | 1        | 8        | 6       | 4       |
| 0       | 3       | 3       | 1       | 0        | 1        | -1      | 2        | 5        | 0        | 5        | 4        | 3         | 8       | 2        | 3        | 0        | 8        | 1       | 2       |
| 1       | 4       | 3       | 2       | 4        | -2       | 2       | 4        | 6        | 6        | 10       | 2        | 5         | 5       | 8        | 8        | 1        | 8        | 3       | 4       |
| 2       | 7       | 10      | 4       | 4        | 15       | 2       | 11       | 8        | 13       | 14       | 9        | 12        | 26      | 17       | 13       | 3        | 6        | 5       | 4       |
| -2      | 3       | 5       | 1       | 0        | 0        | 0       | 11       | 3        | 21       | 10       | 9        | 22        | 54      | 34       | 17       | -3       | 10       | 2       | -1      |
| -1      | 12      | 6       | -1      | 6        | -1       | 2       | 5        | 7        | 7        | 9        | 6        | 3         | 5       | 11       | 8        | 4        | 13       | 3       | 3       |
| 7       | 79      | 68      | 8       | 52       | 9        | 12      | 47       | 57       | 50       | 51       | 47       | 48        | 29      | 49<br>-  | 46       | 19       | 44       | 17      | 40      |
| 0       | 3<br>5  | 3<br>6  | 1<br>4  | -2<br>6  | -1<br>0  | 1<br>1  | 1<br>6   | 10<br>4  | 8<br>11  | 46<br>8  | 42<br>7  | 3<br>8    | 8<br>8  | 5<br>14  | 3<br>4   | 4<br>1   | 14<br>12 | 3<br>4  | 3<br>3  |
| 0       | 9       | 10      | 15      | 4        | -4       | 4       | 22       | 9        | 15       | 0<br>12  | 9        | o<br>15   | 8       | 15       | 14       | 2        | 3        | 4       | 3       |
| 2       | 5       | 6       | 3       | 3        | 0        | 0       | 3        | 5        | 8        | 2        | 2        | 4         | 2       | 7        | -2       | 2        | -1       | 5       | 1       |
| 2       | 1       | 5       | 1       | 2        | 1        | 1       | 1        | 3        | 1        | 1        | 2        | 4         | 1       | 0        | 4        | 0        | 2        | 1       | 2       |
| 0       | 4       | 6       | 6       | 8        | 5        | 4       | 4        | 3        | 9        | 9        | 6        | 4         | 1       | 9        | 9        | 0        | 11       | 6       | 3       |
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| 13      | 37      | 30      | 3       | 68       | 43       | 20      | 22       | 27       | 51       | 57       | 53       | 34        | 39      | 59       | 31       | 61       | 81       | 22      | 70      |
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| 2       | 3       | 5       | 2       | 6        | -3       | 1       | 6        | 8        | 7        | 5        | 1        | 10        | 9       | 9        | 31       | 0        | -2       | 4       | 2       |
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| 1       | 4       | 3       | 1       | -4       | -1       | 0       | 2        | 2        | 3        | -2       | -1       | 1         | -1      | 5        | -2       | 2        | -7       | 0       | 0       |
| 3       | 8       | 8       | 2       | 5        | -2       | 4       | 5        | 11       | 18       | 7        | 5        | 12        | 9       | 18       | 7        | 0        | 12       | 6       | 3       |
| 1       | 4       | 6       | 3       | 42       | -1       | 1       | 7        | 7        | 7        | 9        | 7        | 6         | 3       | 9        | 8        | 2        | 8        | 5       | 7       |
|         | 2       | 8       | 3       | 6        | -1       | 3       | 7        | 5        | 9        | 5        | 3        | 7         | 2       | 9        | -2       | 0        | 8        | 5       | 2       |

| 1  | 25  | 16  | 3   | 15   | 1   | 2   | 6   | 7  | 20  | 19   | 15   | 9  | 11  | 14  | 10  | 4  | 26  | 6  | 9   |
|--|---|---|---|--|---|---|---|--|---|--|--|--|---|---|---|--|---|--|---|
| 0  | 2   | 3   | 1   | 3  | 3   | 0   | 5   | 6  | 7   | 4  | 3  | 7  | 3   | 8   | 7   | -3   | 1   | -3   | 0   |
| -1   | 0   | -3  | -1  | -1   | -4  | 1   | -1  | 1  | -1  | 0  | 1  | -1   | 3   | -3  | -3  | -3   | -6  | -7   | -1  |
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| -1   | 2   | -1  | 3   | 0  | -1  | 4   | 3   | 47   | 28  | 70   | 66   | 10   | 21  | 27  | 12  | 94   | 86  | 68   | 73  |
| 3  | 2   | 2   | 1   | 0  | -3  | -2  | 1   | 3  | 2   | 0  | 0  | 3  | -2  | 1   | 0   | 1  | -5  | 1  | 0   |
| -1<br>1  | 3<br>3  | 5<br>3  | 0   | 6<br>3   | -4<br>2   | 3<br>-1   | 5<br>6  | 9<br>7   | 7<br>3  | 15<br>1  | 11<br>1  | 8<br>11  | 8<br>8  | 18<br>-1  | 8<br>23   | -2<br>-3   | 10<br>2   | 4<br>1   | 1<br>1  |
| 1  | 4   | 5   | 3   | 4  | -1  | 3   | 4   | 6  | 7   | 4  | 2  | 8  | 5   | 7   | 4   | 2  | 10  | 5  | 2   |
| -4   | 0   | 0   | -3  | 5  | -3  | 3   | -2  | -2   | 5   | 4  | 2  | 4  | -4  | 7   | 0   | -3   | 10  | 1  | 1   |
| -5   | -3  | -2  | -3  | 5  | -2  | 2   | -3  | -4   | 3   | 3  | 2  | 2  | -4  | 4   | 2   | -5   | 6   | -2   | -3  |
| 6  | 3   | 7   | 2   | 14   | 3   | 1   | 14  | 22   | 14  | 10   | 8  | 20   | 15  | 12  | 42  | 1  | 11  | 6  | 3   |
| 0  | 2   | 3   | 1   | 5  | -3  | 3   | 3   | 4  | 6   | 4  | 4  | 3  | 1   | 4   | 2   | 0  | 6   | 2  | 1   |
| 0  | 6   | 5   | 1   | 3  | -3  | 3   | 6   | 8  | 12  | 5  | 3  | 4  | 0   | 16  | 5   | 1  | 9   | 2  | 2   |
| 0  | 8   | 6   | 4   | 5  | 0   | 6   | 7   | 21   | 16  | 23   | 19   | 19   | 16  | 33  | 14  | 1  | 11  | 3  | 3   |
| -2   | 0   | 1   | -2  | 2  | -1  | 1   | -2  | -2   | 5   | 2  | 1  | 2  | -2  | 6   | -3  | -5   | -1<br>-   | -3   | -4  |
| 1  | 4   | 3   | 1   | 3  | 2<br>-2   | 3   | 3   | 4  | 9   | 5  | 4  | 6  | 5   | 14  | 8   | 0  | 5   | 2  | 1   |
| 0 2  | 4<br>4  | 1<br>4  | 1<br>1  | 2<br>4   | -2<br>4   | 3   | 2<br>9  | 2<br>4   | 4<br>3  | 4<br>5   | 5<br>4   | 3<br>6   | 3<br>2  | 6<br>3  | 2<br>6  | 1<br>2   | 7<br>4  | 3<br>1   | 1<br>2  |
| -1   | 2   | 2   | 1   | -2   | -1  | 0   | 9<br>1  | 1  | ა<br>2  | 0  | 1  | 4  | 3   | ა<br>1  | 6   | -3   | -5  | 1  | 1   |
| 2  | 6   | 12  | 2   | 7  | 2   | 2   | 4   | 6  | 11  | 9  | 7  | 7  | 8   | 24  | 6   | 2  | 24  | 8  | 5   |
| -1   | 3   | 3   | 1   | 4  | -2  | 2   | 3   | 4  | 8   | 7  | 4  | 10   | 5   | 4   | 5   | -2   | 10  | 4  | 2   |
| 3  | 6   | 9   | 16  | 2  | 0   | 4   | 48  | 25   | 42  | 42   | 36   | 44   | 15  | 42  | 45  | 1  | 6   | 5  | 5   |
| -5   | -3  | -2  | -3  | 4  | 0   | 1   | 0   | -3   | 2   | 3  | 2  | 5  | -3  | 2   | -1  | -6   | 6   | -2   | 2   |
| 3  | 6   | 7   | 2   | 7  | 1   | 4   | 5   | 8  | 9   | 7  | 5  | 6  | 6   | 7   | 3   | 2  | 12  | 4  | 4   |
| 1  | 7   | 5   | 3   | 4  | -3  | 3   | 7   | 6  | 8   | 6  | 4  | 5  | 3   | 8   | 6   | 0  | 11  | 5  | 4   |
| 1  | 5   | 5   | 2   | 3  | 0   | 0   | 5   | 7  | 9   | 7  | 3  | 7  | 8   | 10  | 7   | 0  | 11  | 5  | 3   |
| 0  | 3   | 5   | 2   | 7  | 0   | 1   | 2   | 1  | 9   | 7  | 6  | 3  | 2   | 8   | 9   | 0  | 15  | 5  | 8   |
| 2  | 1   |   |   |  |   |   |   |  |   |  |  |  |   |   |   |  |   |  |   |
| 27   |   | 3   | 1   | 2  | 50  | 70  | 67  | 60   | 2   | 3  | 2  | 8  | 4<br>65   | 2   | 13<br>74  | 0  | 3<br>45   | 1  | 2   |
| 27   | 26  | 27  | 2   | 79   | 50  | 70  | 67  | 60   | 72  | 85   | 83   | 62   | 65  | 81  | 74  | 10   | 45  | 12   | 66  |
| 27<br>0<br>-1  | 26<br>-1  | 27<br>4   | 2<br>2  | 79<br>24   | 50<br>1   | 70<br>1   | 67<br>4   | 60<br>2  | 72<br>4   | 85<br>1  |  | 62<br>3  | 65<br>2   | 81<br>7   | 74<br>-2  | 10<br>-1   | 45<br>-1  |  |   |
| 0  | 26  | 27  | 2   | 79   | 50  | 70  | 67  | 60   | 72  | 85   | 83<br>0  | 62   | 65  | 81  | 74  | 10   | 45  | 12<br>2  | 66<br>1   |
| 0 -1   | 26<br>-1<br>4   | 27<br>4<br>4  | 2<br>2<br>2   | 79<br>24<br>4  | 50<br>1<br>-2   | 70<br>1<br>4  | 67<br>4<br>3  | 60<br>2<br>3   | 72<br>4<br>8  | 85<br>1<br>7   | 83<br>0<br>4   | 62<br>3<br>3   | 65<br>2<br>3  | 81<br>7<br>15   | 74<br>-2<br>5   | 10<br>-1<br>2  | 45<br>-1<br>10  | 12<br>2<br>4   | 66<br>1<br>4  |
| 0<br>-1<br>0   | 26<br>-1<br>4<br>3  | 27<br>4<br>4<br>3   | 2<br>2<br>2<br>1<br>2<br>2  | 79<br>24<br>4<br>5<br>1                                  | 50<br>1<br>-2<br>1<br>-2<br>2   | 70<br>1<br>4<br>2<br>0<br>5   | 67<br>4<br>3<br>0<br>2<br>5   | 60<br>2<br>3<br>1  | 72<br>4<br>8<br>4   | 85<br>1<br>7<br>4<br>2<br>10   | 83<br>0<br>4<br>3<br>0<br>8  | 62<br>3<br>3<br>1  | 65<br>2<br>3<br>6<br>2<br>15  | 81<br>7<br>15<br>8<br>6<br>14   | 74<br>-2<br>5<br>6  | 10<br>-1<br>2<br>1<br>1<br>0   | 45<br>-1<br>10<br>8<br>2<br>12  | 12<br>2<br>4<br>4<br>4<br>5  | 66<br>1<br>4<br>0   |
| 0<br>-1<br>0<br>1<br>0<br>-1   | 26<br>-1<br>4<br>3<br>4<br>6<br>1   | 27<br>4<br>4<br>3<br>7<br>9<br>1  | 2<br>2<br>2<br>1<br>2<br>2<br>1   | 79<br>24<br>4<br>5<br>1<br>7<br>2                        | 50<br>1<br>-2<br>1<br>-2<br>2<br>-1   | 70<br>1<br>4<br>2<br>0<br>5<br>2  | 67<br>4<br>3<br>0<br>2<br>5<br>3  | 60<br>2<br>3<br>1<br>1<br>1<br>11<br>4   | 72<br>4<br>8<br>4<br>8<br>13<br>4   | 85<br>1<br>7<br>4<br>2<br>10<br>2  | 83<br>0<br>4<br>3<br>0<br>8<br>3   | 62<br>3<br>3<br>1<br>4<br>15<br>4  | 65<br>2<br>3<br>6<br>2<br>15<br>5   | 81<br>7<br>15<br>8<br>6<br>14<br>3  | 74<br>-2<br>5<br>6<br>1<br>7  | 10<br>-1<br>2<br>1<br>1<br>0   | 45<br>-1<br>10<br>8<br>2<br>12<br>3   | 12<br>2<br>4<br>4<br>4<br>5  | 66<br>1<br>4<br>0<br>1<br>5   |
| 0<br>-1<br>0<br>1<br>0<br>-1   | 26<br>-1<br>4<br>3<br>4<br>6<br>1   | 27<br>4<br>4<br>3<br>7<br>9<br>1  | 2<br>2<br>2<br>1<br>2<br>2<br>1<br>2  | 79<br>24<br>4<br>5<br>1<br>7<br>2<br>5                   | 50<br>1<br>-2<br>1<br>-2<br>2<br>-1<br>0  | 70<br>1<br>4<br>2<br>0<br>5<br>2<br>3   | 67<br>4<br>3<br>0<br>2<br>5<br>3<br>5   | 60<br>2<br>3<br>1<br>1<br>11<br>4<br>4   | 72<br>4<br>8<br>4<br>8<br>13<br>4<br>13   | 85<br>1<br>7<br>4<br>2<br>10<br>2<br>7   | 83<br>0<br>4<br>3<br>0<br>8<br>3<br>4  | 62<br>3<br>3<br>1<br>4<br>15<br>4<br>8   | 65<br>2<br>3<br>6<br>2<br>15<br>5   | 81<br>7<br>15<br>8<br>6<br>14<br>3<br>15  | 74<br>-2<br>5<br>6<br>1<br>7<br>1   | 10<br>-1<br>2<br>1<br>1<br>0<br>-3<br>2  | 45<br>-1<br>10<br>8<br>2<br>12<br>3<br>3  | 12<br>2<br>4<br>4<br>4<br>5<br>-2<br>4   | 66<br>1<br>4<br>0<br>1<br>5<br>1<br>2   |
| 0<br>-1<br>0<br>1<br>0<br>-1<br>1  | 26<br>-1<br>4<br>3<br>4<br>6<br>1<br>9<br>20  | 27<br>4<br>4<br>3<br>7<br>9<br>1<br>9   | 2<br>2<br>2<br>1<br>2<br>2<br>1<br>2<br>1   | 79<br>24<br>4<br>5<br>1<br>7<br>2<br>5                   | 50<br>1<br>-2<br>1<br>-2<br>2<br>-1<br>0<br>5   | 70<br>1<br>4<br>2<br>0<br>5<br>2<br>3<br>2  | 67<br>4<br>3<br>0<br>2<br>5<br>3<br>5<br>24   | 60<br>2<br>3<br>1<br>1<br>11<br>4<br>4<br>4  | 72<br>4<br>8<br>4<br>8<br>13<br>4<br>13<br>34   | 85<br>1<br>7<br>4<br>2<br>10<br>2<br>7<br>42   | 83<br>0<br>4<br>3<br>0<br>8<br>3<br>4<br>35  | 62<br>3<br>3<br>1<br>4<br>15<br>4<br>8<br>52   | 65<br>2<br>3<br>6<br>2<br>15<br>5<br>5  | 81<br>7<br>15<br>8<br>6<br>14<br>3<br>15  | 74<br>-2<br>5<br>6<br>1<br>7<br>1<br>1<br>30  | 10<br>-1<br>2<br>1<br>1<br>0<br>-3<br>2<br>32  | 45<br>-1<br>10<br>8<br>2<br>12<br>3<br>3<br>22  | 12<br>2<br>4<br>4<br>4<br>5<br>-2<br>4<br>3  | 66<br>1<br>4<br>0<br>1<br>5<br>1<br>2<br>7  |
| 0<br>-1<br>0<br>1<br>0<br>-1<br>1<br>0<br>3  | 26<br>-1<br>4<br>3<br>4<br>6<br>1<br>9<br>20<br>25  | 27<br>4<br>4<br>3<br>7<br>9<br>1<br>9<br>16<br>12   | 2<br>2<br>2<br>1<br>2<br>2<br>1<br>2<br>1<br>2  | 79<br>24<br>4<br>5<br>1<br>7<br>2<br>5<br>-1<br>3        | 50<br>1<br>-2<br>1<br>-2<br>2<br>-1<br>0<br>5<br>4  | 70<br>1<br>4<br>2<br>0<br>5<br>2<br>3<br>2<br>10  | 67<br>4<br>3<br>0<br>2<br>5<br>3<br>5<br>24<br>31   | 60<br>2<br>3<br>1<br>1<br>11<br>4<br>4<br>4<br>14<br>25  | 72<br>4<br>8<br>4<br>8<br>13<br>4<br>13<br>34<br>28   | 85<br>1<br>7<br>4<br>2<br>10<br>2<br>7<br>42<br>35   | 83<br>0<br>4<br>3<br>0<br>8<br>3<br>4<br>35<br>29  | 62<br>3<br>3<br>1<br>4<br>15<br>4<br>8<br>52<br>39   | 65<br>2<br>3<br>6<br>2<br>15<br>5<br>5<br>5   | 81<br>7<br>15<br>8<br>6<br>14<br>3<br>15<br>76<br>56  | 74<br>-2<br>5<br>6<br>1<br>7<br>1<br>1<br>30<br>59  | 10<br>-1<br>2<br>1<br>1<br>0<br>-3<br>2<br>32<br>2   | 45<br>-1<br>10<br>8<br>2<br>12<br>3<br>3<br>22<br>14  | 12<br>2<br>4<br>4<br>4<br>5<br>-2<br>4<br>3<br>2   | 66<br>1<br>4<br>0<br>1<br>5<br>1<br>2<br>7<br>8   |
| 0<br>-1<br>0<br>1<br>0<br>-1<br>1<br>0<br>3  | 26<br>-1<br>4<br>3<br>4<br>6<br>1<br>9<br>20<br>25<br>-1  | 27<br>4<br>4<br>3<br>7<br>9<br>1<br>9<br>16<br>12<br>3  | 2<br>2<br>2<br>1<br>2<br>2<br>1<br>2<br>1<br>3  | 79<br>24<br>4<br>5<br>1<br>7<br>2<br>5<br>-1<br>3<br>5   | 50<br>1<br>-2<br>1<br>-2<br>2<br>-1<br>0<br>5<br>4<br>-2  | 70<br>1<br>4<br>2<br>0<br>5<br>2<br>3<br>2<br>10<br>2   | 67<br>4<br>3<br>0<br>2<br>5<br>3<br>5<br>24<br>31<br>3  | 60<br>2<br>3<br>1<br>1<br>11<br>4<br>4<br>4<br>14<br>25<br>2   | 72<br>4<br>8<br>4<br>8<br>13<br>4<br>13<br>34<br>28<br>6  | 85<br>1<br>7<br>4<br>2<br>10<br>2<br>7<br>42<br>35<br>6  | 83<br>0<br>4<br>3<br>0<br>8<br>3<br>4<br>35<br>29<br>3   | 62<br>3<br>3<br>1<br>4<br>15<br>4<br>8<br>52<br>39<br>2  | 65<br>2<br>3<br>6<br>2<br>15<br>5<br>5<br>5<br>45<br>4  | 81<br>7<br>15<br>8<br>6<br>14<br>3<br>15<br>76<br>56  | 74<br>-2<br>5<br>6<br>1<br>7<br>1<br>1<br>30<br>59<br>7   | 10<br>-1<br>2<br>1<br>1<br>0<br>-3<br>2<br>32<br>2<br>2  | 45<br>-1<br>10<br>8<br>2<br>12<br>3<br>3<br>22<br>14<br>9   | 12<br>2<br>4<br>4<br>5<br>-2<br>4<br>3<br>2<br>6   | 66<br>1<br>4<br>0<br>1<br>5<br>1<br>2<br>7<br>8   |
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| E        | -3      | 0        | -2      | 3        | 0        | 2       | -2       | -2       | 5        | 5       | 2        | 2        | -1      | 6        | 2        | 7       | 2        | 2       | 2       |
|----------|---------|----------|---------|----------|----------|---------|----------|----------|----------|---------|----------|----------|---------|----------|----------|---------|----------|---------|---------|
| -5<br>2  | 6       | 7        | 2       | 4        | 1        | 3<br>2  | 5        | 3        | 10       | 5       | 4        | 5        | 1       | 6<br>8   | 3<br>1   | -7<br>0 | 3<br>6   | -2<br>4 | -3<br>1 |
| 0        | -4      | -3       | 0       | 1        | 0        | 0       | 0        | 5        | 1        | 2       | 2        | 1        | -1      | -4       | 3        | -2      | -4       | -2      | -2      |
| 2        | 5       | 4        | 2       | 2        | 1        | 3       | 1        | 8        | 7        | 21      | 15       | 5        | 5       | 6        | -2       | 66      | 72       | 10      | 27      |
| 4        | 9       | 8        | 11      | 51       | 8        | 3       | 63       | 68       | 36       | 70      | 65       | 52       | 53      | 82       | 83       | 5       | 17       | 3       | 6       |
| 3        | 11      | 10       | 4       | 3        | 1        | 4       | 8        | 12       | 14       | 9       | 7        | 10       | 19      | 8        | 7        | 3       | 13       | 7       | 6       |
| -3       | 5       | 5        | -1      | 15       | 6        | 1       | 16       | 29       | 16       | 47      | 42       | 19       | 26      | 50       | 36       | 1       | 26       | -1      | 1       |
| 1        | 5       | 10       | 7       | 2        | 0        | 1       | 6        | 4        | 9        | 4       | 3        | 6        | 2       | 5        | 2        | 1       | 1        | 2       | 3       |
| -1<br>-7 | 2<br>45 | 3        | 1       | 2        | -3       | 2<br>34 | 2        | 3        | 3        | 3<br>78 | 74       | 3        | 5<br>52 | 6        | 3        | -2      | 7        | 2       | 2       |
| 7        | 45<br>4 | 65<br>12 | -2<br>1 | 86<br>51 | 48<br>12 | 5<br>5  | 48<br>33 | 43<br>12 | 75<br>17 | 14      | 74<br>10 | 52<br>18 | 10      | 69<br>15 | 41<br>11 | 84<br>3 | 88<br>17 | 35<br>5 | 46<br>5 |
| Ö        | 4       | 10       | 3       | 7        | 1        | 3       | 12       | 7        | 18       | 16      | 12       | 13       | 19      | 27       | 24       | 2       | 18       | 5       | 5       |
| 2        | 6       | 9        | 1       | 6        | 6        | 3       | 3        | 4        | 10       | 7       | 6        | 7        | 6       | 8        | 2        | 1       | 13       | 5       | 3       |
| 22       | 53      | 35       | 6       | 41       | 31       | 27      | 64       | 48       | 67       | 68      | 64       | 65       | 76      | 79       | 80       | 4       | 12       | 9       | 12      |
| 1        | 2       | 3        | 1       | 8        | -1       | 1       | 8        | 8        | 6        | 4       | 4        | 13       | 8       | 5        | 22       | -2      | 6        | 2       | 2       |
| 1        | 5       | 7        | 1       | 4        | 1        | 1       | 4        | 3        | 11       | 5       | 4        | 5        | 2       | 7        | 4        | 1       | 8        | 5       | 4       |
| 0        | 5       | 5        | 2       | 4        | -6       | 6       | 3        | 4        | 10       | 5       | 5        | 5        | 4       | 12       | 4        | 1       | 8        | 5       | 2       |
| -1       | -2      | 1        | 1       | 4        | -1       | 1       | 0        | 2        | 3        | -1      | -1       | 5        | 3       | 2        | 6        | -4      | -14      | 1       | 3       |
| -3       | 0       | 4        | -1      | 5        | 0        | 2       | 10       | 4        | 23       | 11      | 9        | 13       | 8       | 21       | 12       | -5      | 11       | 0       | 0       |
| 2        | 5       | 5        | 3       | 6        | -3       | 4       | 7        | 8        | 9        | 8       | 4        | 5        | 4       | 9        | 8        | 2       | 13       | 6       | 3       |
| -1       | 3       | 1        | 1       | 2        | -3       | 1       | 2        | 3        | 6        | 3       | 0        | 2        | 1       | 0        | 3        | -2      | 6        | 1       | 1       |
| -1<br>1  | 3<br>4  | 2<br>5   | 2<br>3  | -1<br>6  | 1<br>-4  | 0<br>4  | 7<br>5   | 11<br>9  | 10<br>11 | 11<br>8 | 9<br>5   | 6<br>7   | 8<br>3  | 4<br>8   | 7<br>4   | -3<br>2 | 4<br>15  | 2<br>10 | 2<br>4  |
| 1        | 8       | 10       | -2      | 10       | 5        | 4       | 4        | 14       | 21       | 27      | 22       | ,<br>16  | 2       | 18       | 12       | -2      | 15       | 5       | -2      |
| -3       | 12      | 10       | 0       | 27       | 18       | 3       | 38       | 74       | 56       | 76      | 73       | 64       | 70      | 77       | 57       | 1       | 12       | -1      | 7       |
| -4       | 1       | -1       | -2      | 3        | -3       | 3       | -3       | -4       | 8        | 3       | 2        | 2        | -5      | 16       | -1       | -2      | 8        | 0       | -1      |
| 0        | 23      | 23       | -2      | 56       | 9        | 11      | 6        | 10       | 45       | 49      | 43       | 21       | 15      | 47       | 17       | 17      | 44       | 5       | 74      |
| 2        | 14      | 10       | 2       | 55       | 9        | 17      | 9        | 18       | 51       | 31      | 25       | 20       | 18      | 63       | 22       | 8       | 33       | 6       | 10      |
| 0        | 0       | 4        | 2       | 8        | 0        | 2       | 5        | 3        | 8        | 10      | 6        | 2        | 4       | 10       | 8        | 0       | 15       | 5       | 1       |
| -1       | 4       | 5        | 1       | 11       | -1       | 3       | 7        | 8        | 10       | 16      | 13       | 5        | 6       | 14       | 18       | 1       | 15       | 4       | 4       |
| 3        | 4       | 7        | 4       | 6        | 1        | 2       | 4        | 5        | 8        | 8       | 5        | 4        | 8       | 8        | 4        | 1       | 13       | 6       | 0       |
| 0        | 6       | 7        | 2       | 3        | 0        | 0       | 1        | 0        | 8        | 5       | 5        | 3        | 0       | 8        | 2        | 2       | 12       | 4       | 1       |
| 0        | 3       | 7        | 2       | 7        | -3       | 2       | 2        | 0        | 7        | 4       | 3        | 2        | 0       | 8        | 0        | 1       | 9        | 3       | 0       |
| 1<br>0   | 1<br>3  | 4<br>6   | 1<br>7  | 18<br>4  | -2<br>2  | 2<br>2  | 49<br>6  | 8<br>6   | 7<br>8   | 4<br>11 | 4<br>9   | 21<br>14 | 6<br>5  | 8<br>10  | 39<br>12 | -1<br>1 | 6<br>10  | 4<br>4  | 1<br>4  |
| 2        | 5       | 6        | 0       | 2        | -1       | 2       | 4        | 6        | 4        | 3       | 2        | 9        | 4       | 4        | 5        | 1       | -8       | 2       | 4       |
| -1       | 1       | -3       | -1      | -4       | 1        | -4      | -2       | 2        | -2       | 0       | 0        | 1        | 1       | -7       | -1       | -2      | -9       | -7      | 0       |
| 5        | 16      | 9        | 1       | 5        | 2        | 2       | 8        | 20       | 13       | 27      | 19       | 11       | 4       | 9        | 10       | 2       | 21       | 5       | 9       |
| 2        | 3       | 5        | 1       | 18       | 2        | 3       | 8        | 20       | 8        | 13      | 10       | 42       | 8       | 10       | 80       | -1      | 9        | 5       | 5       |
| -2       | 0       | 1        | -1      | 4        | 0        | 1       | -1       | 3        | 8        | 7       | 6        | 9        | 0       | 9        | 0        | -2      | 9        | 1       | 1       |
| -1       | 6       | 4        | 2       | 1        | -5       | 2       | 2        | 2        | 9        | 4       | 1        | 0        | -1      | 12       | 0        | 1       | 8        | 3       | 3       |
| 1        | 4       | 12       | 4       | 5        | 1        | 3       | 17       | 9        | 25       | 16      | 13       | 19       | 17      | 33       | 12       | 2       | 16       | 8       | 6       |
| 5        | 9       | 9        | 3       | 2        | 0        | 3       | 1        | 4        | 9        | 2       | 0        | 10       | 6       | 6        | 2        | 2       | 1        | 3       | 3       |
| -1       | 8       | 3        | 2       | 8        | 0        | 2       | 3        | 6        | 6        | 6       | 5        | 6        | 1       | 5        | 6        | -1      | 12       | 5       | 5       |
| 29       | 5       | 18       | 2       | 53       | 5        | 6       | 61       | 61       | 48       | 46      | 41       | 44       | 36      | 42       | 80       | -2      | 7        | 2       | 3       |
| 3        | 15<br>5 | 15<br>5  | 2       | 40       | 6        | 3       | 15<br>4  | 60       | 34       | 41      | 35       | 70       | 44      | 39       | 90       | 2       | 23<br>11 | 8       | 37      |
| 2        | 5<br>7  | 5<br>6   | 7<br>2  | 4<br>6   | -3       | 3<br>5  | 4<br>3   | 10<br>5  | 10<br>8  | 7<br>5  | 7<br>5   | 6<br>4   | 8<br>3  | 6<br>14  | 6<br>4   | 2<br>2  | 11       | 5<br>5  | 3<br>3  |
| -1       | 3       | 1        | 1       | 11       | -2       | 1       | 7        | 6        | 4        | 6       | 3        | 9        | 5       | 6        | 39       | -3      | 4        | -2      | 0       |
| 3        | 7       | 7        | 1       | 3        | 2        | 2       | 3        | 3        | 9        | 2       | 1        | 4        | 1       | 7        | -1       | 1       | 9        | 3       | 2       |
| 9        | 4       | 6        | 11      | 2        | 0        | 5       | 36       | 39       | 27       | 37      | 34       | 16       | 10      | 24       | 12       | 42      | 44       | 15      | 41      |
| 1        | 5       | 2        | 3       | 3        | -3       | 0       | 3        | 4        | 7        | 3       | 3        | 7        | 1       | 6        | -2       | 6       | 9        | 4       | 3       |
| 0        | 4       | 5        | 2       | 7        | -6       | 3       | 2        | 4        | 8        | 5       | 4        | 4        | 4       | 8        | 3        | 2       | 8        | 3       | 1       |
| 1        | 6       | 6        | 3       | 21       | 4        | 3       | 12       | 17       | 17       | 39      | 33       | 14       | 12      | 14       | 38       | 1       | 15       | 6       | 6       |
| 1        | 5       | 5        | -2      | 1        | 0        | 6       | -2       | 8        | 9        | 13      | 9        | 8        | -2      | 4        | -2       | 2       | 26       | 0       | 16      |
| -1       | 7       | 4        | 1       | 7        | 27       | 4       | 4        | 4        | 9        | 7       | 5        | 4        | 7       | 14       | 5        | 1       | 10       | 5       | 4       |
| -1       | 1       | 0        | 1       | 2        | -2       | 2       | 1        | 7        | 3        | 2       | 1        | 4        | 3       | 5        | 7        | -3<br>4 | -2       | 0       | 1       |
| 1        | 3       | 3        | 1       | 15       | 0        | 0       | 4        | 5        | 7        | 3       | 2        | 4        | 3       | 7        | 2        | 1       | 9        | 3       | 1       |

| 0       | _       |         | 4        | _       | <b>-</b> 0 | ^       | _       | 4        | -       | 7        | _       | _        | ^       | ^       | _       | 4        | _        | _       | 0       |
|---------|---------|---------|----------|---------|------------|---------|---------|----------|---------|----------|---------|----------|---------|---------|---------|----------|----------|---------|---------|
| 0       | 0<br>3  | -1<br>7 | 1<br>2   | 0<br>7  | 53<br>3    | 3<br>3  | 6<br>1  | 4<br>3   | 7<br>8  | 7<br>6   | 5<br>5  | 5<br>2   | 9<br>1  | 0<br>10 | 6<br>8  | -4<br>1  | -3<br>11 | -2<br>6 | -2<br>2 |
| 2       | 10      | 5       | 2        | 6       | 3          | 5       | 16      | 10       | 12      | 19       | 15      | 17       | 19      | 23      | 39      | 2        | 9        | 4       | 1       |
| 3       | 6       | 6       | 2        | 4       | 1          | 1       | 4       | 3        | 8       | 3        | 0       | 5        | 1       | 5       | 1       | 2        | 4        | 5       | 1       |
| 7       | 5       | 5       | 5        | 12      | 9          | 2       | 16      | 43       | 15      | 37       | 31      | 61       | 21      | 16      | 83      | 3        | 21       | 2       | 10      |
| 1       | 0       | 1       | 0        | 1       | 6          | 1       | 2       | 2        | 2       | 5        | 4       | 4        | 3       | 0       | 11      | 2        | 5        | 1       | 1       |
| 1       | 8       | 9       | 3        | 6       | 4          | 2       | 18      | 46       | 17      | 49       | 44      | 30       | 31      | 49      | 25      | 6        | 16       | 4       | 3       |
| 0       | 1       | 1       | 1        | 15      | -1         | 2       | 8       | 10       | 6       | 6        | 5       | 12       | 9       | 4       | 39      | -2       | 10       | 2       | 2       |
| -5<br>- | 2       | 2<br>2  | -2<br>-1 | 5<br>8  | 3<br>0     | 3       | 18<br>0 | 41       | 21<br>5 | 56<br>10 | 51<br>7 | 33       | 32      | 57<br>9 | 31      | -6<br>4  | 3<br>12  | -1      | 1       |
| -5<br>2 | -1<br>5 | 4       | 1        | 3       | 0          | 4<br>2  | 4       | -3<br>3  | 5<br>5  | 6        | 6       | 1<br>5   | 0<br>3  | 9<br>7  | 12<br>6 | -4<br>0  | 4        | -1<br>3 | -4<br>2 |
| -2      | 12      | 3       | 1        | 3       | -1         | 0       | -4      | 0        | 1       | 2        | 2       | 2        | 1       | 4       | 4       | 0        | 16       | 4       | 2       |
| 0       | 3       | 4       | 0        | 0       | 3          | 0       | 1       | 3        | 3       | 2        | 1       | 4        | 5       | 3       | 1       | -2       | 6        | 2       | 1       |
| 0       | 7       | 7       | 4        | 6       | -2         | 6       | 9       | 7        | 18      | 12       | 8       | 14       | 4       | 13      | 9       | 2        | 4        | 4       | 4       |
| 0       | 1       | 2       | 0        | 5       | -2         | 3       | 3       | 5        | 4       | 5        | 3       | 4        | 4       | 7       | 4       | -2       | 9        | 4       | 2       |
| 1       | 7       | 7       | 3        | 6       | -1         | 4       | 5       | 4        | 8       | 6        | 6       | 4        | 3       | 15      | 6       | -1       | 10       | 2       | 3       |
| 1       | 4       | 5       | 2        | 2       | 1          | 2       | 3       | 7        | 6       | 3        | 3       | 4        | 5       | 7       | 7       | 1        | 8        | 4       | 3       |
| 1 2     | 3<br>6  | 3<br>13 | 1<br>5   | 1<br>14 | 2<br>5     | 0<br>3  | 4<br>65 | 4<br>64  | 5<br>42 | 2<br>66  | 3<br>63 | 5<br>50  | 8<br>48 | 5<br>79 | 7<br>65 | 0<br>11  | 8<br>17  | 2<br>8  | 2<br>10 |
| 0       | 3       | 2       | ე<br>0   | 14<br>5 | 5<br>2     | ა<br>1  | 3       | 6        | 42<br>5 | 8        | 8       | อบ<br>17 | 48<br>6 | 10      | 46      | 1        | 17       | 3       | 0       |
| 3       | 6       | 6       | 1        | 12      | -3         | 2       | 5       | 6        | 9       | 6        | 8       | 5        | 2       | 9       | 3       | 2        | 3        | 3       | 3       |
| 1       | 3       | 4       | 4        | 1       | -2         | 1       | 3       | 7        | 7       | 4        | 3       | 5        | 5       | 4       | 3       | 1        | 10       | 6       | 3       |
| 1       | 6       | 5       | 7        | 8       | 0          | 1       | 7       | 14       | 8       | 10       | 7       | 8        | 7       | 11      | 13      | 0        | 7        | 3       | 3       |
| 0       | 3       | 4       | 2        | 11      | 1          | 1       | 5       | 7        | 7       | 10       | 6       | 3        | 4       | 9       | 9       | 1        | 9        | 3       | 3       |
| 1       | 3       | 3       | 1        | 1       | 1          | -2      | 4       | 6        | 1       | 4        | 2       | 1        | 4       | 1       | 6       | 1        | 8        | 3       | 1       |
| -4      | 0       | 2       | -2       | 4       | -4         | 3       | 0       | 1        | 7       | 7        | 4       | 6        | -4      | 9       | 7       | -4       | 4        | -1      | -2      |
| -1<br>1 | -1      | -2<br>4 | 0        | -4<br>5 | 2<br>-1    | -1<br>1 | -2<br>3 | 1<br>5   | -1<br>5 | -1<br>4  | -1<br>3 | -1<br>5  | 1<br>1  | -7<br>4 | -1<br>0 | -2<br>0  | -7<br>8  | -7<br>3 | -3      |
| 0       | 3<br>4  | 2       | 4        | 2       | 3          | 2       | 33      | 13       | 20      | 22       | ა<br>17 | 17       | 13      | 27      | 8<br>14 | -3       | 1        | 3       | 2<br>3  |
| 1       | 4       | 4       | 2        | 7       | 0          | 2       | 3       | 2        | 7       | 8        | 7       | 2        | 3       | 9       | 4       | 0        | 13       | 5       | 2       |
| 0       | 4       | 7       | 2        | 2       | 4          | -1      | 5       | 5        | 5       | 6        | 4       | 9        | 13      | 16      | 7       | -1       | 7        | 2       | 2       |
| 0       | 1       | 3       | 1        | 6       | -3         | 2       | 3       | 3        | 5       | 7        | 3       | 3        | 2       | 2       | 4       | 1        | 10       | 3       | 3       |
| 2       | 6       | 6       | 3        | 3       | 6          | -1      | 3       | 4        | 11      | 6        | 5       | 5        | 3       | 6       | 6       | 2        | -9       | 7       | 1       |
| 3       | 2       | 3       | 1        | -2      | -3         | -1      | 3       | 7        | 4       | 2        | 1       | 3        | 1       | 1       | 1       | 1        | -8       | -2      | 1       |
| 0       | 6       | 5       | 3        | 2       | -1         | 1       | 0       | 2        | 6<br>7  | 3<br>6   | 3       | 9        | 7       | 8       | 25      | 1        | -5<br>7  | 4       | 1       |
| 1       | 7<br>4  | 7<br>3  | 2<br>2   | 2<br>5  | -2<br>3    | 1<br>1  | 6<br>3  | 3<br>11  | 7       | ა<br>15  | 3<br>14 | 4<br>3   | 2<br>10 | 6<br>7  | 0<br>7  | 3<br>55  | 77       | 3<br>12 | 2<br>26 |
| 1       | 5       | 5       | 2        | 7       | -2         | 5       | 8       | 8        | 10      | 9        | 8       | 6        | 6       | 10      | 21      | 1        | 12       | 2       | 4       |
| 2       | 9       | 13      | 3        | 8       | -5         | 1       | 13      | 11       | 22      | 7        | 6       | 13       | 5       | 24      | 24      | 7        | 21       | 6       | 13      |
| 4       | 13      | 11      | 3        | 5       | -1         | 2       | 6       | 7        | 10      | 7        | 3       | 8        | 5       | 11      | 0       | 2        | 7        | 7       | 4       |
| 4       | 5       | 3       | 2        | -2      | 2          | 2       | 0       | 3        | 3       | 0        | 2       | 4        | 1       | 2       | -3      | 3        | 0        | 0       | 3       |
| 2       | 4       | 8       | 1        | 6       | -3         | 1       | 8       | 9        | 11      | 10       | 9       | 18       | 6       | 13      | 10      | 1        | 12       | 4       | 2       |
| 3       | 4       | 7       | 3        | 33      | 0          | 5       | 16      | 27       | 13      | 15       | 12      | 30       | 10      | 18      | 60      | 2        | 12       | 4       | 3       |
| 2<br>-4 | 6<br>-1 | 5<br>0  | 2<br>-3  | 29<br>7 | 0<br>-1    | 3<br>2  | 13<br>1 | 22<br>-1 | 8<br>5  | 9<br>9   | 7<br>5  | 30<br>2  | 9<br>-2 | 13<br>7 | 59<br>5 | -3<br>-3 | 6<br>5   | 2<br>-2 | 6<br>-3 |
| 2       | 5       | 7       | 4        | 3       | 1          | 1       | 10      | 9        | 9       | 9<br>5   | 5<br>4  | 7        | 3       | 8       | 5<br>5  | 2        | ວ<br>1   | 4       | -3<br>4 |
| 0       | 6       | 5       | 0        | 5       | -1         | 1       | 3       | 6        | 6       | 7        | 5       | 8        | 5       | 8       | 2       | 2        | 13       | 4       | 8       |
| 0       | 2       | 1       | 1        | -2      | -1         | 1       | 2       | 0        | 4       | 3        | 3       | 2        | 3       | 2       | 4       | -3       | 2        | 3       | 0       |
| 1       | 3       | 2       | 1        | 2       | -1         | 1       | 1       | 3        | 7       | 2        | 2       | 5        | 3       | 4       | 0       | 0        | 1        | 4       | 3       |
| -2      | -2      | -4      | 0        | -2      | 0          | 0       | -2      | 0        | 2       | 0        | 1       | 0        | 1       | -3      | 5       | -4       | -8       | -2      | -1      |
| 0       | 2       | 0       | 0        | -2      | 2          | -1      | 0       | 4        | 1       | 0        | 1       | 1        | 3       | -4      | -2      | -2       | -1       | -2      | 0       |
| 0       | 5<br>2  | 5<br>1  | 1<br>0   | 85<br>2 | 6<br>-2    | 2<br>0  | 7<br>3  | 9<br>3   | 13<br>1 | 22<br>2  | 17<br>1 | 5<br>0   | 7<br>3  | 11<br>3 | 21<br>4 | 1<br>-3  | 18<br>3  | 4<br>2  | 14<br>1 |
| -1<br>2 | 3       | 3       | 1        | 3       | 0          | -1      | 3<br>4  | ა<br>8   | 2       | 6        | 1<br>5  | 18       | ა<br>5  | 3<br>6  | 4<br>47 | -3<br>1  | 3<br>4   | 0       | 1       |
| 9       | 4       | 10      | 1        | 29      | 1          | 3       | 23      | 23       | 20      | 14       | 11      | 33       | 15      | 13      | 50      | 0        | 3        | 3       | 2       |
| 0       | 6       | 5       | 2        | 7       | -2         | 3       | 4       | 5        | 7       | 6        | 3       | 6        | 6       | 13      | 8       | 0        | 10       | 3       | 3       |
| -1      | 2       | 2       | 2        | 0       | -1         | -1      | 0       | 0        | 5       | 1        | 1       | 2        | 2       | 0       | 0       | -2       | 4        | 6       | 3       |
| 0       | 3       | 5       | 1        | 8       | 2          | 2       | 4       | 6        | 9       | 8        | 6       | 8        | 2       | 6       | 9       | 0        | 6        | 2       | 1       |

| 5  | 38  | 45  | 0  | 68   | 10   | 25  | 71   | 85  | 71   | 79  | 73  | 84   | 88  | 84  | 97  | 14   | 55  | 18   | 65   |
|--|---|---|--|--|--|---|--|---|--|---|---|--|---|---|---|--|---|--|--|
| 7  | 61  | 33  | 1  | 59   | 22   | 35  | 10   | 33  | 55   | 43  | 37  | 33   | 32  | 63  | 38  | 8  | 22  | 3  | 10   |
| 1  | 12  | 8   | 3  | 7  | 76   | 7   | 12   | 15  | 18   | 17  | 13  | 9  | 23  | 20  | 12  | 1  | 12  | 5  | 4  |
| 5  | 14  | 12  | 2  | 6  | 8  | 4   | 26   | 33  | 31   | 32  | 29  | 42   | 28  | 20  | 37  | 2  | 15  | 6  | 3  |
| 16   | 70  | 37  | 39   | 13   | 6  | 4   | 24   | 24  | 23   | 20  | 18  | 26   | 8   | 42  | 16  | 5  | 23  | 4  | 11   |
| 1  | 4   | 3   | 2  | 0  | 1  | 1   | 3  | 2   | 5  | 3   | 2   | 5  | 3   | 4   | 0   | -2   | 5   | 3  | 1  |
| 1  | 5   | 8   | 3  | 46   | 1  | 2   | 8  | 39  | 16   | 21  | 18  | 61   | 12  | 19  | 85  | 0  | 16  | 6  | 8  |
| 1  | 1   | 1   | 1  | 81   | 7  | 0   | 4  | 9   | 5  | 21  | 17  | 5  | 2   | 4   | 21  | 0  | 19  | 0  | 23   |
| -1   | 1   | 0   | 1  | -1   | 2  | 1   | 2  | 2   | 1  | -1  | 1   | 3  | 1   | -2  | 0   | -3   | 0   | 0  | 0  |
| -1   | 5   | 3   | 2  | 7  | 7  | 1   | 19   | 14  | 23   | 23  | 19  | 14   | 11  | 18  | 21  | -2   | 19  | 1  | -2   |
| -2   | 1   | 4   | 8  | 2  | -3   | 1   | 5  | 7   | 8  | 6   | 3   | 8  | 7   | 9   | 9   | 0  | 4   | 4  | 5  |
| -4   | 10  | 4   | -2   | 6  | 1  | 2   | 1  | 2   | 9  | 7   | 5   | 11   | 5   | 7   | 9   | -6   | 6   | -1   | -2   |
| 3  | 9   | 16  | 3  | 28   | 3  | 5   | 46   | 46  | 31   | 40  | 34  | 75   | 48  | 48  | 83  | 2  | 8   | 3  | 21   |
| 2  | 6   | 5   | 3  | 2  | -4   | 0   | 4  | 7   | 6  | 2   | 1   | 4  | 3   | 8   | 4   | 0  | 7   | 4  | 2  |
| 2  | 6   | 8   | 3  | 8  | 0  | 2   | 8  | 3   | 12   | 2   | 3   | 9  | 5   | 8   | 1   | 0  | 11  | 6  | 2  |
| 2  | 11  | 10  | 3  | 7  | 60   | 7   | 19   | 13  | 17   | 19  | 16  | 12   | 21  | 15  | 16  | 0  | 14  | 6  | 3  |
| 1  | 3   | 4   | 2  | 2  | 2  | 1   | 5  | 4   | 8  | 4   | 3   | 5  | 2   | 5   | 0   | 2  | 8   | 2  | 4  |
| -1   | 2   | 1   | 1  | 1  | -1   | 0   | -1   | -1  | -1   | -1  | -1  | 2  | 2   | -3  | 1   | 2  | 3   | 0  | 1  |
| 4  | 3   | 12  | 1  | 68   | 1  | 3   | 40   | 67  | 46   | 60  | 55  | 80   | 37  | 52  | 96  | 1  | 14  | 0  | 16   |
| 0  | 3   | 2   | 2  | 3  | 2  | 0   | 3  | 4   | 5  | 5   | 5   | 7  | 4   | 4   | 9   | 0  | 10  | 3  | 0  |
| 2  | 19  | 17  | 5  | 23   | 14   | 6   | 64   | 84  | 59   | 88  | 85  | 70   | 74  | 87  | 73  | 16   | 35  | 7  | 14   |
| -2   | 2   | 4   | 0  | 8  | -1   | 1   | 2  | 2   | 6  | 8   | 7   | 3  | 5   | 9   | 9   | 1  | 15  | 4  | 1  |
| -2   | 0   | 4   | -1   | 3  | -4   | 2   | 0  | 2   | 11   | 9   | 5   | 6  | -1  | 9   | 3   | -2   | 6   | 0  | -3   |
| 0  | 38  | 16  | 2  | 17   | 5  | 4   | 6  | 8   | 16   | 12  | 11  | 12   | 5   | 13  | 11  | 8  | 30  | 7  | 11   |
| 3  | 6   | 9   | 2  | 8  | 5  | 2   | 5  | 14  | 22   | 28  | 23  | 8  | 21  | 11  | 7   | 26   | 64  | 9  | 27   |
| 0  | 7   | 6   | 1  | 0  | -3   | 0   | 2  | 6   | 16   | 6   | 3   | 4  | 0   | 10  | 2   | 1  | -6  | 1  | 2  |
| -1   | 3   | 4   | 2  | 3  | -1   | 2   | 7  | 8   | 8  | 6   | 3   | 9  | 4   | 6   | 7   | -2   | 4   | 4  | 3  |
| 1  | 2   | 6   | 0  | 5  | -3   | 4   | 4  | 6   | 5  | 7   | 4   | 7  | 3   | 6   | 4   | 0  | 10  | 4  | 2  |
| 0.4  | ~ ~   |   |  |  |  |   |  |   |  |   |   |  |   |   |   |  |   |  |  |
| 34   | 82  | 83  | 2  | 97   | 40   | 68  | 62   | 77  | 88   | 94  | 92  | 83   | 89  | 90  | 91  | 80   | 91  | 88   | 95   |
| 13   | 82  | 83<br>14  | 2<br>41  | 97<br>25   | 40<br>9  | 68<br>65  | 62<br>41   | 77<br>84  | 88<br>86   | 94<br>95  | 92<br>93  | 83<br>61   | 89<br>52  | 90<br>91  | 80  | 80<br>96   | 91<br>88  | 88<br>87   | 95<br>97   |
| _  |   |   |  |  | •  |   |  |   |  |   |   |  |   |   | _   |  |   |  |  |
| 13   | 8   | 14  | 41<br>2<br>2   | 25<br>0<br>37  | 9<br>-1<br>6   | 65  | 41<br>4<br>17  | 84<br>6<br>42   | 86   | 95  | 93  | 61<br>3<br>27  | 52  | 91<br>8<br>60   | 80  | 96   | 88  | 87   | 97   |
| 13   | 8<br>8  | 14<br>8   | 41<br>2  | 25<br>0  | 9<br>-1  | 65<br>1   | 41<br>4  | 84<br>6<br>42<br>13   | 86<br>10   | 95<br>1<br>49<br>11   | 93<br>1   | 61<br>3  | 52<br>2   | 91<br>8<br>60<br>12   | 80<br>-2  | 96<br>2  | 88<br>6<br>63<br>5  | 87<br>1  | 97<br>1  |
| 13<br>3<br>12<br>2<br>1  | 8<br>8<br>76  | 14<br>8<br>59<br>9<br>7   | 41<br>2<br>2<br>3<br>2   | 25<br>0<br>37  | 9<br>-1<br>6   | 65<br>1<br>8  | 41<br>4<br>17<br>11<br>5   | 84<br>6<br>42<br>13<br>6  | 86<br>10<br>44   | 95<br>1<br>49<br>11<br>12   | 93<br>1<br>43<br>9<br>9   | 61<br>3<br>27<br>8<br>10   | 52<br>2<br>38<br>10<br>5  | 91<br>8<br>60<br>12<br>18   | 80<br>-2<br>36  | 96<br>2<br>56  | 88<br>6<br>63<br>5<br>12  | 87<br>1<br>9   | 97<br>1<br>36<br>3<br>2  |
| 13<br>3<br>12<br>2<br>1<br>0   | 8<br>8<br>76<br>6<br>6<br>4   | 14<br>8<br>59<br>9<br>7<br>4  | 41<br>2<br>2<br>3<br>2<br>2  | 25<br>0<br>37<br>11<br>4<br>4  | 9<br>-1<br>6<br>58<br>0<br>5   | 65<br>1<br>8<br>5<br>1  | 41<br>4<br>17<br>11<br>5<br>0  | 84<br>6<br>42<br>13<br>6<br>3   | 86<br>10<br>44<br>11<br>11<br>6  | 95<br>1<br>49<br>11<br>12<br>2  | 93<br>1<br>43<br>9<br>9<br>2  | 61<br>3<br>27<br>8<br>10<br>3  | 52<br>2<br>38<br>10<br>5<br>2   | 91<br>8<br>60<br>12<br>18<br>7  | 80<br>-2<br>36<br>6<br>8<br>1   | 96<br>2<br>56<br>1<br>4  | 88<br>6<br>63<br>5<br>12<br>4   | 87<br>1<br>9<br>4<br>5<br>4  | 97<br>1<br>36<br>3<br>2<br>2                                       |
| 13<br>3<br>12<br>2<br>1<br>0<br>2  | 8<br>8<br>76<br>6<br>6<br>4<br>18   | 14<br>8<br>59<br>9<br>7<br>4<br>16  | 41<br>2<br>2<br>3<br>2<br>2<br>2   | 25<br>0<br>37<br>11<br>4<br>4<br>7   | 9<br>-1<br>6<br>58<br>0<br>5<br>3  | 65<br>1<br>8<br>5<br>1<br>1<br>2  | 41<br>4<br>17<br>11<br>5<br>0<br>7   | 84<br>6<br>42<br>13<br>6<br>3<br>7  | 86<br>10<br>44<br>11<br>11<br>6<br>16  | 95<br>1<br>49<br>11<br>12<br>2<br>9   | 93<br>1<br>43<br>9<br>9<br>2<br>5   | 61<br>3<br>27<br>8<br>10<br>3<br>13  | 52<br>2<br>38<br>10<br>5<br>2<br>5  | 91<br>8<br>60<br>12<br>18<br>7<br>11  | 80<br>-2<br>36<br>6<br>8<br>1<br>5  | 96<br>2<br>56<br>1<br>4<br>1<br>4  | 88<br>6<br>63<br>5<br>12<br>4<br>19   | 87<br>1<br>9<br>4<br>5<br>4<br>6   | 97<br>1<br>36<br>3<br>2<br>2<br>5                                  |
| 13<br>3<br>12<br>2<br>1<br>0<br>2  | 8<br>8<br>76<br>6<br>6<br>4<br>18<br>6  | 14<br>8<br>59<br>9<br>7<br>4<br>16<br>4   | 41<br>2<br>2<br>3<br>2<br>2<br>2<br>5  | 25<br>0<br>37<br>11<br>4<br>4<br>7<br>31   | 9<br>-1<br>6<br>58<br>0<br>5<br>3<br>8   | 65<br>1<br>8<br>5<br>1  | 41<br>4<br>17<br>11<br>5<br>0<br>7<br>4  | 84<br>6<br>42<br>13<br>6<br>3<br>7<br>5   | 86<br>10<br>44<br>11<br>11<br>6<br>16<br>8   | 95<br>1<br>49<br>11<br>12<br>2<br>9<br>3  | 93<br>1<br>43<br>9<br>9<br>2<br>5<br>1  | 61<br>3<br>27<br>8<br>10<br>3<br>13<br>5   | 52<br>2<br>38<br>10<br>5<br>2<br>5<br>10  | 91<br>8<br>60<br>12<br>18<br>7<br>11  | 80<br>-2<br>36<br>6<br>8<br>1<br>5  | 96<br>2<br>56<br>1<br>4  | 88<br>6<br>63<br>5<br>12<br>4<br>19<br>6  | 87<br>1<br>9<br>4<br>5<br>4<br>6   | 97<br>1<br>36<br>3<br>2<br>2                                       |
| 13<br>3<br>12<br>2<br>1<br>0<br>2<br>0<br>8  | 8<br>8<br>76<br>6<br>6<br>4<br>18<br>6<br>15  | 14<br>8<br>59<br>9<br>7<br>4<br>16<br>4<br>31   | 41<br>2<br>2<br>3<br>2<br>2<br>2<br>2<br>5<br>6  | 25<br>0<br>37<br>11<br>4<br>4<br>7<br>31<br>20   | 9<br>-1<br>6<br>58<br>0<br>5<br>3<br>8<br>16   | 65<br>1<br>8<br>5<br>1<br>1<br>2<br>13<br>1   | 41<br>4<br>17<br>11<br>5<br>0<br>7<br>4<br>36  | 84<br>6<br>42<br>13<br>6<br>3<br>7<br>5   | 86<br>10<br>44<br>11<br>11<br>6<br>16<br>8<br>76   | 95<br>1<br>49<br>11<br>12<br>2<br>9<br>3<br>35  | 93<br>1<br>43<br>9<br>9<br>2<br>5<br>1<br>32  | 61<br>3<br>27<br>8<br>10<br>3<br>13<br>5<br>28   | 52<br>2<br>38<br>10<br>5<br>2<br>5<br>10  | 91<br>8<br>60<br>12<br>18<br>7<br>11<br>10<br>20  | 80<br>-2<br>36<br>6<br>8<br>1<br>5<br>7<br>33   | 96<br>2<br>56<br>1<br>4<br>1<br>4<br>-1  | 88<br>6<br>63<br>5<br>12<br>4<br>19<br>6<br>23  | 87<br>1<br>9<br>4<br>5<br>4<br>6<br>1<br>6   | 97<br>1<br>36<br>3<br>2<br>2<br>5<br>1                             |
| 13<br>3<br>12<br>2<br>1<br>0<br>2<br>0<br>8<br>-2  | 8<br>8<br>76<br>6<br>6<br>4<br>18<br>6<br>15<br>4   | 14<br>8<br>59<br>9<br>7<br>4<br>16<br>4<br>31<br>1  | 41<br>2<br>2<br>3<br>2<br>2<br>2<br>5<br>6<br>2  | 25<br>0<br>37<br>11<br>4<br>4<br>7<br>31<br>20<br>8  | 9<br>-1<br>6<br>58<br>0<br>5<br>3<br>8<br>16<br>4  | 65<br>1<br>8<br>5<br>1<br>1<br>2<br>13<br>1<br>3  | 41<br>4<br>17<br>11<br>5<br>0<br>7<br>4<br>36<br>2   | 84<br>6<br>42<br>13<br>6<br>3<br>7<br>5<br>21   | 86<br>10<br>44<br>11<br>11<br>6<br>16<br>8<br>76   | 95<br>1<br>49<br>11<br>12<br>2<br>9<br>3<br>35<br>16  | 93<br>1<br>43<br>9<br>9<br>2<br>5<br>1<br>32<br>12  | 61<br>3<br>27<br>8<br>10<br>3<br>13<br>5<br>28<br>3  | 52<br>2<br>38<br>10<br>5<br>2<br>5<br>10<br>19<br>7   | 91<br>8<br>60<br>12<br>18<br>7<br>11<br>10<br>20<br>9   | 80<br>-2<br>36<br>6<br>8<br>1<br>5<br>7<br>33<br>8  | 96<br>2<br>56<br>1<br>4<br>1<br>4<br>-1<br>1<br>1  | 88<br>6<br>63<br>5<br>12<br>4<br>19<br>6<br>23<br>1   | 87<br>1<br>9<br>4<br>5<br>4<br>6<br>1<br>6   | 97<br>1<br>36<br>3<br>2<br>2<br>5<br>1<br>4                        |
| 13<br>3<br>12<br>2<br>1<br>0<br>2<br>0<br>8<br>-2<br>5   | 8<br>8<br>76<br>6<br>6<br>4<br>18<br>6<br>15<br>4   | 14<br>8<br>59<br>9<br>7<br>4<br>16<br>4<br>31<br>1  | 41<br>2<br>2<br>3<br>2<br>2<br>2<br>5<br>6<br>2  | 25<br>0<br>37<br>11<br>4<br>4<br>7<br>31<br>20<br>8  | 9<br>-1<br>6<br>58<br>0<br>5<br>3<br>8<br>16<br>4<br>14  | 65<br>1<br>8<br>5<br>1<br>1<br>2<br>13<br>1<br>3<br>41  | 41<br>4<br>17<br>11<br>5<br>0<br>7<br>4<br>36<br>2<br>86   | 84<br>6<br>42<br>13<br>6<br>3<br>7<br>5<br>21<br>13<br>80   | 86<br>10<br>44<br>11<br>11<br>6<br>16<br>8<br>76<br>10   | 95<br>1<br>49<br>11<br>12<br>2<br>9<br>3<br>35<br>16<br>83  | 93<br>1<br>43<br>9<br>9<br>2<br>5<br>1<br>32<br>12<br>84  | 61<br>3<br>27<br>8<br>10<br>3<br>13<br>5<br>28<br>3<br>57  | 52<br>2<br>38<br>10<br>5<br>2<br>5<br>10<br>19<br>7   | 91<br>8<br>60<br>12<br>18<br>7<br>11<br>10<br>20<br>9   | 80<br>-2<br>36<br>6<br>8<br>1<br>5<br>7<br>33<br>8  | 96<br>2<br>56<br>1<br>4<br>1<br>4<br>-1<br>1<br>-3<br>35   | 88<br>6<br>63<br>5<br>12<br>4<br>19<br>6<br>23<br>1   | 87<br>1<br>9<br>4<br>5<br>4<br>6<br>1<br>6<br>1<br>18  | 97<br>1<br>36<br>3<br>2<br>2<br>5<br>1<br>4<br>-1<br>31            |
| 13<br>3<br>12<br>2<br>1<br>0<br>2<br>0<br>8<br>-2<br>5<br>2  | 8<br>8<br>76<br>6<br>6<br>4<br>18<br>6<br>15<br>4<br>9  | 14<br>8<br>59<br>9<br>7<br>4<br>16<br>4<br>31<br>1<br>7<br>20   | 41<br>2<br>2<br>3<br>2<br>2<br>2<br>5<br>6<br>2<br>67<br>9   | 25<br>0<br>37<br>11<br>4<br>7<br>31<br>20<br>8<br>77<br>53   | 9<br>-1<br>6<br>58<br>0<br>5<br>3<br>8<br>16<br>4<br>14<br>20  | 65<br>1<br>8<br>5<br>1<br>1<br>2<br>13<br>1<br>3<br>41<br>12  | 41<br>4<br>17<br>11<br>5<br>0<br>7<br>4<br>36<br>2<br>86<br>73   | 84<br>6<br>42<br>13<br>6<br>3<br>7<br>5<br>21<br>13<br>80   | 86<br>10<br>44<br>11<br>11<br>6<br>16<br>8<br>76<br>10<br>77<br>69   | 95<br>1<br>49<br>11<br>12<br>2<br>9<br>3<br>35<br>16<br>83<br>88  | 93<br>1<br>43<br>9<br>9<br>2<br>5<br>1<br>32<br>12<br>84<br>86  | 61<br>3<br>27<br>8<br>10<br>3<br>13<br>5<br>28<br>3<br>57<br>82  | 52<br>2<br>38<br>10<br>5<br>2<br>5<br>10<br>19<br>7<br>53<br>84   | 91<br>8<br>60<br>12<br>18<br>7<br>11<br>10<br>20<br>9<br>87<br>90   | 80<br>-2<br>36<br>6<br>8<br>1<br>5<br>7<br>33<br>8<br>65<br>86  | 96<br>2<br>56<br>1<br>4<br>1<br>4<br>-1<br>1<br>-3<br>35<br>5  | 88<br>6<br>63<br>5<br>12<br>4<br>19<br>6<br>23<br>1<br>60<br>16   | 87<br>1<br>9<br>4<br>5<br>4<br>6<br>1<br>6<br>1<br>18<br>6   | 97<br>1<br>36<br>3<br>2<br>2<br>5<br>1<br>4<br>-1<br>31<br>30      |
| 13<br>3<br>12<br>2<br>1<br>0<br>2<br>0<br>8<br>-2<br>5<br>2  | 8<br>8<br>76<br>6<br>6<br>4<br>18<br>6<br>15<br>4<br>9<br>29  | 14<br>8<br>59<br>9<br>7<br>4<br>16<br>4<br>31<br>1<br>7<br>20<br>3  | 41<br>2<br>2<br>3<br>2<br>2<br>2<br>5<br>6<br>2<br>67<br>9   | 25<br>0<br>37<br>11<br>4<br>7<br>31<br>20<br>8<br>77<br>53<br>3  | 9<br>-1<br>6<br>58<br>0<br>5<br>3<br>8<br>16<br>4<br>14<br>20<br>1   | 65<br>1<br>8<br>5<br>1<br>1<br>2<br>13<br>1<br>3<br>41<br>12<br>0   | 41<br>4<br>17<br>11<br>5<br>0<br>7<br>4<br>36<br>2<br>86<br>73<br>3  | 84<br>6<br>42<br>13<br>6<br>3<br>7<br>5<br>21<br>13<br>80<br>94<br>2  | 86<br>10<br>44<br>11<br>11<br>6<br>16<br>8<br>76<br>10<br>77<br>69<br>6  | 95<br>1<br>49<br>11<br>12<br>2<br>9<br>3<br>35<br>16<br>83<br>88<br>4   | 93<br>1<br>43<br>9<br>9<br>2<br>5<br>1<br>32<br>12<br>84<br>86<br>1   | 61<br>3<br>27<br>8<br>10<br>3<br>13<br>5<br>28<br>3<br>57<br>82<br>1   | 52<br>2<br>38<br>10<br>5<br>2<br>5<br>10<br>19<br>7<br>53<br>84<br>4  | 91<br>8<br>60<br>12<br>18<br>7<br>11<br>10<br>20<br>9<br>87<br>90<br>6  | 80<br>-2<br>36<br>6<br>8<br>1<br>5<br>7<br>33<br>8<br>65<br>86<br>0   | 96<br>2<br>56<br>1<br>4<br>1<br>4<br>-1<br>1<br>-3<br>35<br>5  | 88<br>6<br>63<br>5<br>12<br>4<br>19<br>6<br>23<br>1<br>60<br>16<br>6  | 87<br>1<br>9<br>4<br>5<br>4<br>6<br>1<br>6<br>1<br>18<br>6   | 97<br>1<br>36<br>3<br>2<br>2<br>5<br>1<br>4<br>-1<br>31<br>30<br>1 |
| 13<br>3<br>12<br>2<br>1<br>0<br>2<br>0<br>8<br>-2<br>5<br>2<br>-2<br>-1  | 8<br>8<br>76<br>6<br>6<br>4<br>18<br>6<br>15<br>4<br>9<br>29<br>-1  | 14<br>8<br>59<br>7<br>4<br>16<br>4<br>31<br>1<br>7<br>20<br>3<br>8  | 41<br>2<br>2<br>3<br>2<br>2<br>2<br>5<br>6<br>2<br>67<br>9<br>0<br>8   | 25<br>0<br>37<br>11<br>4<br>4<br>7<br>31<br>20<br>8<br>77<br>53<br>3<br>17   | 9<br>-1<br>6<br>58<br>0<br>5<br>3<br>8<br>16<br>4<br>14<br>20<br>1   | 65<br>1<br>8<br>5<br>1<br>1<br>2<br>13<br>1<br>3<br>41<br>12<br>0<br>4  | 41<br>4<br>17<br>11<br>5<br>0<br>7<br>4<br>36<br>2<br>86<br>73<br>3  | 84<br>6<br>42<br>13<br>6<br>3<br>7<br>5<br>21<br>13<br>80<br>94<br>2<br>7   | 86<br>10<br>44<br>11<br>11<br>6<br>16<br>8<br>76<br>10<br>77<br>69<br>6  | 95<br>1<br>49<br>11<br>12<br>2<br>9<br>3<br>35<br>16<br>83<br>88<br>4<br>7  | 93<br>1<br>43<br>9<br>9<br>2<br>5<br>1<br>32<br>12<br>84<br>86<br>1<br>3  | 61<br>3<br>27<br>8<br>10<br>3<br>13<br>5<br>28<br>3<br>57<br>82<br>1<br>5  | 52<br>2<br>38<br>10<br>5<br>2<br>5<br>10<br>19<br>7<br>53<br>84<br>4<br>7   | 91<br>8<br>60<br>12<br>18<br>7<br>11<br>10<br>20<br>9<br>87<br>90<br>6<br>17  | 80<br>-2<br>36<br>6<br>8<br>1<br>5<br>7<br>33<br>8<br>65<br>86<br>0<br>5  | 96<br>2<br>56<br>1<br>4<br>1<br>4<br>-1<br>1<br>-3<br>35<br>5<br>-2<br>0   | 88<br>6<br>63<br>5<br>12<br>4<br>19<br>6<br>23<br>1<br>60<br>16<br>6  | 87<br>1<br>9<br>4<br>5<br>4<br>6<br>1<br>6<br>1<br>18<br>6<br>6<br>3   | 97<br>1<br>36<br>3<br>2<br>2<br>5<br>1<br>4<br>-1<br>31<br>30<br>1 |
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| 0  | 2  | 3  | 1  | 3  | -3 | 2  | 2  | 4  | 3  | 3  | 2  | 3  | 0  | 4  | 2  | -1 | 8  | 5  | 2  |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 2  | 17 | 16 | 4  | 5  | 12 | 3  | 58 | 82 | 52 | 83 | 82 | 54 | 59 | 77 | 65 | 15 | 31 | 6  | 13 |
| 7  | 5  | 6  | 12 | 7  | -3 | 21 | 49 | 47 | 49 | 72 | 68 | 25 | 20 | 53 | 46 | 85 | 78 | 51 | 84 |
| -1 | -1 | -3 | 0  | 2  | 1  | 2  | 0  | 14 | 2  | 9  | 8  | 5  | 2  | 0  | 12 | -3 | -7 | -4 | 2  |
| 0  | 0  | 1  | 0  | -3 | 3  | 1  | 0  | 1  | 1  | 1  | -1 | 7  | 4  | -1 | 3  | -5 | -4 | -2 | -2 |
| 0  | 11 | 11 | 8  | 5  | -2 | 4  | 37 | 13 | 29 | 28 | 22 | 22 | 10 | 43 | 27 | 2  | 22 | 7  | 8  |

| TK      | ТК       | ¥        | ¥        | ¥        | ТК       | ТК      | ТК      | ТK      | ¥           | ¥       | ΤK      | ТК       | X       | ТK       | ¥          | ТК       | ТК      | ТК       | ТК        |
|---------|----------|----------|----------|----------|----------|---------|---------|---------|-------------|---------|---------|----------|---------|----------|------------|----------|---------|----------|-----------|
|         |          |          |          |          |          |         |         |         |             |         |         |          |         |          |            |          |         |          |           |
|         |          |          |          |          |          |         |         |         |             |         |         |          |         |          |            |          |         |          |           |
| EPHB3   | EPHB2    | PYK2     | ХХК      | ZAP70    | LTK      | ALK     | ROS     | INSR    | 17<br>IGF1R | IRR     | DDR2    | MUSK 27  | TRKA    | TRKB     | 12<br>TRKC | RON      | MET 7   | AXL      | MER<br>12 |
| 0       | 39       | 48       | 14       | 7        | 16       | 11      | 61      | 14      | 17          | 3       | 30      |          | 6       |          | 12         | 13       | 7       | 0        | 12        |
| -2      | 7<br>6   | 10<br>5  | 4<br>-2  | 1<br>1   | 2<br>1   | 4<br>-1 | 2<br>16 | 3       | 2<br>2      | 1<br>-2 | 1<br>9  | 6<br>14  | 5<br>23 | 4<br>28  | 2<br>25    | -3<br>3  | 0<br>2  | -1<br>-2 | 6<br>4    |
| 0       | 66       | 84       | 43       | 33       | 33       | 39      | 70      | 65      | 77          | 4       | 43      | 72       | 64      | 41       | 17         | 34       | 12      | 1        | 14        |
| 3       | 4        | 5        | 0        | 2        | 4        | 7       | 18      | 2       | 4           | 1       | 2       | 24       | 3       | 4        | 6          | 24       | 17      | -7       | 6         |
| 5<br>1  | 8<br>-3  | 8<br>23  | 3<br>-4  | 3        | 4<br>2   | 7<br>1  | 15<br>0 | 4<br>-1 | 7<br>0      | 2       | 0<br>3  | 5<br>-4  | 3<br>-4 | 4<br>1   | 6<br>0     | 68<br>-3 | 40<br>6 | -3<br>0  | 3         |
| 0       | 6        | 28       | -2       | 5        | 11       | 10      | 20      | 14      | 9           | 3       | 7       | 36       | 52      | 75       | 77         | 4        | 20      | 5        | 3         |
| 10      | 57       | 9        | 1        | 2        | 4        | 4       | 6       | 2       | 3           | 2       | 10      | 4        | 1       | 1        | 1          | 4        | 7       | -1       | 2         |
| 3 4     | 6<br>78  | 9<br>65  | 1<br>25  | 4<br>5   | 4<br>39  | 2<br>15 | 7<br>66 | 6<br>17 | 3<br>16     | 2<br>1  | 1<br>78 | 10<br>15 | 3<br>7  | 4<br>14  | 6<br>13    | 11<br>5  | 5<br>5  | -2<br>8  | 1<br>8    |
| 2       | 1        | 8        | 0        | 2        | 4        | 3       | 3       | 4       | 0           | 0       | 3       | 3        | 13      | 27       | 25         | -1       | 5       | -2       | 4         |
| 2       | 3        | 4        | 3        | 1        | 3        | 5       | 8       | 3       | 2           | 1       | 0       | 6        | 6       | 12       | 12         | -1       | 3       | -4       | 2         |
| 1       | 9        | 7        | 0        | -2       | 4        | 13      | 15      | 8       | 5           | 4       | 1       | 4        | 1       | 2        | 2          | 2        | 0       | 4        | 2         |
| 4       | 8<br>-2  | 11<br>0  | -3       | 1        | 5<br>1   | 4<br>3  | 7<br>4  | 6<br>2  | 4<br>-2     | 2       | 2<br>-1 | 3<br>16  | 6<br>12 | 4<br>31  | 3<br>39    | -2       | 0<br>4  | -6<br>3  | 2<br>1    |
| 6       | 53       | 7        | -1       | -1       | 6        | 14      | 14      | 3       | 6           | 2       | 4       | 4        | -1      | 1        | 3          | 4        | -1      | 1        | 1         |
| 3       | 12       | 9        | 1        | 2        | 0        | 4       | 9       | 2       | 1           | 1       | 4       | 4        | 1       | 0        | 3<br>2     | 15       | 6       | -6       | 1         |
| 97<br>6 | 86<br>8  | 41<br>14 | -4<br>2  | 1<br>7   | 10<br>10 | 8<br>25 | 9<br>22 | 8<br>9  | 4<br>7      | 3<br>3  | 80<br>9 | 6<br>88  | 2<br>6  | 6<br>10  | 7<br>10    | 6<br>13  | 0<br>10 | -14<br>3 | 5<br>6    |
| 0       | 2        | 93       | -1       | 0        | 80       | 86      | 45      | 82      | 60          | 15      | 8       | 9        | 1       | 0        | 10         | 2        | -2      | 5<br>5   | 2         |
| 1       | 23       | 39       | -6       | 12       | 24       | 19      | 78      | 19      | 13          | 3       | 65      | 5        | 8       | 10       | 11         | 10       | 28      | 1        | 62        |
| -4      | -1       | 18       | 1        | 0        | 9        | 14      | 9       | 13      | 10          | -1      | 0       | 31       | 38      | 62       | 87         | 4        | 9       | 11       | 9         |
| 2 5     | 44<br>10 | 6<br>10  | 0<br>-1  | -18<br>7 | 2<br>4   | 2<br>8  | 4<br>10 | 0<br>4  | 2<br>11     | 2<br>3  | 1<br>3  | 2<br>4   | 2<br>2  | 2<br>8   | 4<br>6     | 4<br>7   | 10<br>4 | -1<br>-9 | 7<br>3    |
| 6       | 22       | 8        | -2       | 1        | 3        | 3       | 17      | 3       | 3           | 3       | 18      | 4        | 9       | 20       | 29         | 4        | 8       | -4       | 2         |
| 4       | 12       | 13       | -1       | 2        | 3        | 8       | 10      | 2       | 4           | 3       | 9       | 6        | 2       | 6        | 6          | 7        | 7       | -2       | 2         |
| 3       | 17<br>5  | 4<br>20  | -3       | 2<br>14  | 1<br>1   | 2<br>4  | 8<br>9  | 5<br>5  | 4<br>1      | -1<br>0 | 0<br>1  | 1<br>24  | 3<br>19 | 1<br>45  | 2<br>42    | 2<br>6   | 5<br>15 | 1<br>0   | 1<br>3    |
| 4       | 36       | 26       | -3       | 4        | 8        | 10      | 69      | 5       | 6           | 3       | 8       | 51       | 19      | 57       | 56         | 8        | 16      | 44       | 77        |
| 3       | 18       | 25       | -2       | 4        | 7        | 10      | 61      | 21      | 21          | 1       | 7       | 8        | 3       | 15       | 6          | 6        | 10      | -3       | 5         |
| 5       | 7        | 13       | 2        | -2       | 2        | 4       | 11      | 7       | 1           | 0       | -1      | -1       | 0       | 1        | 2          | 5        | 8       | -3       | 3         |
| -4      | 30<br>1  | 22<br>20 | 35<br>-4 | 4<br>-3  | 4<br>4   | 4<br>6  | 38<br>7 | 3<br>9  | 8<br>6      | 3<br>-1 | -1<br>1 | 53<br>36 | 8<br>47 | 31<br>59 | 29<br>57   | 18<br>6  | 6<br>0  | 0<br>4   | 21<br>4   |
| 1       | 5        | 8        | 2        | 2        | 2        | 4       | 29      | 4       | 9           | 1       | 0       | 6        | 3       | 4        | 5          | 21       | 15      | -3       | 1         |
| 4       | 17       | 58       | -7       | 3        | 5        | 5       | 43      | 4       | 5           | 3       | 76      | 9        | 6       | 8        | 11         | 16       | 41      | -5       | 6         |
| 2       | 8        | 8<br>5   | 1        | 2<br>-1  | 3<br>0   | 4<br>4  | 15<br>1 | 2<br>-1 | 3           | 1<br>1  | 6<br>5  | 5<br>-1  | 4<br>1  | 1<br>1   | 4<br>3     | 5<br>1   | 3<br>5  | -1<br>1  | 3         |
| 1<br>7  | 6<br>46  | 5<br>23  | 0<br>2   | 5        | 7        | 4<br>7  | 28      | 8       | -1<br>7     | 1<br>5  | 5<br>28 | 16       | 43      | 47       | ა<br>48    | 7        | 5<br>5  | -1<br>-6 | 2<br>10   |
| 32      | 36       | 2        | 4        | 2        | 1        | 3       | 76      | 0       | -1          | -3      | 13      | 4        | 0       | 6        | 11         | 13       | 4       | 6        | 7         |
| -5      | -1       | -2       | -2       | -21      | 1        | 8       | 3       | 3       | -1          | -2      | 19      | 41       | 36      | 37       | 48         | 11       | -3      | 1        | 13        |
| 1       | 12       | 1        | 1        | 0        | 5        | 4       | 55      | 2       | 3           | 0       | 31      | 5        | 26      | 39       | 39         | 6        | 4       | 2        | 3         |

| 4        | 8        | 14       | -1       | 3         | 3        | 6        | 16       | 4       | 4       | 1       | 5        | 6       | 9       | 11      | 10             | 9        | 8       | 2        | 9       |
|----------|----------|----------|----------|-----------|----------|----------|----------|---------|---------|---------|----------|---------|---------|---------|----------------|----------|---------|----------|---------|
| 5        | 6        | 8        | 2        | -2        | 5        | 4        | 6        | 6       | 6       | 2       | 2        | 4       | 3       | 4       | 3              | 6        | 6       | -4       | 3       |
| -7       | 9<br>12  | 97       | 5        | 15<br>2   | 96<br>8  | 79       | 83       | 98<br>9 | 97      | 98      | 2<br>3   | 62<br>5 | 14      | 11      | 12             | 29       | 23      | 86<br>-6 | 16      |
| 4        | 7        | 14<br>3  | 2<br>4   | 2         | o<br>11  | 15<br>10 | 6<br>4   | 3       | 4<br>2  | 4<br>3  | ა<br>2   | 5<br>5  | 1<br>5  | 6<br>4  | 6<br>5         | 1<br>2   | 8<br>10 | 0        | 2<br>30 |
| 3        | 11       | 11       | -4       | 4         | 4        | 9        | 11       | 3       | 2       | 4       | 0        | 3       | 5       | 9       | 9              | 2        | 1       | -5       | 2       |
| 4        | 4        | 45       | 1        | 2         | 3        | 5        | 7        | 3       | 2       | 2       | 1        | 5       | 3       | 1       | 0              | 0        | -4      | -4       | 2       |
| 2        | 6        | 5        | 0        | 1         | 2        | 5        | 5        | 5       | 10      | 4       | 2        | 4       | 3       | 4       | 3              | 4        | 5       | -8       | 1       |
| -2       | 2        | 3        | 0        | -2        | 0        | -1       | 3        | 3       | -1      | -2      | 2        | 2       | 0       | 1       | -1             | 2        | 0       | 7        | 0       |
| 12       | 56       | 10       | -1       | 0         | 5        | 4        | 7        | 0       | 3       | 3       | 10       | 4       | 0       | 4       | 6              | 7        | 12      | -5       | 3       |
| 5        | 4        | 5        | 0        | 3         | 4        | 5        | 6        | 3       | 3       | 2       | 3        | 5       | 1       | 3       | 3              | 8        | 11      | -6       | 3       |
| 2 3      | 15<br>8  | 59<br>9  | -4<br>-6 | 1<br>1    | 10<br>5  | 12<br>4  | 78<br>14 | 6<br>15 | 9<br>6  | 4<br>6  | 10<br>2  | 10      | 7<br>3  | 9<br>5  | 12<br>3        | 8<br>1   | 25<br>4 | -1<br>-6 | 4<br>3  |
| 2        | 66       | -2       | -0<br>-1 | -4        | 0        | -2       | 2        | 5       | -5      | 1       | 37       | 5       | 0       | 0       | 1              | 1        | 1       | 3        | 4       |
| 3        | 8        | 4        | 1        | 3         | 0        | 2        | 3        | 3       | 0       | 1       | 1        | 2       | -1      | 1       | 2              | 1        | -4      | -3       | 0       |
| 4        | 10       | 8        | -1       | 4         | 1        | 7        | 17       | 4       | 10      | 2       | 7        | 5       | 6       | 6       | 7              | -2       | 5       | -7       | 9       |
| 3        | 11       | 10       | -8       | 1         | 6        | 4        | 12       | 6       | 4       | 2       | 8        | 5       | 20      | 35      | 31             | 0        | 6       | -6       | 5       |
| 5        | 39       | 30       | 14       | 8         | 12       | 9        | 27       | 15      | 13      | 4       | 2        | 23      | 3       | 11      | 11             | 17       | 15      | -4       | 10      |
| 1        | 8        | 9        | -1       | 0         | 1        | 5        | 6        | 4       | 3       | 2       | 0        | 7       | 1       | 2       | 4              | 5        | 0       | -1       | 5       |
| -5<br>24 | -8<br>78 | 9<br>13  | 1<br>-3  | 3<br>-9   | 0<br>6   | 4<br>8   | 7<br>11  | 7<br>2  | 2<br>-5 | 0<br>0  | -1<br>80 | 2<br>83 | 3<br>85 | 0<br>74 | <b>2</b><br>90 | 6<br>17  | 4<br>43 | -1<br>61 | 3<br>14 |
| 3        | 12       | 11       | -3<br>-1 | -9<br>-10 | 9        | 9        | 5        | 2       | 4       | 4       | 1        | 4       | 1       | 3       | 3              | 7        | 13      | -5       | 5       |
| 3        | 11       | 6        | 0        | 1         | 0        | 4        | 5        | 2       | 4       | 2       | 7        | 1       | 2       | 4       | 3              | 6        | 2       | -1       | 4       |
| -4       | 4        | 6        | 0        | -4        | -1       | -1       | 3        | 1       | -7      | 3       | 49       | 3       | 3       | 1       | 4              | 6        | 11      | 0        | 2       |
| 6        | 22       | 3        | 3        | 2         | 3        | 4        | 8        | 0       | 5       | 1       | 7        | 9       | 2       | 0       | 2              | 11       | 11      | 3        | 8       |
| 2        | 4        | 0        | 2        | 2         | 1        | 3        | 3        | 2       | 1       | -2      | 0        | 4       | 26      | 31      | 35             | -2       | 2       | 0        | 2       |
| 4        | 4        | 10       | 1        | -3        | 3        | 3        | 4        | 6       | 2       | 3       | 1        | 3       | -1      | 3       | 3              | 5        | 4       | -5       | 1       |
| 4        | 57<br>-  | 40       | -2       | 3         | 5        | 7        | 11       | 9       | 6       | 3       | 1        | 19      | 8       | 16      | 11             | 6        | 9       | 0        | 4       |
| 0 2      | 7<br>5   | 10<br>8  | -5<br>0  | -2<br>-3  | 5<br>3   | 2<br>2   | 10<br>7  | 1<br>3  | -5<br>9 | 3<br>1  | 1<br>1   | -2<br>5 | 1<br>4  | 4<br>3  | 1<br>0         | 6<br>-1  | 7<br>2  | -8<br>0  | 14      |
| 6        | 7        | 1        | 1        | 0         | 0        | 0        | 1        | 2       | 0       | -2      | 2        | -1      | -3      | 2       | -1             | 22       | 6       | 2        | 4       |
| 6        | 21       | 46       | -5       | 7         | 13       | 16       | 12       | 32      | 25      | 6       | 9        | 30      | 54      | 73      | 74             | 11       | 15      | _        | 8       |
| 5        | 27       | 30       | -9       | 10        | 1        | 5        | 33       | 3       | 5       | 5       | 27       | 90      | 69      | 55      | 89             | 82       | 85      | 29       | 30      |
| 3        | 9        | 25       | -2       | 7         | 7        | 12       | 8        | 15      | 17      | 6       | 0        | 31      | 44      | 57      | 58             | 6        | 14      | -4       | 6       |
| 2        | 12       | 12       | -1       | 6         | 3        | 8        | 12       | 3       | 5       | 3       | 4        | 13      | 11      | 13      | 14             | 1        | 2       | -6       | 7       |
| 4        | 4<br>5   | -3<br>7  | 1<br>-6  | 2<br>2    | 4<br>4   | 1<br>4   | 6<br>7   | 2<br>3  | 1       | 0<br>3  | 1<br>2   | -1<br>0 | 0<br>-1 | 1<br>3  | 2<br>1         | -2<br>-5 | 8<br>6  | 2<br>-6  | 5<br>2  |
| 4        | 8        | ,<br>39  | -0<br>-1 | 7         | 6        | 6        | 7<br>26  | ა<br>7  | 2       | ა<br>1  | 11       | 6       | 62      | 89      | 94             | 8        | 4       | -0<br>-2 | 2       |
| 1        | 8        | 19       | -2       | 0         | -2       | -1       | 4        | 0       | -2      | -2      | 3        | 22      | 16      | 31      | 41             | 2        | 9       | 7        | 1       |
| 6        | 9        | 14       | 1        | 4         | 3        | 5        | 6        | 5       | -1      | 1       | 2        | 1       | 0       | 3       | 3              | 3        | 9       | -5       | 0       |
| 4        | 38       | 18       | -1       | 16        | 29       | 19       | 80       | 3       | 7       | 1       | -16      | 7       | 6       | 12      | 12             | 22       | 37      | -1       | 19      |
| 0        | 8        | -4       | 0        | 2         | 25       | 0        | 2        | 3       | -1      | -1      | 69       | 32      | -1      | 2       | 6              | -2       | 0       | 1        | 0       |
| 2        | 6        | 14       | -3       | 3         | 5        | 6        | 5        | 3       | 5       | 3       | 3        | 13      | 18      | 35      | 42             |          | 7       | -4       | 1       |
| 4        | 10<br>12 | 44<br>o  | -3<br>1  | 8<br>1    | 37<br>-1 | 25<br>3  | 19       | 23<br>4 | 12      | 3<br>3  | 4<br>0   | 32<br>7 | 71      | 78<br>1 | 78<br>-1       | 2<br>0   | 10      | 2        | 9       |
| 3        | 12<br>0  | 8<br>5   | -1<br>-2 | 1         | 1        | 3        | 6<br>5   | 4<br>2  | 5<br>-1 | 0       | 8<br>1   | -3      | 0       | -1<br>1 | 1              | 1        | -3<br>6 | -1<br>1  | 3<br>0  |
| 6        | 13       | 96       | -8       | 8         | 92       | 81       | 55       | 95      | 90      | 82      | 2        | 11      | 1       | 7       | 5              | 3        | 2       | 37       | 5       |
| 3        | 6        | 1        | -2       | -1        | 3        | 5        | 2        | 2       | 1       | 1       | 5        | -1      | -5      | 0       | 1              | -3       | 0       | 5        | 0       |
| 49       | 68       | 7        | 1        | 1         | 3        | 6        | 10       | 5       | 2       | 2       | 2        | 4       | 3       | 5       | 6              | 9        | 6       | -4       | 3       |
| 2        | 6        | 6        | -1       | 2         | 0        | 1        | 3        | 3       | 0       | 2       | 2        | 2       | 2       | 3       | 1              | 4        | 2       | -5       | 13      |
| 2        | 7        | 4        | -1       | 1         | 2        | 6        | 7        | 1       | 2       | 3       | 2        | 4       | 3       | 9       | 15             | 7        | 6       | -2       | 7       |
| 6        | 7        | 17       | -3       | 0         | 6        | 6        | 9        | 6       | 15      | 3       | 2        | 2       | 1       | 6       | 8              | 13       | 7       | -9<br>3  | 5       |
| 2        | 0<br>3   | -3<br>93 | 0        | 1<br>3    | 3<br>81  | 5<br>82  | 2<br>74  | 4<br>88 | 3<br>88 | 2<br>44 | 1<br>-1  | 3<br>9  | 1<br>0  | 2<br>1  | 2<br>-1        | 8<br>-1  | 1<br>2  | -2<br>2  | 82      |
| -2       | -12      | 8        | 1        | 4         | 0        | 2        | 3        | 5       | 1       | 0       | 0        | 2       | -1      | -4      | -1<br>-2       | 0        | 2       | 1        | -1      |
| 5        | 15       | 14       | 0        | 2         | 3        | 4        | 7        | 6       | 4       | 3       | 4        | 7       | 8       | 4       | 7              | 6        | 3       | -5       | 4       |
| 4        | 7        | 4        | -1       | 2         | 2        | 4        | 6        | 3       | 0       | 1       | 4        | 3       | 2       | 1       | 2              | 4        | -1      | -3       | 6       |
| -1       | 9        | 96       | 2        | 3         | 94       | 91       | 88       | 98      | 98      | 94      | 4        | 17      | 6       | 5       | 5              | 6        | 10      | 54       | 5       |

| 5        | 20       | 5       | 0        | 2       | 3        | 4       | 6       | 2       | 7       | 3        | 5       | 4        | 2        | 4        | 5        | 5       | 6        | -6        | 2      |
|----------|----------|---------|----------|---------|----------|---------|---------|---------|---------|----------|---------|----------|----------|----------|----------|---------|----------|-----------|--------|
| 0        | 4        | 8       | -1       | 0       | 0        | 1       | 4       | 2       | -1      | -2       | 0       | 2        | 3        | 2        | 0        | -1      | 0        | 3         | 2      |
| -3       | -2       | -2      | 0        | 0       | 0        | -2      | -1      | -2      | 1       | -2       | 1       | -2       | 2        | -1       | 0        | -2      | 0        | 2         | 0      |
| 4        | 8        | 9       | -1       | 6       | 5        | 17      | 33      | 8       | 8       | 3        | 3       | 9        | 3        | 2        | 2        | 3       | 10       | -2        | 6      |
| 37       | 84       | 7       | 0        | -1      | 2        | 6       | 7       | 3       | 2       | -1       | 84      | 86       | 82       | 61       | 88       | 1       | 35       | 47        | 5      |
| -3       | -5       | -1      | -1       | 3       | -2       | 0       | 5       | 0       | -2      | 0        | 0       | 1        | -3       | -1       | -3       | 1       | -2       | 2         | 0      |
| 4        | 6        | 10      | 0        | 3       | 4        | 3       | 8       | 3       | 1       | 1        | 3       | 3        | 5        | 6        | 2        | 5       | 10       | -5        | 3      |
| 3        | 2        | -1      | 1        | 2       | -1       | 0       | 0       | 2       | 0       | -2       | 0       | 0        | 3        | 0        | 1        | 2       | 2        | 2         | 10     |
| 5        | 8        | 5       | -7       | 2       | 4        | 4       | 8       | 3       | 1       | 3        | 4       | 3        | 1        | 4        | 4        | 3       | 5        | -6        | 4      |
| 2        | 9        | 12      | -2       | -4      | 2        | 2       | 4       | 0       | -5      | 3        | 2       | 5        | 3        | 4        | 4        | 3       | 4        | -5<br>-   | 1      |
| -1       | 5        | 9       | 2        | -1      | 2        | 0       | 4       | 3       | -4      | 1        | 1       | 2        | 4        | 3        | 1        | 0       | 3        | -5<br>0   | 2      |
| 5        | 8<br>6   | 7<br>0  | -1<br>-3 | 3<br>2  | 5<br>3   | 3<br>4  | 9       | 3<br>3  | 2<br>1  | 2        | 2<br>2  | 1<br>1   | 3<br>1   | 5<br>2   | 5<br>0   | -4      | 4<br>1   | -2<br>-3  | 44     |
| 3<br>4   | 6        | 13      | -3<br>0  | 0       | 5<br>5   | 5       | 9       | 3       | 12      | 3        | 3       | 9        | 7        | 2<br>18  | 10       | 3       | 5        | -5<br>-5  | 2<br>7 |
| 4        | 9        | 16      | 1        | 11      | 9        | 22      | 38      | 82      | 23      | 15       | 2       | 13       | 5        | 5        | 3        | 10      | 7        | -7        | 5      |
| -3       | 5        | 46      | 2        | -6      | 58       | 70      | 51      | 107     | 82      | 17       | 1       | 3        | 1        | -3       | -1       | 8       | 2        | 4         | 2      |
| 1        | 0        | 10      | 4        | -3      | 17       | 9       | 9       | 1       | 3       | 3        | 2       | 6        | 4        | 3        | 6        | -1      | 2        | -3        | 4      |
| 1        | 1        | 0       | 1        | 2       | 2        | 2       | 3       | 4       | 0       | 1        | 5       | 1        | 2        | 4        | 4        | 0       | 5        | -2        | 0      |
| 4        | 3        | 0       | 0        | 1       | 2        | 3       | 4       | 0       | 1       | 0        | 0       | -4       | -5       | 4        | 6        | 0       | 4        | 2         | 3      |
| -2       | -4       | -7      | 0        | 2       | 0        | 0       | 4       | 0       | -1      | -1       | 6       | 4        | -2       | 0        | -2       | -5      | 5        | 2         | 0      |
| 6        | 15       | 60      | -3       | 4       | 4        | 6       | 47      | 8       | 5       | 3        | 3       | 11       | 11       | 7        | 12       | 10      | 16       | -5        | 3      |
| 4        | 10       | 10      | -1       | -11     | 4        | 3       | 3       | 5       | 1       | 2        | 46      | 5        | 7        | 5        | 4        | 5       | 8        | -2        | 4      |
| -1       | 12       | 25      | -3       | 12      | 6        | 10      | 10      | 20      | 9       | 2        | 4       | 13       | 66       | 75       | 72       | 0       | 6        | 19        | 17     |
| -1       | 6        | 7       | 0        | -3      | 2        | 0       | 5       | 3       | -4      | 0        | 2       | -1       | 2        | 3        | 1        | -1      | 0        | -4        | 6      |
| 4        | 11       | 7       | -4       | 2       | 4        | 5       | 8       | 4       | 6       | 4        | 2       | -1       | 1        | 2        | 2        | 4       | 7        | -6<br>-   | -1     |
| 7        | 7        | 6       | -2       | 0       | 3        | 5       | 4       | 3       | 0       | 4        | 1       | 4        | 3        | 4        | 3        | 7       | 8        | -5        | 4      |
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| 0        | 9        | 98      | 0        | 4       | 96       | 89      | 86      | 100     | 96      | 98       | 0       | 29       | 13       | 1        | 4        | 4       | -2       | 64        | 8      |
| 5        | 8        | 12      | 4        | 4       | 7        | 7       | 15      | 5       | 4       | 3        | 3       | 7        | 4        | 3        | 2        | 7       | 6        | -6        | 7      |
| 4        | 3        | 7       | 0        | 3       | 3        | 3       | 1       | 8       | 3       | 1        | 5       | 3        | -1       | 2        | 3        | 1       | 4        | -3        | -1     |
| 2        | 7        | 9       | -1       | 2       | 3        | 7       | 8       | 3       | 4       | 2        | 1       | 3        | 2        | 3        | 3        | 5       | 5        | -8        | 3      |
| 6        | 13       | 14      | 3        | 1       | 7        | 4       | 6       | 7       | 5       | 3        | 7       | 4        | 7        | 10       | 9        | 9       | 6        | -4        | 2      |
| 2        | 2        | 3       | 1        | 2       | 2        | 1       | 5       | 3       | 1       | -1       | 1       | 2        | 3        | 1        | 1        | 0       | 0        | 2         | 1      |
| 6        | 13       | 7       | -1       | 5       | 2        | 4       | 14      | 5       | 3       | 2        | 9       | 4        | 3        | 7        | 5        | 3       | 7        | -3        | 6      |
| 0        | 10       | -2      | -4       | 1       | -1       | -2      | 16      | -13     | -2      | -4       | 6       | 17       | 3        | 23       | 14       | 13      | 7        | 6         | 6      |
| 1        | 15       | 16      | 0        | 0       | 0        | 4       | 19      | 2       | 8       | 1        | 18      | 6        | 41       | 41       | 35       | -2      | 4        | -1        | 2      |
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| 0<br>2   | 11<br>3  | 6<br>9  | 1<br>0   | 3<br>-3 | 4<br>0   | 1       | 5<br>2  | 1<br>3  | 0<br>6  | 1<br>-2  | 5<br>0  | 2        | 3        | 4<br>1   | 5<br>1   | 4<br>1  | 10<br>-1 | 3<br>0    | 3<br>4 |
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| 4        | 7        | 3       | 0        | -5      | 2        | 8       | 7       | 6       | 4       | 2        | 1       | 2        | 1        | 1        | 1        | 4       | 3        | 2         | 3      |
| 1        | -5       | 8       | 0        | 2       | -1       | -1      | 4       | -4      | -6      | 0        | 4       | 12       | -4       | -1       | 2        | -3      | 4        | 7         | 0      |
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| 3        | 7        | 7       | 3        | 0       | 4        | 4       | 11      | 3       | 2       | 3        | 15      | 8        | 6        | 2        | 2        | 1       | 0        | -8        | 11     |
| 3        | 11       | 9       | -3       | 4       | 3        | 4       | 5       | 3       | 9       | 2        | 4       | 22       | 34       | 60       | 66       | 8       | 13       | -5        | 1      |
| 6        | 10       | 11      | 1        | 2       | 7        | 12      | 12      | 6       | 0       | 0        | 2       | 48       | 3        | 15       | 17       | 1       | 6        | -2        | 2      |
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|          |          |         |          |         |          |         |         |         |         |          |         |          |          |          |          |         |          |           |        |

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|--|---------|
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| 6 61 12 -1 -34 28 4 12 8 -2 2 6 3 4 3 8 9 9 -4 4 13 13 0 -2 5 5 11 6 11 2 6 5 10 4 3 4 4 -2 4 13 21 -2 8 7 11 13 7 3 4 2 2 22 12 43 44 7 12 3 4 12 10 1 2 4 4 9 5 2 3 6 5 1 3 4 1 9 -2 2 24 11 -2 -3 3 8 43 6 5 3 20 31 44 49 3 2 -2 3 8 2 0 2 1 1 2 1 2 1 -1 0 7 3 2 4 2 2 2 5 2 6 14 4 -1 3 4 5 5 3 3 1 2 3 0 2 3 6 6 -2 4 8 11 0 1 6 6 18 7 4 2 3 9 6 4 5 1 6 -7 3 0 1 3 2 1 0 5 1 1 0 1 0 1 4 1 3 4 6 2 0 -4 8 20 -1 2 3 0 9 7 -2 1 2 19 36 46 52 5 3 -1 4 13 13 -4 2 5 7 6 6 8 4 6 5 2 6 5 3 7 -6 3 7 9 1 1 3 4 4 3 9 0 4 5 4 3 0 1 8 1 0 3 -5 2 1 1 1 3 2 0 -1 -1 2 8 7 16 -1 -4 2 4 17 10 -5 -7 8 6 9 3 2 4 8 4 4 6 7 4 7 -6 1 19 10 0 -2 28 32 8 4 -2 2 10 3 2 2 5 7 8 -8 -2 11 6 -2 1 2 -2 27 1 -5 1 8 23 5 19 22 44 48 1 -1 5 8 4 -3 2 1 7 3 -3 3 2 2 2 1 7 7 7 4 3 -1 2 -2  | 4<br>2  |
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| 4       13       21       -2       8       7       11       13       7       3       4       2       22       12       43       44       7       12       3         4       12       10       1       2       4       4       9       5       2       3       6       5       1       3       4       1       9       -2         2       24       11       -2       -3       3       8       43       6       5       3       20       31       44       49       3       2       -2         3       8       2       0       2       1       1       2       1       -1       0       7       3       2       4       2       -2       5       2         6       14       4       -1       3       4       5       5       3       3       1       2       3       0       2       3       6       6       -2       4       4       2       3       9       6       4       5       1       6       -7       3       0       1       4       1       3       4       6   | 4       |
| 2       24       11       -2       -3       3       8       43       6       5       3       20       31       44       49       3       2       -2         3       8       2       0       2       1       1       2       1       -1       0       7       3       2       4       2       -2       5       2         6       14       4       -1       3       4       5       5       3       3       1       2       3       0       2       3       6       6       -2         4       8       11       0       1       6       6       18       7       4       2       3       9       6       4       5       1       6       -7         3       0       1       3       2       1       0       5       1       1       0       1       4       1       3       4       6       2       0         -4       8       20       -1       2       3       0       9       7       -2       1       2       19       36       46       52       5       3  | 6       |
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| 6 14 4 -1 3 4 5 5 3 3 1 2 3 0 2 3 6 6 -2 4 8 11 0 1 6 6 18 7 4 2 3 9 6 4 5 1 6 -7 3 0 1 3 2 1 0 5 1 1 0 1 4 1 3 4 6 2 0 -4 8 20 -1 2 3 0 9 7 -2 1 2 19 36 46 52 5 3 -1 4 13 13 -4 2 5 7 6 6 8 4 6 5 2 6 5 3 7 -6 3 7 9 1 1 3 4 4 3 9 0 4 5 4 3 0 1 8 1 0 3 -5 2 1 1 1 1 3 2 0 -1 -1 2 8 7 16 -1 -4 2 4 17 10 -5 -7 8 6 9 3 2 4 8 4 4 6 7 4 7 -6 1 19 10 0 -2 28 32 8 4 -2 2 10 3 2 2 5 7 8 -8 -2 11 6 -2 1 2 -2 27 1 -5 1 8 23 5 19 22 44 48 1 -1 5 8 4 -3 2 1 7 3 -3 3 2 2 1 7 7 4 3 -1 2 -2  | 8       |
| 4       8       11       0       1       6       6       18       7       4       2       3       9       6       4       5       1       6       -7         3       0       1       3       2       1       0       5       1       1       0       1       4       1       3       4       6       2       0         -4       8       20       -1       2       3       0       9       7       -2       1       2       19       36       46       52       5       3       -1         4       13       13       -4       2       5       7       6       6       8       4       6       5       2       6       5       3       7       -6         3       7       9       1       1       3       4       4       3       9       0       4       5       4       3       0       1       8       1         0       3       -5       2       1       1       1       3       2       0       -1       -1       2       8       7       16       -1   | 25      |
| 3       0       1       3       2       1       0       5       1       1       0       1       4       1       3       4       6       2       0         -4       8       20       -1       2       3       0       9       7       -2       1       2       19       36       46       52       5       3       -1         4       13       13       -4       2       5       7       6       6       8       4       6       5       2       6       5       3       7       -6         3       7       9       1       1       3       4       4       3       9       0       4       5       4       3       0       1       8       1         0       3       -5       2       1       1       1       3       2       0       -1       -1       2       8       7       16       -1       -4       2         4       17       10       -5       -7       8       6       9       3       2       4       8       4       4       6       7       4   | 3       |
| -4       8       20       -1       2       3       0       9       7       -2       1       2       19       36       46       52       5       3       -1         4       13       13       -4       2       5       7       6       6       8       4       6       5       2       6       5       3       7       -6         3       7       9       1       1       3       4       4       3       9       0       4       5       4       3       0       1       8       1         0       3       -5       2       1       1       1       3       2       0       -1       -1       2       8       7       16       -1       -4       2         4       17       10       -5       -7       8       6       9       3       2       4       8       4       4       6       7       4       7       -6         1       19       10       0       -2       28       32       8       4       -2       2       10       3       2       2       5       7<  | 6       |
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| 4       17       10       -5       -7       8       6       9       3       2       4       8       4       4       6       7       4       7       -6         1       19       10       0       -2       28       32       8       4       -2       2       10       3       2       2       5       7       8       -8         -2       11       6       -2       1       2       -2       27       1       -5       1       8       23       5       19       22       44       48       1         -1       5       8       4       -3       2       1       7       3       -3       3       2       8       6       4       2       8       3       -11         3       29       8       1       2       5       9       12       3       -3       2       21       7       7       4       3       -1       2       -2   | 6       |
| 1     19     10     0     -2     28     32     8     4     -2     2     10     3     2     2     5     7     8     -8       -2     11     6     -2     1     2     -2     27     1     -5     1     8     23     5     19     22     44     48     1       -1     5     8     4     -3     2     1     7     3     -3     3     2     8     6     4     2     8     3     -11       3     29     8     1     2     5     9     12     3     -3     2     21     7     7     4     3     -1     2     -2  | 2       |
| -2     11     6     -2     1     2     -2     27     1     -5     1     8     23     5     19     22     44     48     1       -1     5     8     4     -3     2     1     7     3     -3     3     2     8     6     4     2     8     3     -11       3     29     8     1     2     5     9     12     3     -3     2     21     7     7     4     3     -1     2     -2  | 5       |
| -1     5     8     4     -3     2     1     7     3     -3     3     2     8     6     4     2     8     3     -11       3     29     8     1     2     5     9     12     3     -3     2     21     7     7     4     3     -1     2     -2   | 5       |
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| 3 6 -7 -4 2 1 0 3 -3 -1 1 -1 -3 -3 1 -2 3 5 -7   | 2       |
| 2 11 13 -1 3 4 3 4 1 1 2 3 14 19 26 28 9 4 -4 -2 -2 3 1 2 1 1 5 2 0 0 3 1 -4 -1 0 -2 0 2   | 3       |
| -2 -2 3 1 2 1 1 5 2 0 0 3 1 -4 -1 0 -2 0 2<br>-6 -5 -8 0 -2 -2 -2 1 -3 -5 -4 -1 3 -1 -1 0 -6 -2 7  | 3 2     |
| 9 23 2 0 -1 2 4 1 -4 3 2 11 2 1 4 2 0 10 0   | 5       |
| 5 7 6 -2 1 3 5 4 3 0 2 22 1 4 3 2 -3 12 -3   | 3       |
| -1 20 1 <mark>0 -5 1 0 8 0 -6 1 11 12 3 1 2 6 11 4</mark>  | 6       |
| 2 4 7 2 3 5 5 9 5 13 5 1 9 6 3 2 4 2 -7  | 11      |
| 0 16 24 0 5 7 13 18 32 17 3 5 43 15 31 42 6 12 10  | 5       |
| 1 11 4 1 7 1 6 12 1 3 2 8 7 0 1 2 4 2 2  | 3       |
| 8 18 4 0 2 0 2 3 4 0 1 6 4 0 0 -1 4 3 1<br>4 8 10 0 3 2 3 5 4 -1 2 2 3 2 3 3 2 4 -3  | 3<br>45 |
| 4 8 10 0 3 2 3 5 4 -1 2 2 3 2 3 3 2 4 -3 6 55 15 2 0 4 3 9 4 5 1 77 1 6 4 2 5 4 -1   | 45<br>6 |
| 3 9 -1 -6 -4 3 4 8 -1 1 3 5 3 2 3 4 20 13 -2   | 4       |
| 4 5 11 3 4 4 4 8 6 7 5 0 9 5 5 5 6 8 -8  | 7       |
| 2 5 1 0 2 8 9 4 4 11 1 2 1 4 2 0 2 5 0   | 48      |
| 2 10 8 0 0 2 8 16 2 6 2 <u>2 4 2 -1 1</u> 2 2 1  | 2       |
| 28 68 19 -7 -11 24 11 16 6 7 2 84 89 94 86 87 8 10 22  | 14      |
| 1 15 6 0 3 1 4 3 2 2 1 63 5 2 3 4 1 1 -2   | 4       |
| 4 3 15 -1 5 5 7 10 5 4 2 1 5 2 6 7 14 3 -13 5 15 14 0 2 8 6 16 43 24 2 -6 7 5 3 5 8 10 -3  | 7       |
| 5 15 14 0 2 8 6 16 43 24 2 -6 7 5 3 5 8 10 -3<br>-6 59 8 1 3 0 1 10 -18 -8 1 84 59 34 11 17 6 9 28   | 6<br>7  |
| 5 7 3 2 6 10 5 8 6 3 3 3 6 8 6 6 13 4 -7   |         |
| 2 5 3 1 2 1 2 8 4 3 -1 -1 5 1 2 3 6 6 2  | 2       |
| -1 14 <mark>92</mark> 3 0 <mark>69 78</mark> 39 <mark>88 92</mark> 38 10 9 5 3 5 7 <b>-2</b> 6   | 2 3     |

| _        | 4        | _        | 4       | 2        | 17      | 4       | 0       | _        | 1       | 2       | 2        | 2        | 2       | 0       | 17      | 2        | _       | 2        | 2      |
|----------|----------|----------|---------|----------|---------|---------|---------|----------|---------|---------|----------|----------|---------|---------|---------|----------|---------|----------|--------|
| -5<br>6  | -1<br>9  | 6<br>10  | -1      | -2<br>7  | 17<br>5 | 1<br>5  | 8<br>6  | 2<br>6   | 1<br>7  | -2<br>3 | 2<br>3   | 3<br>6   | 2<br>1  | 9<br>5  | 17<br>4 | 3<br>8   | 5<br>8  | -8       | 3<br>1 |
| 3        | 9        | 45       | 5       | 0        | 1       | 5       | 4       | 3        | 6       | 4       | 8        | 9        | 6       | 8       | 12      | 8        | 4       | 2        | 9      |
| 2        | 8        | 10       | 1       | 6        | 0       | 4       | 7       | 1        | 5       | 2       | 7        | 9        | 2       | 0       | -1      | 3        | 5       | 3        | 4      |
| -5       | 37       | 2        | 0       | 5        | 3       | 2       | 9       | 1        | -3      | 1       | 25       | 15       | 0       | 3       | 4       | 1        | 12      | 8        | 9      |
| -2       | 4        | 8        | 0       | 0        | 1       | -3      | -1      | -3       | -4      | 0       | 2        | 3        | -2      | 0       | 4       | 0        | 3       | 1        | 1      |
| 4        | 11       | 14       | -4      | 3        | 4       | 4       | 8       | 3        | 4       | 2       | 4        | 9        | 5       | 5       | 7       | 14       | 17      | -4       | 5      |
| 3        | 12       | 6        | 2       | 0        | 4       | 5       | 4       | 1        | -1      | -1      | 9        | 4        | 5       | 3       | 2       | 5        | 7       | 1        | 31     |
| -1       | 4        | 10       | -1      | 0        | 2       | -1      | 11      | 5        | -4      | 0       | 2        | 11       | 4       | 6       | 8       | 24       | 17      | 1        | 7      |
| 0        | 7        | 97       | -3      | 6        | 89      | 70      | 60      | 117      | 93      | 78      | 1        | 4        | 2       | 6       | 5       | 3        | 3       | 8        | 4      |
| 4        | 9        | 6        | -1      | 3        | 2       | 2       | 1       | 4        | 1       | 2       | 2        | 3        | -1      | 4       | 3       | 4        | -1      | -13      | 3      |
| 4        | 25       | 0        | -2      | 1        | 0       | 0       | 2       | -2       | -3      | 1       | 16       | 0        | -2      | 1       | -1      | 0        | 4       | -5       | 3      |
| 1<br>3   | 3<br>11  | 9<br>27  | 2<br>-2 | 2<br>5   | 2<br>11 | 1<br>13 | 4<br>10 | 0<br>12  | 1       | -2<br>3 | 0<br>6   | 0<br>12  | 3<br>16 | 1<br>33 | 0<br>32 | 0        | -2<br>7 | 1        | 0      |
| 5        | 8        | 6        | 1       | 1        | 4       | 2       | 3       | 5        | 6<br>1  | 2       | 3        | 1        | 4       | 3       | 2       | 8<br>8   | 4       | -3<br>-4 | 8<br>5 |
| 5        | 8        | 5        | 2       | 1        | 6       | 5       | 10      | 5        | 5       | 3       | 6        | 9        | 7       | 5       | 4       | 4        | 7       | -7       | 8      |
| 4        | 5        | 2        | 2       | -2       | 3       | 5       | 5       | 5        | 2       | 2       | 2        | 4        | 2       | 3       | 2       | 6        | 5       | -3       | 5      |
| 2        | 6        | 7        | 0       | -2       | 3       | 2       | 3       | 5        | 2       | -1      | 4        | 4        | 3       | 0       | 2       | -1       | 9       | -1       | 3      |
| -3       | 18       | 14       | 43      | 10       | 7       | 7       | 31      | 3        | 4       | 2       | 14       | 44       | 14      | 33      | 35      | 64       | 89      | 11       | 35     |
| 5        | 10       | 11       | -1      | -1       | 3       | 2       | 2       | 2        | 0       | 1       | 3        | 1        | -1      | 3       | 3       | 2        | 4       | -3       | 0      |
| 6        | 8        | 11       | -1      | 5        | 2       | 4       | 8       | 6        | 2       | 1       | 3        | 9        | 2       | 2       | 3       | 6        | 6       | -2       | 3      |
| 2        | 10       | 3        | -6      | 3        | 2       | 3       | 15      | 1        | 2       | 1       | 6        | 1        | 0       | 2       | 3       | -3       | 4       | -1       | 3      |
| 1        | 12       | 6        | -1      | 3        | 5       | 4       | 15      | 5        | 3       | 1       | 2        | 4        | 4       | 7       | 9       | -2       | 1       | 0        | 7      |
| 3        | 7        | 9        | 0       | 1        | 2       | 5       | 6       | 4        | 9       | 5       | -1       | 4        | 2       | 7       | 5       | 2        | 5       | -46      | 2      |
| 5        | 4        | 3        | -2      | 1        | 1       | 1       | 4       | 4        | 3       | 1       | 2        | -2       | -3      | 1       | 0       | 2        | 9       | 1        | 0      |
| -1       | 8        | 7        | 2       | -1       | 3       | 0       | 7       | 5        | -4      | 1       | 5        | 2        | 1       | 0       | 3       | 7        | 5       | -4       | 3      |
| -5<br>4  | 0<br>7   | -11<br>0 | 0<br>-2 | -1<br>-2 | -2<br>3 | -3<br>3 | 1       | -5<br>2  | -3<br>0 | -4<br>3 | 0<br>1   | -3<br>-1 | 0<br>1  | 1<br>2  | 2<br>2  | 0<br>2   | -5<br>4 | 5<br>-3  | 0 2    |
| 2        | 6        | 32       | 0       | 6        | 3       | 8       | 4<br>9  | 6        | 12      | 3       | 3        | 47       | 46      | 65      | 73      | 7        | 4       | 15       | 11     |
| 4        | 11       | 15       | -1      | 1        | 5       | 5       | 4       | 5        | 4       | 3       | 2        | 3        | 2       | 6       | 7       | 1        | 6       | -6       | 3      |
| 1        | 9        | 21       | -1      | 3        | 1       | 1       | 21      | 2        | 7       | 0       | 1        | 5        | 3       | 3       | 5       | 7        | 5       | -1       | 4      |
| 5        | 9        | 2        | -5      | 1        | 5       | 4       | 4       | 5        | 1       | 3       | 5        | 3        | 0       | 3       | 2       | -2       | 6       | -6       | 2      |
| 3        | 13       | 7        | 2       | 2        | 3       | 5       | 12      | -1       | 7       | 2       | 6        | 9        | 4       | 6       | 5       | 5        | 11      | 0        | 6      |
| -4       | -8       | 1        | 0       | 2        | 2       | 5       | 2       | -1       | -1      | -1      | -2       | 2        | -1      | -1      | 0       | 2        | 4       | 3        | 3      |
| 2        | 7        | 8        | -7      | 3        | 1       | 2       | 9       | 1        | -1      | 0       | 2        | 0        | 0       | 4       | 4       | 2        | 0       | -4       | 1      |
| 2        | 5        | 10       | -2      | 3        | 2       | 5       | 2       | 2        | 2       | 0       | 2        | 5        | 1       | 2       | 7       | 2        | -1      | 0        | 3      |
| 8        | 80       | 10       | 1       | 3        | 4       | 4       | 3       | 6        | 2       | -1      | 94       | 49       | 56      | 33      | 39      | 3        | 6       | 10       | 3      |
| 7        | 8        | 12       | 0       | 4        | 7       | 8       | 2       | 5        | 6       | 4       | 2        | 3        | 3       | 3       | 3       | 7        | 11      | -4       | 31     |
| 2        | 37<br>11 | 10<br>13 | -2<br>0 | 3<br>1   | 4<br>4  | 11<br>8 | 16<br>8 | 5<br>3   | 6<br>5  | 2<br>2  | 1<br>5   | 8<br>4   | 1<br>3  | 5<br>1  | 4<br>3  | 11<br>-1 | 4<br>9  | -1<br>-3 | 7<br>1 |
| -5       | 8        | -2       | 1       | 4        | 0       | 0       | 5       | -1       | -1      | -1      | 8        | 10       | 50      | 75      | 73      | 6        | 6       | -3<br>8  | 3      |
| 6        | 13       | 13       | -1      | -1       | 3       | 5       | J       | 8        | 4       | 3       | 1        | 4        | 0       | 3       | 3       | 6        | 8       | -3       | 2      |
| 5        | 7        | 20       | 0       | 12       | 9       | 11      | 12      | 8        | 7       | 4       | -1       |          | 2       | 5       | 6       | 7        | 34      | -6       | 49     |
| 5        | 8        | 8        | -1      | 8        | 7       | 8       | 6       | 3        | 1       | 3       | 1        | 1        | 3       | 3       | 4       | 10       | 24      | -1       | 49     |
| -1       | 2        | 11       | -1      | -3       | 4       | 0       | 8       | 6        | -3      | 2       | 0        | 0        | 3       | 2       | 1       | 3        | 6       | -7       | 2      |
| 5        | 12       | 9        | -2      | 3        | 4       | 11      | 12      | 6        | 5       | 2       | 1        | 8        | 3       | 6       | 9       | 8        | -3      | 0        | 3      |
| 1        | 28       | 8        | 0       | -1       | 0       | 3       | 6       | 3        | 1       | 2       | 19       | 7        | 1       | 1       | 3       | 2        | 5       | 1        | 5      |
| 4        | 6        | 1        | -1      | 2        | 0       | 1       | 4       | 3        | -1      | 0       | 0        | 3        | 0       | 1       | 1       | 2        | 2       | -1       | 1      |
| 1        | 2        | 4        | 1       | 4        | 2       | 3       | 3       | 6        | 4       | 2       | 1        | 3        | 3       | 2       | 2       | 5        | 6       | -1       | 7      |
| -4       | -3       | -4       | 3       | 2        | -1      | -2      | 4       | -1       | 3       | -1      | 1        | 3        | 1       | 0       | 0       | 1        | -2      | 4        | 2      |
| 1        | 0        | -9       | 0       | 0        | -1      | 1       | 0       | -1<br>-5 | 0       | -1      | -1<br>-5 | 1        | -3<br>1 | -2      | -2<br>1 | -3       | 5<br>4  | 2<br>-4  | 1      |
| 11<br>-1 | 12<br>4  | 12<br>7  | 0<br>2  | 1<br>2   | 6<br>0  | 6<br>1  | 9<br>5  | 5<br>3   | 4<br>9  | 2<br>1  | -5<br>1  | 6<br>2   | 1<br>3  | 3<br>2  | 4<br>3  | 0<br>2   | -1      | -4<br>-5 | 9<br>1 |
| 2        | 1        | 2        | -4      | 1        | 2       | 2       | 2       | ა<br>1   | 9       | 0       | 6        | -5       | -4      | 0       | -1      | 4        | 2       | -5<br>1  | 0      |
| 2        | 0        | 5        | 0       | 6        | 3       | 4       | 2       | 6        | 3       | 0       | 3        | 2        | 2       | 1       | 2       | 1        | 0       | -3       | 41     |
| 7        | 11       | 7        | 0       | -3       | 6       | 7       | 10      | 5        | 3       | 3       | 2        | 7        | 5       | 4       | 3       | 10       | 7       | -4       | 3      |
| 2        | 5        | 3        | 1       | 1        | 2       | 3       | 2       | 1        | 2       | 0       | 5        | 7        | 3       | 2       | 2       | 4        | 3       | 3        | 3      |
| 2        | 5        | -1       | 1       | 2        | 5       | 5       | 7       | 5        | 2       | 2       | 2        | 2        | 0       | 1       | 2       | 4        | 5       | 0        | 7      |

| 16   | 74  | 44  | -3   | 3  | 6   | 8   | 11  | 18  | 3  | 2  | 83  | 4   | 17   | 13   | 9   | 5  | 11   | -6   | 32   |
|--|---|---|--|--|---|---|---|---|--|--|---|---|--|--|---|--|--|--|--|
| 13   | 9   | 0   | 1  | 2  | 2   | 2   | 8   | 2   | 0  | -2   | 9   | 2   | -1   | 1  | 2   | 3  | 15   | 3  | 6  |
| 3  | 7   | 14  | -2   | 5  | 34  | 15  | 9   | 4   | 3  | 2  | 7   | 8   | 7  | 8  | 12  | 3  | 8  | -4   | 2  |
| 4  | 15  | 12  | 2  | 12   | 4   | 4   | 12  | 8   | 12   | 5  | 7   | 0   | 3  | 3  | 4   | 3  | 6  | -3   | 9  |
| 3  | 34  | 89  | -2   | 5  | 11  | 10  | 54  | 11  | 6  | 2  | 85  | 39  | 51   | 32   | 37  | 59   | 77   | 12   | 52   |
| 1  | 10  | 8   | 2  | 1  | 1   | 2   | 6   | 3   | 2  | 2  | 1   | 3   | 3  | 3  | 1   | 2  | 8  | 0  | 0  |
| 4  | 19  | 18  | -2   | 1  | 5   | 8   | 10  | 2   | 3  | 3  | 35  | 3   | 3  | 8  | 5   | 3  | 9  | -3   | 7  |
| 15   | 20  | -3  | 1  | 0  | 3   | 2   | 6   | 3   | 1  | 1  | -4  | 1   | -1   | -1   | 2   | 4  | 3  | 2  | 10   |
| 2  | 1   | 1   | 0  | 2  | 0   | 2   | 4   | 1   | -1   | -2   | 1   | 5   | 4  | 1  | 1   | 0  | 3  | 2  | 3  |
| -3   | 21  | 7   | 0  | 3  | 7   | 7   | 31  | 2   | -6   | 2  | 5   | 12  | 9  | 17   | 27  | 7  | 13   | 1  | 11   |
| 3  | 9   | 10  | 1  | 0  | 3   | 4   | 5   | 5   | 2  | 1  | 5   | 10  | 8  | 8  | 14  | 2  | 4  | -3   | 3  |
| -2   | 6   | 12  | 2  | -1   | 9   | 3   | 12  | 6   | -5   | 1  | -1  | 6   | 3  | 1  | 2   | 4  | 4  | 0  | 6  |
| 3  | 18  | 13  | -2   | 3  | 2   | 4   | 4   | 3   | 1  | 1  | 16  | 2   | 3  | 3  | 4   | 5  | 5  | -1   | 40   |
| 4  | 6   | 2   | 3  | 1  | 4   | 6   | 4   | 3   | 3  | 2  | 6   | 6   | 5  | 12   | 8   | 3  | 3  | -3   | 5  |
| 4  | 9   | 15  | -2   | 0  | 6   | 10  | 24  | 9   | 5  | 1  | 4   | 9   | 1  | 1  | 3   | 2  | 2  | -6   | 6  |
| 6  | 15  | 35  | -1   | 4  | 44  | 21  | 11  | 4   | 5  | 2  | 7   | 8   | 21   | 29   | 47  | 19   | 16   | -6   | 4  |
| 2  | 13  | 0   | 2  | 0  | 1   | 3   | 3   | 0   | 2  | 1  | 8   | 8   | 3  | 2  | 5   | 4  | 5  | 5  | 2  |
| 2  | 1   | -2<br>10  | -4   | 1  | 3<br>24   | 3   | 4   | 0   | -2<br>7  | -1   | 0   | -4<br>2   | -8<br>20   | -1<br>10   | -2<br>7   | 1  | 3  | -1<br>o  | -1<br>12   |
| 6  | 35<br>5   | 10<br>7   | 0<br>-2  | -1<br>-3   | 24<br>1   | 35<br>2   | 22<br>3   | 24<br>3   | 7<br>0   | 3<br>0   | 80<br>1   | -2<br>4   | 20<br>2  | 19<br>5  | <i>7</i><br>5   | 9<br>2   | 9<br>7   | 8<br>-2  | 13<br>4  |
| 4  | 30  | ,<br>16   | 10   | 4  | 6   | 8   | 76  | 7   | 5  | 5  | 9   | 46  | 13   | 38   | 37  | 61   | 49   | 6  | 39   |
| 4  | 11  | 19  | -1   | 2  | 6   | 6   | 8   | 5   | 1  | 2  | 1   | 0   | 0  | 5  | 3   | 9  | 8  | -9   | 2  |
| -1   | 7   | 9   | -1   | 0  | 3   | 5   | 12  | 11  | -3   | 2  | 23  | 9   | 2  | 1  | 3   | 7  | 7  | 1  | 4  |
| 5  | 40  | 12  | -1   | 2  | 6   | 8   | 11  | 7   | 6  | 4  | 22  | 2   | 2  | 3  | 3   | 9  | ,<br>15  | 0  | 14   |
| 8  | 62  | 14  | 0  | 2  | 4   | 6   | 11  | 2   | 8  | 4  | 79  | 64  | 52   | 35   | 41  | 5  | 19   | 19   | 4  |
| -4   | -7  | 0   | 11   | 1  | 6   | 0   | 5   | 1   | 2  | -1   | 2   | 1   | -27  | -2   | -1  | 5  | 2  | 2  | 1  |
| 2  | 7   | 9   | 1  | 4  | 3   | 2   | 7   | 5   | 1  | 1  | 2   | 5   | 4  | 6  | 7   | 1  | 1  | -3   | 3  |
| 5  | 10  | 13  | -4   | 2  | 6   | 5   | 8   | 4   | 1  | 4  | 6   | 1   | 0  | 5  | 3   | 5  | 6  | -3   | 2  |
| 53   | 92  | 10  | _  |  |   | 2.4   | 0   | 0   | _  |  | 7.4   | _   | 1  | _  | _   | _  | _  | e  | 4  |
|  | 32  | 18  | 2  | 4  | 50  | 34  | 8   | 6   | 5  | 4  | 74  | 6   | 4  | 2  | 5   | 5  | 5  | -6   | 4  |
| 100  | 90  | 91  | -9   | 4<br>5   | 11  | 34<br>9   | 81  | о<br>27   | 5<br>8   | 4<br>7   | 87  | 101   | 98   | 101  | 99  | 5<br>22  | 63   | 82   | 67   |
| 100  | 90<br>9   | 91<br>90  |  | 5  |   | 9<br>85   | 81<br>79  |   |  |  | 87<br>1   |   |  |  |   |  | 63<br>-7   |  |  |
| 100<br>0<br>21   | 90<br>9<br>58   | 91<br>90<br>13  | -9<br>0<br>2   | 5<br>29  | 11<br>90<br>6   | 9   | 81<br>79<br>15  | 27  | 8  | 7<br>90<br>2   | 87<br>1<br>28   | 101<br>4<br>4   | 98<br>4<br>2   | 101<br>3<br>4  | 99<br>5<br>5  | 22<br>5<br>2   | 63   | 82<br>21<br>-7   | 67<br>0<br>3   |
| 100<br>0<br>21<br>2  | 90<br>9<br>58<br>11   | 91<br>90<br>13<br>9   | -9<br>0<br>2<br>-3   | 5<br>29<br>-8  | 11<br>90<br>6<br>23   | 9<br>85<br>5<br>9   | 81<br>79<br>15<br>18  | 27<br>91<br>6<br>0  | 8<br>98<br>6<br>4  | 7<br>90<br>2<br>3  | 87<br>1<br>28<br>6  | 101<br>4<br>4<br>6  | 98<br>4<br>2<br>13   | 101<br>3<br>4<br>12  | 99<br>5<br>5<br>24  | 22<br>5<br>2<br>8  | 63<br>-7<br>3<br>6   | 82<br>21<br>-7<br>-2   | 67<br>0<br>3<br>2  |
| 100<br>0<br>21<br>2<br>3   | 90<br>9<br>58<br>11<br>8  | 91<br>90<br>13<br>9<br>20   | -9<br>0<br>2<br>-3<br>-1   | 5<br>29<br>-8<br>3   | 11<br>90<br>6<br>23<br>6  | 9<br>85<br>5<br>9<br>6  | 81<br>79<br>15<br>18<br>13  | 27<br>91<br>6<br>0<br>4   | 8<br>98<br>6<br>4<br>4   | 7<br>90<br>2<br>3<br>1   | 87<br>1<br>28<br>6<br>5   | 101<br>4<br>4<br>6<br>12  | 98<br>4<br>2<br>13<br>9  | 101<br>3<br>4<br>12<br>15  | 99<br>5<br>5<br>24<br>17  | 22<br>5<br>2<br>8<br>6   | 63<br>-7<br>3<br>6<br>-1   | 82<br>21<br>-7<br>-2<br>-4   | 67<br>0<br>3<br>2<br>5   |
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| 100<br>0<br>21<br>2<br>3<br>5<br>3<br>2<br>-5<br>0<br>8<br>7<br>3<br>2<br>-7<br>2<br>3<br>51<br>11<br>1<br>2<br>64<br>22<br>1<br>2                 | 90<br>9<br>58<br>11<br>8<br>4<br>17<br>1<br>18<br>1<br>55<br>46<br>9<br>9<br>6<br>10<br>10<br>82<br>71<br>7<br>9<br>80<br>89<br>-3<br>6<br>12       | 91<br>90<br>13<br>9<br>20<br>4<br>8<br>98<br>81<br>4<br>59<br>12<br>6<br>95<br>0<br>14<br>3<br>19<br>48<br>4<br>97<br>85<br>21<br>4<br>1<br>9 | -9<br>0<br>2<br>-3<br>-1<br>1<br>36<br>11<br>0<br>-15<br>5<br>1<br>2<br>0<br>-1<br>2<br>-10<br>-5<br>1<br>73<br>-10<br>-4<br>-3<br>0<br>2            | 5<br>29<br>-8<br>3<br>2<br>2<br>2<br>3<br>9<br>2<br>4<br>4<br>3<br>27<br>0<br>0<br>0<br>2<br>-2<br>29<br>3<br>2<br>1<br>0<br>0<br>0<br>1<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0   | 11<br>90<br>6<br>23<br>6<br>4<br>10<br>96<br>78<br>3<br>6<br>4<br>2<br>94<br>-1<br>6<br>-1<br>34<br>3<br>2<br>95<br>54<br>55<br>-1<br>0<br>9  | 9<br>85<br>5<br>9<br>6<br>4<br>5<br>89<br>58<br>4<br>4<br>9<br>4<br>82<br>4<br>5<br>2<br>13<br>6<br>-2<br>87<br>23<br>14<br>1<br>1        | 81<br>79<br>15<br>18<br>13<br>4<br>8<br>82<br>79<br>11<br>67<br>42<br>9<br>61<br>11<br>9<br>0<br>14<br>6<br>8<br>81<br>28<br>7<br>0<br>4<br>11      | 27<br>91<br>6<br>0<br>4<br>7<br>6<br>102<br>10<br>3<br>2<br>4<br>90<br>-2<br>3<br>1<br>9<br>8<br>6<br>97<br>13<br>2<br>4<br>3<br>-1       | 8<br>98<br>6<br>4<br>4<br>11<br>101<br>4<br>2<br>0<br>5<br>2<br>99<br>-2<br>3<br>2<br>1<br>5<br>-5<br>94<br>11<br>1<br>0<br>1  | 7<br>90<br>2<br>3<br>1<br>-1<br>1<br>97<br>7<br>0<br>3<br>1<br>0<br>71<br>0<br>3<br>2<br>-3<br>3<br>0<br>97<br>2<br>4<br>-1<br>0<br>1      | 87<br>1 28<br>6 5<br>3 6<br>0 17<br>2 89<br>41<br>1 3 8<br>4 38<br>80 83<br>0 3 80<br>11 21<br>1 1          | 101<br>4<br>4<br>6<br>12<br>5<br>5<br>13<br>12<br>4<br>59<br>80<br>1<br>20<br>9<br>4<br>3<br>98<br>5<br>1<br>15<br>94<br>1<br>15<br>3<br>3<br>3<br>3<br>3<br>4<br>5<br>5<br>1<br>5<br>1<br>5<br>1<br>5<br>1<br>1<br>5<br>5<br>1<br>1<br>5<br>5<br>1<br>1<br>1<br>5<br>5<br>5<br>1<br>1<br>1<br>5<br>5<br>5<br>1<br>1<br>1<br>5<br>5<br>5<br>1<br>1<br>5<br>5<br>5<br>5<br>6<br>7<br>8<br>7<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8<br>8 | 98 4 2 13 9 1 4 4 17 4 91 12 2 7 -1 3 -1 97 32 0 4 89 2 -3 0 1   | 101<br>3<br>4<br>12<br>15<br>1<br>7<br>3<br>34<br>4<br>83<br>26<br>1<br>6<br>0<br>4<br>2<br>88<br>20<br>0<br>9<br>91<br>3<br>-1<br>1<br>0      | 99<br>5<br>5<br>24<br>17<br>1<br>8<br>0<br>41<br>5<br>87<br>21<br>3<br>3<br>6<br>4<br>85<br>12<br>2<br>7<br>93<br>1<br>9                      | 22<br>5<br>2<br>8<br>6<br>-1<br>5<br>0<br>17<br>3<br>90<br>66<br>1<br>12<br>3<br>21<br>0<br>3<br>4<br>6<br>9<br>12<br>16<br>24<br>2<br>6       | 63<br>-7<br>3<br>6<br>-1<br>4<br>6<br>1<br>20<br>1<br>65<br>56<br>0<br>13<br>6<br>4<br>-3<br>11<br>8<br>0<br>23<br>30<br>3<br>46<br>-2<br>-5       | 82<br>21<br>-7<br>-2<br>-4<br>-2<br>-7<br>42<br>40<br>0<br>16<br>41<br>-4<br>58<br>11<br>-6<br>-1<br>23<br>-4<br>-2<br>66<br>37<br>-2<br>1<br>1            | 67<br>0<br>3<br>2<br>5<br>4<br>5<br>8<br>50<br>3<br>49<br>59<br>0<br>10<br>5<br>3<br>1<br>22<br>24<br>2<br>20<br>35<br>11<br>8<br>1            |

| 4  | 5  | 3  | -3  | 2  | 1  | 3  | 2  | 1  | 2  | 1  | 0   | -2 | 2  | 0  | 0  | -2 | 10 | -3 | -1 |
|----|----|----|-----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|
| -6 | 26 | 10 | 5   | 2  | 2  | 1  | 14 | 4  | 2  | 3  | 15  | 49 | 7  | 19 | 23 | 42 | 27 | 3  | 16 |
| 68 | 78 | 32 | -18 | 1  | 47 | 22 | 22 | 11 | 16 | 5  | 79  | 90 | 96 | 91 | 89 | 28 | 29 | 45 | 32 |
| -2 | 4  | -4 | -3  | -3 | -1 | -2 | 8  | 1  | -2 | -5 | -14 | 5  | -2 | -1 | -2 | -2 | -3 | 8  | 3  |
| -4 | -9 | -8 | 0   | -1 | 2  | 2  | 36 | 0  | -1 | -4 | 2   | 4  | -1 | -1 | 1  | -1 | 7  | 5  | 2  |
| 4  | 18 | 44 | -8  | 6  | 10 | 15 | 17 | 12 | 19 | 4  | 4   | 51 | 51 | 66 | 67 | 39 | 43 | 25 | 8  |

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| TK      | TK       | TK        | TK        | TK       | TK       | TK       | TK      | ΤK       | TK       | TK       | TK       | TK       | TK        | TK        | TK        | TK       | TK          | TK       | TK           |
|---------|----------|-----------|-----------|----------|----------|----------|---------|----------|----------|----------|----------|----------|-----------|-----------|-----------|----------|-------------|----------|--------------|
| TYR03   | RET      | RET-V804L | RET-Y791F | FGFR1    | FGFR2    | FGFR3    | FGFR4   | FLT1     | KDR      | FLT4     | FMS      | КІТ      | KIT-D816V | KIT-T6701 | KIT-V560G | FLT3     | FLT-3-D835Y | PDGFRα   | PDGFRα-D842V |
| 55<br>3 | 86<br>7  | 50<br>8   | 89<br>5   | 35<br>-4 | 27<br>12 | 18<br>4  | 3<br>3  | 98<br>-1 | 91<br>5  | 95<br>2  | 50<br>11 | 43<br>8  | 54<br>2   | 5<br>1    | 21<br>0   | 65<br>4  | 86<br>2     | 82<br>10 | 88<br>6      |
| 1       | 16       | 16        | 16        | 9        | 27       | 17       | 1       |          | 48       | 37       | 58       | 99       | 0         | 95        | 80        | 91       | 63          | 70       | 43           |
| 28      | 84       | 69        | 82        | 25       | 40       | 31       | 2       | 88       | 72       | 106      | 94       | 96       | 59        | 43        | 58        | 90       | 87          | 92       | 90           |
| 3       | 44<br>66 | 42<br>53  | 38<br>61  | 9<br>13  | 13<br>32 | 8<br>23  | 2<br>11 | 5<br>4   | 11<br>13 | 3<br>3   | 2<br>3   | 2<br>8   | 2<br>-1   | 2<br>3    | 0         | 3<br>3   | 5<br>2      | 19<br>15 | 7            |
| 6   2   | 25       | 3         | 29        | 0        | 32<br>1  | 23<br>1  | 2       | 4<br>17  | 81       | ა<br>34  | ა<br>1   | -3       | 4         | ა<br>1    | 2<br>-2   | ა<br>-1  | -4          | 24       | 6<br>44      |
| 9       | 61       | 67        | 50        | 15       | 37       |          | 2       | 14       | 48       | 47       | 87       | 68       | 4         | 52        | 10        | 49       | 67          | 65       | 59           |
| 6       | 9        | 4         | 9         | 8        | 7        | 5        | 1       | 4        | 7        | 0        | 31       | 67       | 2         | 2         | 23        | 2        | 2           | 39       | 16           |
| 5       | 15       | 33        | 18        | 3        | 4        | 4        | 2       | -2       | 7        | -1       | 2        | 0        | 6         | 4         | -1        | 3        | 2           | 9        | 4            |
| 54<br>7 | 82<br>4  | 39<br>14  | 80<br>11  | 9<br>3   | 13<br>7  | 5<br>4   | 7<br>3  | 29<br>10 | 63<br>11 | 33<br>3  | 34<br>15 | 91<br>80 | 15<br>3   | 5<br>36   | 23<br>24  | 48<br>62 | 37<br>10    | 71<br>17 | 68<br>3      |
| 5       | 7        | 5         | 6         | 3        | 7        | 4        | 1       | 11       | 21       | 9        | 26       | 89       | 0         | 48        | 53        | 81       | 19          | 30       | 5            |
| 5       | 29       | 43        | 13        | 0        | 5        | 3        | 2       | 2        | 4        | 1        | 22       | 19       | 1         | -1        | 1         | 28       | 20          | 11       | 6            |
| 3       | 24       | 4         | 29        | 6        | 7        | 4        | 2       | 10       | 65       | 12       | 4        | 7        | 4         | 4         | 5         | 5        | 0           | 16       | 17           |
| 0       | 19       | 35        | 18        | 5        | 27       | 27       | 0       | 8        | 23       | 15       | 17       | 80       | -3        | 54        | 24        | 62       | 11          | 38       | 13           |
| 5<br>1  | 3<br>23  | 3<br>17   | 3<br>25   | 1<br>8   | 10<br>20 | 2<br>14  | 1<br>8  | 4<br>2   | 4<br>5   | 3<br>1   | 28<br>2  | 63<br>2  | 0         | -1<br>2   | 14<br>5   | 1        | -7<br>1     | 42<br>8  | 13           |
| 19      | 88       | 27        | 90        | 8        | 14       | 11       | 9       | 73       | 71       | 69       | 16       | 48       | 84        | 2<br>8    | 54        | 2<br>5   | 0           | 85       | 2<br>97      |
| 7       | 18       | 17        | 20        | 14       | 12       | 9        | 5       | 0        | 36       | 24       | 18       | 8        | 8         | 5         | 0         | 16       | 12          | 76       | 54           |
| -1      | 3        | 14        | 14        | -5       | 2        | 1        | 0       | 1        | 4        | 0        | 3        | 2        | -2        | 1         | 7         | 1        | 2           | 15       | 5            |
| 16      | 77       | 37        | 80        | 63       | 70       | 70       | 26      | 94       | 73       | 94       | 92       | 98       | 6         | 81        | 80        | 15       | 14          | 86       | 58           |
| 17<br>2 | 36<br>18 | 54<br>7   | 40<br>36  | 6<br>-1  | 21<br>4  | 21<br>0  | 4<br>2  | 24<br>3  | 44<br>12 | 33<br>1  | 51<br>4  | 91<br>6  | -1<br>2   | 82<br>1   | 22        | 63<br>2  | 47<br>2     | 53<br>22 | 34<br>19     |
| 5       | 5        | 9         | 8         | 6        | 6        | 6        | 2       | 3<br>1   | 5        | 19       | 2        | 10       | 8         | 3         | 4<br>0    | 0        | 0           | 11       | 5            |
| 24      | 34       | 29        | 39        | 13       | 53       | 60       | 4       | 17       | 59       | 47       | 35       | 71       | 12        | 11        | 13        | 70       | 87          | 68       | 73           |
| 3       | 12       | 13        | 14        | 3        | 6        | 4        | 2       | 3        | 21       | 5        | 5        | 5        | 1         | 3         | 6         | 2        | 3           | 14       | 3            |
| -1      | 4        | 3         | 8         | 2        | 1        | 2        | 2       | 2        | 3        | 1        | 4        | 1        | 4         | 0         | 2         | 2        | -2          | 8        | 6            |
| 20      | 43<br>64 | 44<br>54  | 29<br>59  | 17<br>19 | 18<br>32 | 19<br>24 | 2<br>1  | 12<br>16 | 47<br>67 | 48<br>73 | 46<br>33 | 64<br>8  | 5<br>5    | 15<br>3   | 14<br>1   | 79<br>12 | 64<br>24    | 61<br>82 | 59<br>88     |
| 57      | 27       | 14        | 38        | 10       | 32<br>13 | 10       | 2       | 16       | 45       | 31       | 63       | 83       | 2         | ა<br>8    | 33        | 17       | 24          | 43       | 34           |
| 3       | 10       | 6         | 8         | 6        | 3        | 2        | 2       | 2        | 8        | 1        | 3        | 4        | 0         | 5         | 3         | 3        | -1          | 10       | 5            |
| 26      | 85       | 54        | 78        | 3        | 8        | 8        | 1       | 4        | 20       | 22       | 42       | 53       | 4         | 0         | 8         | 23       | 23          | 65       | 61           |
| 6       | 49       | 66        | 50        | 6        | 27       | 26       | 5       | 21       | 47       | 31       | 42       | 87       | 0         | 61        | 20        | 74       | 59          | 42       | 18           |
| 2<br>7  | 35<br>58 | 35<br>49  | 42<br>74  | 7<br>1   | 18<br>15 | 15<br>10 | 8<br>2  | 2<br>31  | 12<br>35 | 15<br>21 | 1<br>97  | 94       | 1<br>5    | 0<br>74   | 0<br>85   | 2/       | -1<br>20    | 11<br>84 | 3<br>20      |
| 3       | 39       | 49<br>27  | 43        | 8        | 10       | 10<br>8  | 4       | 31<br>4  | 35<br>9  | 21<br>1  | 2        | 5        | -3        | 1         | 85<br>3   | 84       | 20          | 9        | 29<br>3      |
| 2       | 12       | 13        | 21        | 0        | 8        | J        | 1       | 1        | 4        | 3        | 7        | 8        | 3         | 3         | 5         | 3        | 1           | 17       | 3            |
| 26      | 57       | 34        | 57        | 46       | 70       | 77       | 18      | 55       | 77       | 87       | 67       | 97       | 10        | 81        | 34        | 75       | 60          | 71       | 41           |
| 3       | 19       | 5         | 25        | 11       | 1        | 1        | 1       | 1        | 17       | 0        | 15       | 17       | 1         | -1        | 5         | 0        | 1           | 22       | 14           |
| 52      | 55       | 48        | 55        | 9        | 10       | 9        | 1       | 14       | 35       | 17       | 24       | 86       | -1        | 20        | 56        | 79       | 34          | 61       | 40           |
| 20      | 54       | 10        | 51        | 40       | 61       | 65       | 16      | 68       | 90       | 83       | 27       | 91       | 7         | 20        | 20        | 30       | 45          | 50       | 32           |

| 4  | 6   | 15   | 10   | 4   | 8   | 6   | -2   | 3  | 11   | 0   | 5   | 3  | 2  | 2  | 1   | 4  | 7  | 16   | 5  |
|--|---|--|--|---|---|---|--|--|--|---|---|--|--|--|---|--|--|--|--|
| 7  | 4   | 4  | 14   | 2   | 5   | 3   | 0  | 5  | 16   | 7   | 3   | 7  | 6  | 3  | -2  | 1  | -5   | 6  | 6  |
| 19   | 14  | 38   | 19   | 4   | 14  | 8   | 5  | 2  | 14   | 5   | 94  | 68   | 7  | 16   | 18  | 13   | 22   | 63   | 21   |
| 4  | 10  | 9  | 22   | 9   | 9   | 9   | 5  | 3  | 28   | 12  | 5   | 15   | 8  | 8  | 3   | 4  | 3  | 19   | 5  |
| 3  | 9   | 5  | 8  | 3   | 4   | 4   | 1  | 2  | 7  | 3   | 7   | 8  | 2  | 3  | 3   | 10   | 4  | 11   | 5  |
| 2  | 7   | 6  |  | 6   | 14  | 13  | 1  | 16   | 19   | 10  | 54  | 98   | 7  | 78   | 85  | 87   | 26   | 47   | 7  |
| 2  | 10  | 4  | 17   | -5  | 11  | 3   | -1   | 16   | 76   | 27  | 3   | 4  | 6  | -1   | 0   | 4  | 0  | 19   | 34   |
| 2  | 8   | 2  | 8  | 3   | 6   | 4   | 1  | 3  | 8  | 15  | 1   | 4  | -21  | 1  | -1  | 2  | -1   | 8  | 4  |
| -3   | 3   | -1   | -2   | 2   | 2   | 3   | 2  | 3  | 9  | 7   | 2   | 0  | -3   | -1   | 9   | 2  | 3  | 7  | 3  |
| 7  | 5   | 8  | 15   | 1   | 8   | 5   | 1  | 0  | 5  | 3   | 38  | 83   | 7  | 1  | 42  | 3  | 1  | 43   | 8  |
| 3  | 5   | 4  | 20   | 2   | 4   | 3   | 2  | -1   | 11   | 5   | 16  | 2  | 4  | 3  | -2  | 3  | -1   | 12   | 3  |
| 6  | 15  | 14   | 23   | 9   | 9   | 6   | 3  | 9  | 19   | 5   | 67  | 58   | 4  | 7  | 54  | 59   | 5  | 54   | 36   |
| 5  | 7   | 17   | 12   | 5   | 5   | 5   | 1  | 4  | 13   | 3   | 3   | 12   | 4  | 6  | 1   | 4  | 3  | 14   | 7  |
| 2  | 7   | 6  | 18   | -4  | -2  | -4  | -4   | 2  | 4  | -9  | 44  | 52   | 1  | -1   | 17  | 1  | 5  | 34   | 4  |
| 1  | 4   | 7  | 1  | 0   | 4   | 4   | 0  | 4  | 9  | 2   | 0   | 1  | -1   | -1   | 2   | 1  | 1  | 6  | 2  |
| 3  | 14  | 14   | 18   | 11  | 16  | 13  | 3  | 4  | 17   | 19  | 5   | 8  | 6  | 1  | 9   | 3  | -1<br>27   | 17<br>54   | 4  |
| 9<br>27  | 9<br>83   | 12<br>69   | 13<br>81   | 8<br>8  | 12<br>17  | 10<br>19  | 0<br>3   | 19<br>11   | 19<br>46   | 9<br>26   | 56<br>34  | 97<br>49   | 3<br>13  | 82<br>8  | 84<br>6   | 91<br>17   | 37<br>34   | 72   | 12<br>81   |
| 1  | 8<br>8  | 3  | 6  | 0<br>7  | -4  | 3   | 0  | 1  | 46<br>7  | 4   | 34  | 49   | 3  | 0  | 2   | 3  | 34<br>4  | 10   | -1   |
| 0  | 8   | 1  | 3  | 7   | 32  | 21  | 2  | 1  | 20   | 13  | 47  | -3   | -7   | -2   | 2   | 1  | 4  | 15   | 6  |
| 37   | 84  | 76   | 82   | 10  | 33  | 8   | -2   | 79   | 72   | 38  | 73  | 92   | -2   | 79   | 73  | 71   | 31   | 85   | 31   |
| 5  | 7   | 6  | 20   | 2   | 4   | 5   | 0  | 3  | 6  | 3   | 4   | 5  | 7  | 10   | 6   | 3  | 8  | 16   | 3  |
| 3  | 7   | 3  | 2  | 12  | 9   | 9   | 0  | 2  | 9  | 2   | 7   | 0  | 0  | 2  | 5   | 4  | 4  | 8  | 1  |
| 3  | 14  | 15   | 26   | -2  | 6   | 12  | -1   | 8  | 13   | -6  | 8   | 19   | 4  | 3  | 15  | 6  | 5  | 39   | 2  |
| 3  | 12  | 9  | 12   | 2   | 6   | 3   | 2  | 3  | 12   | 4   | 5   | 9  | 1  | 2  | 5   | 2  | 5  | 13   | 3  |
| 3  | 34  | 6  | 31   | 0   | 5   | 4   | 0  | 3  | 4  | 5   | 35  | 32   | 1  | 6  | 19  | 44   | 3  | 34   | 17   |
| 4  | 4   | 5  | 4  | 2   | 5   | 3   | 0  | -1   | 4  | -1  | -1  | 5  | 3  | 5  | -1  | 1  | 4  | 7  | 4  |
| 11   | 39  | 57   | 32   | 4   | 11  | 5   | 1  | 5  | 9  | 3   | 80  | 45   | 6  | 7  | 8   | 36   | 36   | 26   | 13   |
| 3  | 5   | 4  | 15   | 4   | 4   | 2   | -1   | 2  | 11   | -10   | 6   | 4  | 2  | 2  | -1  | 1  | 0  | 13   | 4  |
| 0  | 3   | 3  | 4  | 3   | 5   | 8   | 1  | 1  | 5  | 15  | 9   | 21   | -1   | 4  | -3  | 5  | -2   | 12   | 1  |
| 3  |   |  |  |   |   |   |  |  |  |   |   |  |  |  |   |  |  |  |  |
|  | 2   | 1  | 9  | 0   | -1  | 0   | -2   | 0  | 0  | -1  | 0   | 2  | -1   | 0  | 3   | -2   | -3   | 9  | 3  |
| 22   | 61  | 75   | 67   | 17  | 35  | 33  | 11   | 30   | 48   | 27  | 48  | 2<br>84  | 10   | 72   | 3<br>22   | -2<br>74   | -3<br>66   | 65   | 69   |
| 22<br>17   | 61<br>49  | 75<br>41   | 67<br>65   | 17<br>0   | 35<br>13  | 33<br>6   | 11<br>2  | 30<br>51   | 48<br>56   | 27<br>42  | 48<br>96  | 2<br>84<br>96  | 10<br>2  | 72<br>36   | 3<br>22<br>81   | -2<br>74<br>85   | -3<br>66<br>29   | 65<br>87   | 69<br>29   |
| 22<br>17<br>10   | 61<br>49<br>49  | 75<br>41<br>67   | 67<br>65<br>53   | 17<br>0<br>10   | 35<br>13<br>25  | 33<br>6<br>22   | 11<br>2<br>3   | 30<br>51<br>24   | 48<br>56<br>37   | 27<br>42<br>40  | 48<br>96<br>35  | 2<br>84<br>96<br>76  | 10<br>2<br>8   | 72<br>36<br>47   | 3<br>22<br>81<br>10   | -2<br>74<br>85<br>54   | -3<br>66<br>29<br>46   | 65<br>87<br>46   | 69<br>29<br>24   |
| 22<br>17<br>10<br>9  | 61<br>49<br>49<br>16  | 75<br>41<br>67<br>21   | 67<br>65<br>53<br>26   | 17<br>0<br>10<br>14   | 35<br>13  | 33<br>6<br>22<br>13   | 11<br>2<br>3<br>4  | 30<br>51<br>24<br>12   | 48<br>56<br>37<br>19   | 27<br>42<br>40<br>7   | 48<br>96<br>35<br>15  | 2<br>84<br>96<br>76<br>84  | 10<br>2<br>8<br>5  | 72<br>36<br>47<br>5  | 3<br>22<br>81<br>10<br>25   | -2<br>74<br>85<br>54<br>23   | -3<br>66<br>29<br>46<br>31   | 65<br>87<br>46<br>40   | 69<br>29<br>24<br>14   |
| 22<br>17<br>10<br>9<br>2   | 61<br>49<br>49<br>16<br>2   | 75<br>41<br>67<br>21<br>12   | 67<br>65<br>53<br>26<br>7  | 17<br>0<br>10<br>14<br>2  | 35<br>13<br>25<br>16  | 33<br>6<br>22<br>13<br>2  | 11<br>2<br>3<br>4<br>0   | 30<br>51<br>24<br>12<br>0  | 48<br>56<br>37<br>19<br>4  | 27<br>42<br>40<br>7<br>4  | 48<br>96<br>35<br>15<br>4   | 2<br>84<br>96<br>76<br>84<br>2   | 10<br>2<br>8<br>5  | 72<br>36<br>47<br>5<br>1   | 3<br>22<br>81<br>10<br>25<br>-1   | -2<br>74<br>85<br>54<br>23<br>3  | -3<br>66<br>29<br>46<br>31<br>5  | 65<br>87<br>46<br>40<br>7  | 69<br>29<br>24<br>14<br>5  |
| 22<br>17<br>10<br>9<br>2<br>6  | 61<br>49<br>49<br>16<br>2<br>2  | 75<br>41<br>67<br>21<br>12<br>4  | 67<br>65<br>53<br>26<br>7<br>7   | 17<br>0<br>10<br>14<br>2<br>5   | 35<br>13<br>25<br>16  | 33<br>6<br>22<br>13<br>2<br>6   | 11<br>2<br>3<br>4<br>0<br>2  | 30<br>51<br>24<br>12<br>0<br>0   | 48<br>56<br>37<br>19<br>4<br>5   | 27<br>42<br>40<br>7<br>4<br>1   | 48<br>96<br>35<br>15  | 2<br>84<br>96<br>76<br>84<br>2<br>5  | 10<br>2<br>8<br>5<br>0<br>5  | 72<br>36<br>47<br>5<br>1   | 3<br>22<br>81<br>10<br>25<br>-1<br>-3   | -2<br>74<br>85<br>54<br>23   | -3<br>66<br>29<br>46<br>31<br>5  | 65<br>87<br>46<br>40<br>7<br>7   | 69<br>29<br>24<br>14<br>5  |
| 22<br>17<br>10<br>9<br>2<br>6<br>3   | 61<br>49<br>49<br>16<br>2<br>2  | 75<br>41<br>67<br>21<br>12<br>4<br>12  | 67<br>65<br>53<br>26<br>7<br>7   | 17<br>0<br>10<br>14<br>2<br>5<br>14   | 35<br>13<br>25<br>16<br>6<br>18   | 33<br>6<br>22<br>13<br>2<br>6<br>14   | 11<br>2<br>3<br>4<br>0<br>2<br>2   | 30<br>51<br>24<br>12<br>0<br>0<br>5  | 48<br>56<br>37<br>19<br>4<br>5<br>9  | 27<br>42<br>40<br>7<br>4<br>1<br>4  | 48<br>96<br>35<br>15<br>4<br>2<br>7   | 2<br>84<br>96<br>76<br>84<br>2<br>5  | 10<br>2<br>8<br>5<br>0<br>5<br>2   | 72<br>36<br>47<br>5<br>1<br>2<br>3   | 3<br>22<br>81<br>10<br>25<br>-1<br>-3<br>4  | -2<br>74<br>85<br>54<br>23<br>3<br>2<br>7  | -3<br>66<br>29<br>46<br>31<br>5<br>-3<br>5   | 65<br>87<br>46<br>40<br>7<br>7   | 69<br>29<br>24<br>14<br>5<br>2   |
| 22<br>17<br>10<br>9<br>2<br>6<br>3<br>5  | 61<br>49<br>49<br>16<br>2<br>2<br>11<br>49  | 75<br>41<br>67<br>21<br>12<br>4<br>12<br>73  | 67<br>65<br>53<br>26<br>7<br>7<br>13   | 17<br>0<br>10<br>14<br>2<br>5<br>14<br>1  | 35<br>13<br>25<br>16<br>6<br>18<br>7  | 33<br>6<br>22<br>13<br>2<br>6<br>14<br>5  | 11<br>2<br>3<br>4<br>0<br>2<br>2<br>-1   | 30<br>51<br>24<br>12<br>0<br>0<br>5<br>11  | 48<br>56<br>37<br>19<br>4<br>5<br>9  | 27<br>42<br>40<br>7<br>4<br>1<br>4  | 48<br>96<br>35<br>15<br>4<br>2<br>7<br>4  | 2<br>84<br>96<br>76<br>84<br>2<br>5<br>28<br>6   | 10<br>2<br>8<br>5<br>0<br>5<br>2<br>9  | 72<br>36<br>47<br>5<br>1<br>2<br>3   | 3<br>22<br>81<br>10<br>25<br>-1<br>-3<br>4<br>1   | -2<br>74<br>85<br>54<br>23<br>3<br>2<br>7<br>6   | -3<br>66<br>29<br>46<br>31<br>5<br>-3<br>5<br>46   | 65<br>87<br>46<br>40<br>7<br>7<br>17   | 69<br>29<br>24<br>14<br>5<br>2<br>5  |
| 22<br>17<br>10<br>9<br>2<br>6<br>3<br>5<br>4   | 61<br>49<br>49<br>16<br>2<br>2<br>11<br>49<br>2   | 75<br>41<br>67<br>21<br>12<br>4<br>12<br>73<br>2   | 67<br>65<br>53<br>26<br>7<br>7<br>13<br>56   | 17<br>0<br>10<br>14<br>2<br>5<br>14   | 35<br>13<br>25<br>16<br>6<br>18<br>7<br>4   | 33<br>6<br>22<br>13<br>2<br>6<br>14<br>5<br>3   | 11<br>2<br>3<br>4<br>0<br>2<br>2   | 30<br>51<br>24<br>12<br>0<br>0<br>5<br>11  | 48<br>56<br>37<br>19<br>4<br>5<br>9<br>56<br>7   | 27<br>42<br>40<br>7<br>4<br>1<br>4<br>44<br>0   | 48<br>96<br>35<br>15<br>4<br>2<br>7   | 2<br>84<br>96<br>76<br>84<br>2<br>5<br>28<br>6<br>47   | 10<br>2<br>8<br>5<br>0<br>5<br>2<br>9<br>5   | 72<br>36<br>47<br>5<br>1<br>2<br>3<br>-2<br>8  | 3<br>22<br>81<br>10<br>25<br>-1<br>-3<br>4<br>1   | -2<br>74<br>85<br>54<br>23<br>3<br>2<br>7<br>6<br>2  | -3<br>66<br>29<br>46<br>31<br>5<br>-3<br>5<br>46   | 65<br>87<br>46<br>40<br>7<br>7<br>17<br>62<br>7  | 69<br>29<br>24<br>14<br>5<br>2<br>5<br>77  |
| 22<br>17<br>10<br>9<br>2<br>6<br>3<br>5  | 61<br>49<br>49<br>16<br>2<br>2<br>11<br>49  | 75<br>41<br>67<br>21<br>12<br>4<br>12<br>73  | 67<br>65<br>53<br>26<br>7<br>7<br>13   | 17<br>0<br>10<br>14<br>2<br>5<br>14<br>1  | 35<br>13<br>25<br>16<br>6<br>18<br>7  | 33<br>6<br>22<br>13<br>2<br>6<br>14<br>5  | 11<br>2<br>3<br>4<br>0<br>2<br>2<br>-1<br>0  | 30<br>51<br>24<br>12<br>0<br>0<br>5<br>11  | 48<br>56<br>37<br>19<br>4<br>5<br>9  | 27<br>42<br>40<br>7<br>4<br>1<br>4  | 48<br>96<br>35<br>15<br>4<br>2<br>7<br>4<br>15  | 2<br>84<br>96<br>76<br>84<br>2<br>5<br>28<br>6   | 10<br>2<br>8<br>5<br>0<br>5<br>2<br>9  | 72<br>36<br>47<br>5<br>1<br>2<br>3   | 3<br>22<br>81<br>10<br>25<br>-1<br>-3<br>4<br>1   | -2<br>74<br>85<br>54<br>23<br>3<br>2<br>7<br>6   | -3<br>66<br>29<br>46<br>31<br>5<br>-3<br>5<br>46   | 65<br>87<br>46<br>40<br>7<br>7<br>17   | 69<br>29<br>24<br>14<br>5<br>2<br>5  |
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| 22<br>17<br>10<br>9<br>2<br>6<br>3<br>5<br>4<br>30<br>-1<br>5<br>19<br>1   | 61<br>49<br>49<br>16<br>2<br>2<br>11<br>49<br>2<br>39<br>61<br>15<br>66<br>7<br>3<br>6                                      | 75<br>41<br>67<br>21<br>12<br>4<br>12<br>73<br>2<br>34<br>8<br>42<br>74<br>7<br>3  | 67<br>65<br>53<br>26<br>7<br>7<br>13<br>56<br>9<br>47<br>39<br>22<br>65<br>25<br>2   | 17<br>0<br>10<br>14<br>2<br>5<br>14<br>1<br>3<br>0<br>1<br>24<br>8<br>7<br>6  | 35<br>13<br>25<br>16<br>6<br>18<br>7<br>4<br>21<br>3<br>15<br>31<br>10<br>22<br>9   | 33<br>6<br>22<br>13<br>2<br>6<br>14<br>5<br>3<br>11<br>2<br>13<br>31<br>9<br>15<br>8  | 11<br>2<br>3<br>4<br>0<br>2<br>2<br>-1<br>0<br>0<br>1<br>1<br>4<br>1<br>0<br>4   | 30<br>51<br>24<br>12<br>0<br>0<br>5<br>11<br>1<br>30<br>26<br>8<br>26<br>3<br>1<br>2   | 48<br>56<br>37<br>19<br>4<br>5<br>9<br>56<br>7<br>68<br>64<br>17<br>38<br>9<br>9<br>6  | 27<br>42<br>40<br>7<br>4<br>1<br>4<br>44<br>0<br>63<br>11<br>10<br>25<br>2<br>3   | 48<br>96<br>35<br>15<br>4<br>2<br>7<br>4<br>15<br>94<br>28<br>32<br>60<br>5<br>27<br>2  | 2<br>84<br>96<br>76<br>84<br>2<br>5<br>28<br>6<br>47<br>88<br>48<br>90<br>94<br>3<br>-1<br>9   | 10<br>2<br>8<br>5<br>0<br>5<br>2<br>9<br>5<br>6<br>-1<br>3<br>1<br>0<br>2<br>3   | 72<br>36<br>47<br>5<br>1<br>2<br>3<br>-2<br>8<br>38<br>2<br>41<br>88<br>-2<br>0<br>3   | 3<br>22<br>81<br>10<br>25<br>-1<br>-3<br>4<br>1<br>2<br>37<br>39<br>30<br>42<br>6<br>1  | -2<br>74<br>85<br>54<br>23<br>3<br>2<br>7<br>6<br>2<br>15<br>4<br>67<br>86<br>3<br>3   | -3<br>66<br>29<br>46<br>31<br>5<br>-3<br>5<br>46<br>-4<br>12<br>1<br>16<br>71<br>5<br>-2<br>13   | 65<br>87<br>46<br>40<br>7<br>7<br>17<br>62<br>7<br>61<br>80<br>41<br>63<br>7<br>4  | 69<br>29<br>24<br>14<br>5<br>2<br>5<br>77<br>12<br>36<br>9<br>13<br>35<br>-1   |
| 22<br>17<br>10<br>9<br>2<br>6<br>3<br>5<br>4<br>30<br>-1<br>5<br>19<br>1<br>4  | 61<br>49<br>49<br>16<br>2<br>2<br>11<br>49<br>2<br>39<br>61<br>15<br>66<br>7<br>3<br>6                                      | 75<br>41<br>67<br>21<br>12<br>4<br>12<br>73<br>2<br>34<br>8<br>42<br>74<br>7<br>3<br>12<br>1                                 | 67<br>65<br>53<br>26<br>7<br>7<br>13<br>56<br>9<br>47<br>39<br>22<br>65<br>25<br>2<br>12<br>4  | 17<br>0<br>10<br>14<br>2<br>5<br>14<br>1<br>3<br>0<br>1<br>24<br>8<br>7<br>6<br>0   | 35<br>13<br>25<br>16<br>6<br>18<br>7<br>4<br>21<br>3<br>15<br>31<br>10<br>22<br>9<br>3                                    | 33<br>6<br>22<br>13<br>2<br>6<br>14<br>5<br>3<br>11<br>2<br>13<br>31<br>9<br>15<br>8<br>2   | 11<br>2<br>3<br>4<br>0<br>2<br>2<br>-1<br>0<br>0<br>1<br>1<br>4<br>1<br>0<br>4<br>0  | 30<br>51<br>24<br>12<br>0<br>0<br>5<br>11<br>1<br>30<br>26<br>8<br>26<br>3<br>1<br>2<br>1  | 48<br>56<br>37<br>19<br>4<br>5<br>9<br>56<br>7<br>68<br>64<br>17<br>38<br>9<br>9<br>6<br>1                                       | 27<br>42<br>40<br>7<br>4<br>1<br>4<br>44<br>0<br>63<br>11<br>10<br>25<br>2<br>3<br>0<br>-1  | 48<br>96<br>35<br>15<br>4<br>2<br>7<br>4<br>15<br>94<br>28<br>32<br>60<br>5<br>27<br>2<br>7   | 2<br>84<br>96<br>76<br>84<br>2<br>5<br>28<br>6<br>47<br>88<br>48<br>90<br>94<br>3<br>-1<br>9   | 10<br>2<br>8<br>5<br>0<br>5<br>2<br>9<br>5<br>6<br>-1<br>3<br>1<br>0<br>2<br>3<br>-1                                       | 72<br>36<br>47<br>5<br>1<br>2<br>3<br>-2<br>8<br>38<br>2<br>41<br>88<br>-2<br>0<br>3<br>0  | 3<br>22<br>81<br>10<br>25<br>-1<br>-3<br>4<br>1<br>2<br>37<br>39<br>30<br>42<br>6<br>1<br>1   | -2<br>74<br>85<br>54<br>23<br>3<br>2<br>7<br>6<br>2<br>15<br>4<br>67<br>86<br>3<br>3<br>10   | -3<br>66<br>29<br>46<br>31<br>5<br>-3<br>5<br>46<br>-4<br>12<br>1<br>16<br>71<br>5<br>-2<br>13<br>-5                                     | 65<br>87<br>46<br>40<br>7<br>7<br>17<br>62<br>7<br>61<br>80<br>41<br>63<br>7<br>4<br>13<br>6   | 69<br>29<br>24<br>14<br>5<br>2<br>5<br>77<br>12<br>36<br>9<br>13<br>35<br>-1<br>4<br>3   |
| 22<br>17<br>10<br>9<br>2<br>6<br>3<br>5<br>4<br>30<br>-1<br>5<br>19<br>1<br>4<br>1<br>4  | 61<br>49<br>49<br>16<br>2<br>11<br>49<br>2<br>39<br>61<br>15<br>66<br>7<br>3<br>6   | 75<br>41<br>67<br>21<br>12<br>4<br>12<br>73<br>2<br>34<br>8<br>42<br>74<br>7<br>3<br>12<br>1                                 | 67<br>65<br>53<br>26<br>7<br>7<br>13<br>56<br>9<br>47<br>39<br>22<br>65<br>25<br>2<br>12<br>4  | 17<br>0<br>10<br>14<br>2<br>5<br>14<br>1<br>3<br>0<br>1<br>24<br>8<br>7<br>6<br>0<br>4  | 35<br>13<br>25<br>16<br>6<br>18<br>7<br>4<br>21<br>3<br>15<br>31<br>10<br>22<br>9<br>3<br>5                               | 33<br>6<br>22<br>13<br>2<br>6<br>14<br>5<br>3<br>11<br>2<br>13<br>31<br>9<br>15<br>8<br>2<br>8                                    | 11<br>2<br>3<br>4<br>0<br>2<br>2<br>-1<br>0<br>0<br>1<br>1<br>4<br>1<br>0<br>4<br>0<br>3   | 30<br>51<br>24<br>12<br>0<br>0<br>5<br>11<br>1<br>30<br>26<br>8<br>26<br>3<br>1<br>2<br>1<br>2   | 48<br>56<br>37<br>19<br>4<br>5<br>9<br>56<br>7<br>68<br>64<br>17<br>38<br>9<br>9<br>6<br>1<br>6                                  | 27<br>42<br>40<br>7<br>4<br>1<br>4<br>44<br>0<br>63<br>11<br>10<br>25<br>2<br>3<br>0<br>-1<br>1                                     | 48<br>96<br>35<br>15<br>4<br>2<br>7<br>4<br>15<br>94<br>28<br>32<br>60<br>5<br>27<br>2<br>7<br>39   | 2<br>84<br>96<br>76<br>84<br>2<br>5<br>28<br>6<br>47<br>88<br>48<br>90<br>94<br>3<br>-1<br>9<br>1<br>86                                      | 10<br>2<br>8<br>5<br>0<br>5<br>2<br>9<br>5<br>6<br>-1<br>3<br>1<br>0<br>2<br>3<br>-1<br>-1                                 | 72<br>36<br>47<br>5<br>1<br>2<br>3<br>-2<br>8<br>38<br>2<br>41<br>88<br>-2<br>0<br>3<br>0<br>3                                     | 3<br>22<br>81<br>10<br>25<br>-1<br>-3<br>4<br>1<br>2<br>37<br>39<br>30<br>42<br>6<br>1<br>1<br>0<br>18  | -2<br>74<br>85<br>54<br>23<br>3<br>2<br>7<br>6<br>2<br>15<br>4<br>67<br>86<br>3<br>3<br>10<br>0                                    | -3<br>66<br>29<br>46<br>31<br>5<br>-3<br>5<br>46<br>-4<br>12<br>1<br>16<br>71<br>5<br>-2<br>13<br>-5<br>2                                | 65<br>87<br>46<br>40<br>7<br>7<br>17<br>62<br>7<br>61<br>80<br>41<br>63<br>7<br>4<br>13<br>6<br>43                                   | 69<br>29<br>24<br>14<br>5<br>2<br>5<br>77<br>12<br>36<br>9<br>13<br>35<br>-1<br>4<br>3<br>1  |
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| 22<br>17<br>10<br>9<br>2<br>6<br>3<br>5<br>4<br>30<br>-1<br>5<br>19<br>1<br>4<br>3<br>1  | 61<br>49<br>49<br>16<br>2<br>11<br>49<br>2<br>39<br>61<br>15<br>66<br>7<br>3<br>6<br>0<br>7<br>5                            | 75<br>41<br>67<br>21<br>12<br>4<br>12<br>73<br>2<br>34<br>8<br>42<br>74<br>7<br>3<br>12<br>1<br>12<br>7                      | 67<br>65<br>53<br>26<br>7<br>7<br>13<br>56<br>9<br>47<br>39<br>22<br>65<br>25<br>2<br>12<br>4<br>12<br>12<br>21                          | 17<br>0<br>10<br>14<br>2<br>5<br>14<br>1<br>3<br>0<br>1<br>24<br>8<br>7<br>6<br>0<br>4<br>-2<br>3                             | 35<br>13<br>25<br>16<br>6<br>18<br>7<br>4<br>21<br>3<br>15<br>31<br>10<br>22<br>9<br>3<br>5<br>3                          | 33<br>6<br>22<br>13<br>2<br>6<br>14<br>5<br>3<br>11<br>2<br>13<br>31<br>9<br>15<br>8<br>2<br>8<br>2<br>3                          | 11<br>2<br>3<br>4<br>0<br>2<br>2<br>-1<br>0<br>0<br>1<br>1<br>4<br>1<br>0<br>4<br>0<br>3<br>3<br>3<br>2  | 30<br>51<br>24<br>12<br>0<br>0<br>5<br>11<br>1<br>30<br>26<br>8<br>26<br>3<br>1<br>2<br>1<br>2<br>1<br>5   | 48<br>56<br>37<br>19<br>4<br>5<br>9<br>56<br>7<br>68<br>64<br>17<br>38<br>9<br>9<br>6<br>1<br>6<br>3<br>17                       | 27<br>42<br>40<br>7<br>4<br>1<br>4<br>44<br>0<br>63<br>11<br>10<br>25<br>2<br>3<br>0<br>-1<br>1<br>0<br>21                          | 48<br>96<br>35<br>15<br>4<br>2<br>7<br>4<br>15<br>94<br>28<br>32<br>60<br>5<br>27<br>2<br>7<br>39<br>4<br>5   | 2<br>84<br>96<br>76<br>84<br>2<br>5<br>28<br>6<br>47<br>88<br>48<br>90<br>94<br>3<br>-1<br>9<br>1<br>86<br>10<br>5                           | 10<br>2<br>8<br>5<br>0<br>5<br>2<br>9<br>5<br>6<br>-1<br>3<br>1<br>0<br>2<br>3<br>-1<br>-1<br>1                            | 72<br>36<br>47<br>5<br>1<br>2<br>3<br>-2<br>8<br>38<br>2<br>41<br>88<br>-2<br>0<br>3<br>0<br>3<br>2<br>-1                          | 3<br>22<br>81<br>10<br>25<br>-1<br>-3<br>4<br>1<br>2<br>37<br>39<br>30<br>42<br>6<br>1<br>1<br>0<br>18<br>1                                   | -2<br>74<br>85<br>54<br>23<br>3<br>2<br>7<br>6<br>2<br>15<br>4<br>67<br>86<br>3<br>3<br>10<br>0<br>2<br>3<br>7                     | -3<br>66<br>29<br>46<br>31<br>5<br>-3<br>5<br>46<br>-4<br>12<br>1<br>16<br>71<br>5<br>-2<br>13<br>-5<br>2<br>8<br>1                      | 65<br>87<br>46<br>40<br>7<br>7<br>17<br>62<br>7<br>61<br>80<br>41<br>63<br>7<br>4<br>13<br>6<br>43<br>12<br>51                       | 69<br>29<br>24<br>14<br>5<br>2<br>5<br>77<br>12<br>36<br>9<br>13<br>35<br>-1<br>4<br>3<br>1<br>15<br>2<br>45                           |
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| 4   | 6  | 12   | 12   | 3   | 5   | 4   | -1   | 0  | 8   | 3  | 4  | 15  | 3   | 4   | 6   | 1  | 3  | 18   | 6   |
|---|--|--|--|---|---|---|--|--|---|--|--|---|---|---|---|--|--|--|---|
| 3   | 1  | 3  | 5  | -10   | -5  | -3  | -2   | 0  | 3   | 4  | 18   | 9   | 1   | -3  | 3   | -1   | 2  | 16   | 10  |
| -1  | 3  | -1   | 0  | -2  | 0   | -1  | -1   | -1   | 0   | 4  | 0  | -3  | 1   | 0   | 3   | -2   | 2  | 2  | 4   |
| 3   | 8  | 10   | 7  | 7   | 10  | 6   | 0  | 1  | 23  | 7  | 50   | 11  | 2   | 5   | 2   | 3  | 6  | 18   | 16  |
| 40  | 88   | 85   | 83   | 17  | 30  | 12  | 3  | 78   | 85  | 53   | 39   | 74  | 0   | 47  | 74  | 47   | 14   | 84   | 23  |
| -2  | 3  | 0  | 7  | -3  | 2   | 2   | 0  | 0  | 1   | 0  | 1  | -1  | -2  | -2  | 0   | 1  | 0  | 7  | 2   |
| 4   | 7  | 2  | 7  | 2   | 6   | 5   | 0  | 1  | 11  | -1   | 6  | 7   | 5   | 4   | 1   | 5  | 7  | 15   | 8   |
| 1   | 5  | 5  | 8  | -1  | -1  | 0   | 0  | 0  | 9   | 2  | 4  | 1   | -1  | -1  | 0   | -3   | 3  | 9  | 3   |
| 2   | 5  | 11   | 7  | 5   | 8   | 6   | -1   | 2  | 10  | 3  | 9  | 6   | 6   | 4   | 1   | 4  | 1  | 20   | 3   |
| 1   | 7  | 11   | 10   | 0   | 2   | 3   | -4   | 5  | 11  | -8   | 8  | 5   | 3   | 2   | 1   | 4  | -6   | 15   | 3   |
| 2   | 3  | 3  | 3  | -4  | -2  | 0   | -4   | 6  | 8   | -8   | 5  | 1   | 3   | 1   | -2  | 2  | 0  | 10   | 4   |
| 4   | 10   | 12   | 10   | 4   | 4   | 4   | 0  | 3  | 7   | 5  | 6  | 9   | 2   | 5   | 1   | 7  | -1   | 10   | 4   |
| 3   | 0  | 2  | 4  | 4   | 3   | 5   | 2  | 8  | 62  | 6  | 3  | 0   | 3   | 2   | -1  | 1  | 6  | 5  | 1   |
| 1   | 3  | 8  | 7  | 11  | 14  | 11  | 2  | 3  | 11  | 15   | 9  | 11  | 0   | 5   | -2  | 29   | 1  | 16   | 2   |
| 4   | 11   | 10   | 14   | 18  | 7   | 7   | 2  | 0  | 19  | 5  | 13   | 11  | 6   | 4   | -2  | 6  | 10   | 23   | 24  |
| -1  | 4  | 4  | 1  | -4  | -2  | -3  | -2   | 1  | 2   | -11  | 4  | -1  | 1   | -2  | -3  | 2  | 3  | 7  | 1   |
| 2   | 38   | 7<br>o   | 41   | 3<br>3  | 4<br>3  | 3<br>1  | 2  | 30   | 96  | 63<br>1  | 6  | 2   | 10<br>-4  | 1   | -1<br>7   | 2<br>2   | 1  | 44<br>21   | 62  |
| 4   | 3  | 8<br>2   | 11<br>3  | ა<br>3  | 2   | 3   | 3<br>1   | 0 2  | 4<br>0  | 1<br>2   | 8<br>2   | 13<br>1   | -4<br>-3  | 3<br>1  | 7<br>4  | 2  | -4<br>-3   | 21<br>9  | 10<br>3   |
| -2  | ა<br>10  | 5  | ა<br>15  | -3  | 0   | -1  | 1  | 4  | 20  | 5  | 3  | 1   | -3<br>1   | -3  | 4   | 0  | -ა<br>1  | 13   | 6   |
| 8   | 9  | 13   | 12   | 1   | 7   | 6   | 1  | 7  | 15  | 6  | 33   | 46  | 7   | 11  | 6   | 14   | 16   | 30   | 13  |
| 3   | 7  | 8  | 11   | 3   | 4   | 3   | 2  | 2  | 7   | 0  | 2  | 40  | 6   | 4   | 0   | 3  | 2  | 12   | 6   |
| 13  | 67   | 86   | 74   | 17  | 42  | 48  | 14   | 13   | 55  | 30   | 31   | 53  | 6   | 20  | 4   | 66   | 78   | 65   | 47  |
| 0   | 7  | 6  | 4  | -7  | -3  | -5  | -4   | 3  | 7   | -10  | 3  | 1   | 4   | 2   | 2   | 1  | 0  | 10   | 4   |
| 1   | 7  | 5  | 13   | 6   | 11  | 8   | 2  | 1  | 7   | 6  | 10   | -6  | 5   | 5   | -4  | 5  | -1   | 15   | 5   |
| 3   | 9  | 11   | 10   | 6   | 8   | 8   | 0  | 2  | 10  | 3  | 8  | 9   | 6   | 3   | 1   | 4  | 1  | 14   | 4   |
| 1   | 7  | 5  | 9  | 5   | 6   | 5   | 1  | 3  | 14  | 5  | 6  | 3   | 2   | 2   | -2  | 5  | 8  | 10   | 4   |
| 6   | 2  | 11   | 15   | -2  | 6   | 6   | 0  | 3  | 9   | 1  | 3  | 11  | 8   | 6   | 0   | 6  | 5  | 14   | 8   |
| 2   | 3  | 3  | 1  | -8  | 8   | 8   | 1  | 0  | 0   | 1  | 1  | 0   | 0   | -1  | 2   | 3  | -1   | 7  | 3   |
| 7   | 84   | 9  | 80   | 37  | 56  | 55  | 11   | 91   | 77  | 104  | 32   | 89  | 24  | 7   | 12  | 7  | -5   | 67   | 74  |
|   |  |  |  | •   | -   | -   |  | <b>U</b> .   |   | . 🗸 .  | ~-   | 00  |   |   | 12  | '  | -5   | 01   | 1 -   |
| 8   | 6  | 21   | 3  | 1   | 4   | 1   | 1  | 0  | 4   | 2  | 27   | 4   | 1   | 1   | 0   | 4  | 5  | 17   | 4   |
| 8   | 6<br>5   | 21<br>9  | 3<br>7   | 1<br>8  | 4<br>6  | 1<br>7  |  | 0<br>2   | 4<br>9  | 2<br>0   | 27<br>5  |   |   |   | 0<br>-4   |  | 5<br>1   | 17<br>10   | 4<br>3  |
| 3   | 5<br>4   | 9<br>8   | 3<br>7<br>14   | 1<br>8<br>16  | 4<br>6<br>21  | 1<br>7<br>25  | 1<br>2<br>1  | 0<br>2<br>7  | 4<br>9<br>24  | 2<br>0<br>12   | 27<br>5<br>11  | 4<br>11<br>5  | 1<br>4<br>6   | 1<br>3<br>4   | 0<br>-4<br>7  | 4<br>3<br>0  | 5<br>1<br>-4   | 17<br>10<br>10   | 4<br>3<br>2   |
| 3<br>3<br>2   | 5<br>4<br>7  | 9<br>8<br>-1   | 3<br>7<br>14<br>4  | 1<br>8<br>16<br>5   | 4<br>6<br>21<br>7   | 1<br>7<br>25<br>4   | 1<br>2<br>1<br>3   | 0<br>2<br>7<br>4   | 4<br>9<br>24<br>7   | 2<br>0<br>12<br>-2   | 27<br>5<br>11<br>7   | 4<br>11<br>5<br>5   | 1<br>4<br>6<br>2  | 1<br>3<br>4<br>2  | 0<br>-4<br>7<br>1   | 4<br>3<br>0<br>5   | 5<br>1<br>-4<br>-2   | 17<br>10<br>10<br>8  | 4<br>3<br>2<br>4  |
| 3<br>3<br>2<br>7  | 5<br>4<br>7<br>10  | 9<br>8<br>-1<br>6  | 3<br>7<br>14<br>4<br>11  | 1<br>8<br>16<br>5<br>8  | 4<br>6<br>21<br>7<br>11   | 1<br>7<br>25<br>4<br>7  | 1<br>2<br>1<br>3<br>1  | 0<br>2<br>7<br>4<br>12   | 4<br>9<br>24<br>7<br>20   | 2<br>0<br>12<br>-2<br>12   | 27<br>5<br>11<br>7<br>23   | 4<br>11<br>5<br>5<br>88   | 1<br>4<br>6<br>2<br>4   | 1<br>3<br>4<br>2<br>40  | 0<br>-4<br>7<br>1<br>50   | 4<br>3<br>0<br>5<br>79   | 5<br>1<br>-4<br>-2<br>10   | 17<br>10<br>10<br>8<br>30  | 4<br>3<br>2<br>4<br>7   |
| 3<br>3<br>2<br>7<br>1   | 5<br>4<br>7<br>10<br>1   | 9<br>8<br>-1<br>6<br>2   | 3<br>7<br>14<br>4<br>11<br>2   | 1<br>8<br>16<br>5<br>8<br>5   | 4<br>6<br>21<br>7<br>11<br>3  | 1<br>7<br>25<br>4<br>7<br>7   | 1<br>2<br>1<br>3<br>1<br>3   | 0<br>2<br>7<br>4<br>12<br>4  | 4<br>9<br>24<br>7<br>20<br>8  | 2<br>0<br>12<br>-2<br>12<br>4  | 27<br>5<br>11<br>7<br>23<br>11   | 4<br>11<br>5<br>5<br>88<br>7  | 1<br>4<br>6<br>2<br>4<br>2  | 1<br>3<br>4<br>2<br>40<br>3   | 0<br>-4<br>7<br>1<br>50<br>2  | 4<br>3<br>0<br>5<br>79<br>3  | 5<br>1<br>-4<br>-2<br>10<br>4  | 17<br>10<br>10<br>8<br>30<br>6   | 4<br>3<br>2<br>4<br>7<br>2  |
| 3<br>3<br>2<br>7<br>1<br>3  | 5<br>4<br>7<br>10<br>1<br>10   | 9<br>8<br>-1<br>6<br>2<br>9  | 3<br>7<br>14<br>4<br>11<br>2<br>10   | 1<br>8<br>16<br>5<br>8<br>5<br>13   | 4<br>6<br>21<br>7<br>11<br>3<br>14  | 1<br>7<br>25<br>4<br>7<br>7   | 1<br>2<br>1<br>3<br>1<br>3<br>1  | 0<br>2<br>7<br>4<br>12<br>4<br>5   | 4<br>9<br>24<br>7<br>20<br>8<br>15  | 2<br>0<br>12<br>-2<br>12<br>4<br>1   | 27<br>5<br>11<br>7<br>23<br>11<br>5  | 4<br>11<br>5<br>5<br>88<br>7<br>12  | 1<br>4<br>6<br>2<br>4<br>2<br>2   | 1<br>3<br>4<br>2<br>40<br>3<br>4  | 0<br>-4<br>7<br>1<br>50<br>2<br>4   | 4<br>3<br>0<br>5<br>79<br>3<br>5   | 5<br>1<br>-4<br>-2<br>10<br>4<br>15  | 17<br>10<br>10<br>8<br>30<br>6<br>15   | 4<br>3<br>2<br>4<br>7<br>2<br>7   |
| 3<br>3<br>2<br>7<br>1<br>3<br>8   | 5<br>4<br>7<br>10<br>1<br>10<br>46   | 9<br>8<br>-1<br>6<br>2<br>9<br>11  | 3<br>7<br>14<br>4<br>11<br>2<br>10<br>28   | 1<br>8<br>16<br>5<br>8<br>5<br>13<br>-5   | 4<br>6<br>21<br>7<br>11<br>3<br>14<br>-2  | 1<br>7<br>25<br>4<br>7<br>7<br>12   | 1<br>2<br>1<br>3<br>1<br>3<br>1<br>4   | 0<br>2<br>7<br>4<br>12<br>4<br>5   | 4<br>9<br>24<br>7<br>20<br>8<br>15<br>12  | 2<br>0<br>12<br>-2<br>12<br>4<br>1   | 27<br>5<br>11<br>7<br>23<br>11<br>5  | 4<br>11<br>5<br>5<br>88<br>7<br>12<br>-2  | 1<br>4<br>6<br>2<br>4<br>2<br>2<br>1  | 1<br>3<br>4<br>2<br>40<br>3<br>4<br>-3  | 0<br>-4<br>7<br>1<br>50<br>2<br>4<br>4  | 4<br>3<br>0<br>5<br>79<br>3<br>5   | 5<br>1<br>-4<br>-2<br>10<br>4<br>15<br>3   | 17<br>10<br>10<br>8<br>30<br>6<br>15<br>43   | 4<br>3<br>2<br>4<br>7<br>2<br>7<br>42   |
| 3<br>3<br>2<br>7<br>1<br>3<br>8<br>46   | 5<br>4<br>7<br>10<br>1<br>10<br>46<br>36   | 9<br>8<br>-1<br>6<br>2<br>9<br>11<br>21  | 3<br>7<br>14<br>4<br>11<br>2<br>10<br>28<br>36   | 1<br>8<br>16<br>5<br>8<br>5<br>13<br>-5<br>24   | 4<br>6<br>21<br>7<br>11<br>3<br>14<br>-2<br>55  | 1<br>7<br>25<br>4<br>7<br>7<br>12<br>-3<br>60   | 1<br>2<br>1<br>3<br>1<br>3<br>1<br>4<br>4                                      | 0<br>2<br>7<br>4<br>12<br>4<br>5<br>2<br>31  | 4<br>9<br>24<br>7<br>20<br>8<br>15<br>12  | 2<br>0<br>12<br>-2<br>12<br>4<br>1<br>0  | 27<br>5<br>11<br>7<br>23<br>11<br>5<br>59<br>85  | 4<br>11<br>5<br>5<br>88<br>7<br>12<br>-2<br>88  | 1<br>4<br>6<br>2<br>4<br>2<br>2<br>1<br>6   | 1<br>3<br>4<br>2<br>40<br>3<br>4<br>-3<br>48  | 0<br>-4<br>7<br>1<br>50<br>2<br>4<br>4  | 4<br>3<br>0<br>5<br>79<br>3<br>5<br>-1<br>53   | 5<br>1<br>-4<br>-2<br>10<br>4<br>15<br>3   | 17<br>10<br>10<br>8<br>30<br>6<br>15<br>43   | 4<br>3<br>2<br>4<br>7<br>2<br>7<br>42<br>23   |
| 3<br>3<br>2<br>7<br>1<br>3<br>8<br>46<br>3  | 5<br>4<br>7<br>10<br>1<br>10<br>46<br>36<br>4  | 9<br>8<br>-1<br>6<br>2<br>9<br>11<br>21<br>3   | 3<br>7<br>14<br>4<br>11<br>2<br>10<br>28<br>36<br>11   | 1<br>8<br>16<br>5<br>8<br>5<br>13<br>-5<br>24<br>5  | 4<br>6<br>21<br>7<br>11<br>3<br>14<br>-2<br>55<br>4   | 1<br>7<br>25<br>4<br>7<br>7<br>12<br>-3<br>60<br>4  | 1<br>2<br>1<br>3<br>1<br>3<br>1<br>4<br>4<br>4                                 | 0<br>2<br>7<br>4<br>12<br>4<br>5<br>2<br>31<br>4   | 4<br>9<br>24<br>7<br>20<br>8<br>15<br>12<br>68<br>7   | 2<br>0<br>12<br>-2<br>12<br>4<br>1<br>0<br>86<br>4   | 27<br>5<br>11<br>7<br>23<br>11<br>5<br>59<br>85<br>3   | 4<br>11<br>5<br>5<br>88<br>7<br>12<br>-2<br>88<br>5   | 1<br>4<br>6<br>2<br>4<br>2<br>2<br>1<br>6<br>6  | 1<br>3<br>4<br>2<br>40<br>3<br>4<br>-3<br>48<br>4   | 0<br>-4<br>7<br>1<br>50<br>2<br>4<br>4<br>14  | 4<br>3<br>0<br>5<br>79<br>3<br>5<br>-1<br>53<br>1  | 5<br>1<br>-4<br>-2<br>10<br>4<br>15<br>3<br>70<br>6  | 17<br>10<br>10<br>8<br>30<br>6<br>15<br>43<br>51   | 4<br>3<br>2<br>4<br>7<br>2<br>7<br>42<br>23<br>5  |
| 3<br>3<br>2<br>7<br>1<br>3<br>8<br>46<br>3<br>4   | 5<br>4<br>7<br>10<br>1<br>10<br>46<br>36<br>4<br>8   | 9<br>8<br>-1<br>6<br>2<br>9<br>11<br>21<br>3<br>16   | 3<br>7<br>14<br>4<br>11<br>2<br>10<br>28<br>36<br>11<br>20   | 1<br>8<br>16<br>5<br>8<br>5<br>13<br>-5<br>24<br>5<br>2   | 4<br>6<br>21<br>7<br>11<br>3<br>14<br>-2<br>55<br>4<br>6  | 1<br>7<br>25<br>4<br>7<br>7<br>12<br>-3<br>60<br>4<br>5   | 1<br>2<br>1<br>3<br>1<br>3<br>1<br>4<br>4<br>4<br>2<br>4                       | 0<br>2<br>7<br>4<br>12<br>4<br>5<br>2<br>31<br>4   | 4<br>9<br>24<br>7<br>20<br>8<br>15<br>12<br>68<br>7<br>9  | 2<br>0<br>12<br>-2<br>12<br>4<br>1<br>0<br>86<br>4<br>-2   | 27<br>5<br>11<br>7<br>23<br>11<br>5<br>59<br>85<br>3<br>0  | 4<br>11<br>5<br>5<br>88<br>7<br>12<br>-2<br>88<br>5<br>7  | 1<br>4<br>6<br>2<br>4<br>2<br>2<br>1<br>6<br>6<br>5   | 1<br>3<br>4<br>2<br>40<br>3<br>4<br>-3<br>48<br>4<br>3  | 0<br>-4<br>7<br>1<br>50<br>2<br>4<br>4<br>14<br>-1<br>5   | 4<br>3<br>0<br>5<br>79<br>3<br>5<br>-1<br>53<br>1  | 5<br>1<br>-4<br>-2<br>10<br>4<br>15<br>3<br>70<br>6<br>-3  | 17<br>10<br>10<br>8<br>30<br>6<br>15<br>43<br>51<br>11   | 4<br>3<br>2<br>4<br>7<br>2<br>7<br>42<br>23<br>5<br>4   |
| 3<br>3<br>2<br>7<br>1<br>3<br>8<br>46<br>3<br>4<br>2  | 5<br>4<br>7<br>10<br>1<br>10<br>46<br>36<br>4  | 9<br>8<br>-1<br>6<br>2<br>9<br>11<br>21<br>3<br>16<br>2  | 3<br>7<br>14<br>4<br>11<br>2<br>10<br>28<br>36<br>11<br>20<br>2  | 1<br>8<br>16<br>5<br>8<br>5<br>13<br>-5<br>24<br>5<br>2   | 4<br>6<br>21<br>7<br>11<br>3<br>14<br>-2<br>55<br>4<br>6  | 1<br>7<br>25<br>4<br>7<br>7<br>12<br>-3<br>60<br>4  | 1<br>2<br>1<br>3<br>1<br>3<br>1<br>4<br>4<br>2<br>4                            | 0<br>2<br>7<br>4<br>12<br>4<br>5<br>2<br>31<br>4<br>0  | 4<br>9<br>24<br>7<br>20<br>8<br>15<br>12<br>68<br>7<br>9  | 2<br>0<br>12<br>-2<br>12<br>4<br>1<br>0<br>86<br>4<br>-2<br>1  | 27<br>5<br>11<br>7<br>23<br>11<br>5<br>59<br>85<br>3<br>0  | 4<br>11<br>5<br>5<br>88<br>7<br>12<br>-2<br>88<br>5<br>7<br>3   | 1<br>4<br>6<br>2<br>4<br>2<br>2<br>1<br>6<br>6<br>5   | 1<br>3<br>4<br>2<br>40<br>3<br>4<br>-3<br>48<br>4<br>3<br>1   | 0<br>-4<br>7<br>1<br>50<br>2<br>4<br>4<br>14<br>-1<br>5   | 4<br>3<br>0<br>5<br>79<br>3<br>5<br>-1<br>53<br>1<br>0   | 5<br>1<br>-4<br>-2<br>10<br>4<br>15<br>3<br>70<br>6<br>-3<br>3   | 17<br>10<br>10<br>8<br>30<br>6<br>15<br>43<br>51<br>11<br>16<br>5  | 4<br>3<br>2<br>4<br>7<br>2<br>7<br>42<br>23<br>5<br>4<br>2  |
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| 3<br>3<br>2<br>7<br>1<br>3<br>8<br>46<br>3<br>4<br>2<br>2<br>3<br>0<br>4<br>15<br>1<br>4<br>2<br>8<br>3<br>3<br>4<br>2<br>2<br>8<br>3<br>3<br>4<br>2<br>2<br>8<br>3<br>3<br>4<br>2<br>8<br>3<br>4<br>2<br>8<br>3<br>3<br>4<br>2<br>8<br>3<br>3<br>4<br>2<br>8<br>3<br>3<br>4<br>3<br>4<br>3<br>4<br>2<br>8<br>3<br>3<br>4<br>3<br>3<br>4<br>3<br>3<br>4<br>3<br>3<br>4<br>3<br>3<br>4<br>3<br>3<br>4<br>3<br>3<br>4<br>3<br>3<br>4<br>3<br>3<br>3<br>4<br>3<br>3<br>3<br>3<br>4<br>3<br>3<br>3<br>3<br>3<br>4<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>4<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3<br>3  | 5<br>4<br>7<br>10<br>1<br>10<br>46<br>36<br>4<br>8<br>1<br>7<br>26<br>3<br>4<br>2<br>4<br>5<br>5<br>5<br>49<br>64<br>6<br>23<br>74       | 9<br>8<br>-1<br>6<br>2<br>9<br>11<br>21<br>3<br>16<br>2<br>6<br>28<br>1<br>9<br>-2<br>1<br>1<br>7<br>75<br>28<br>7<br>17<br>58       | 3<br>7<br>14<br>4<br>11<br>2<br>10<br>28<br>36<br>11<br>20<br>2<br>6<br>34<br>5<br>16<br>-2<br>3<br>-3<br>4<br>52<br>52<br>9<br>27<br>74 | 1 8 16 5 8 5 13 -5 24 5 2 0 6 0 3 2 -3 5 5 3 6 13 8 5 -3  | 4<br>6<br>21<br>7<br>11<br>3<br>14<br>-2<br>55<br>4<br>6<br>-1<br>8<br>4<br>5<br>0<br>-1<br>4<br>8<br>6<br>12<br>23<br>6<br>19<br>4       | 1<br>7<br>25<br>4<br>7<br>7<br>12<br>-3<br>60<br>4<br>5<br>0<br>7<br>-1<br>4<br>-4<br>0<br>4<br>7<br>5<br>8<br>14<br>8<br>13<br>3       | 1 2 1 3 1 4 4 2 4 -1 3 -4 1 1 0 3 3 2 2 1 1 0                                  | 0<br>2<br>7<br>4<br>12<br>4<br>5<br>2<br>31<br>4<br>0<br>-2<br>3<br>24<br>0<br>1<br>-1<br>1<br>4<br>3<br>10<br>10<br>3<br>24<br>38       | 4<br>9<br>24<br>7<br>20<br>8<br>15<br>12<br>68<br>7<br>9<br>2<br>9<br>71<br>3<br>5<br>6<br>4<br>15<br>11<br>35<br>5<br>14<br>44<br>44<br>47   | 2<br>0<br>12<br>-2<br>12<br>4<br>1<br>0<br>86<br>4<br>-2<br>1<br>8<br>35<br>0<br>2<br>5<br>-1<br>9<br>1<br>49<br>50<br>3<br>26<br>22 | 27<br>5<br>11<br>7<br>23<br>11<br>5<br>5<br>9<br>85<br>3<br>0<br>0<br>6<br>1<br>1<br>1<br>2<br>3<br>2<br>3<br>9<br>61<br>4<br>77<br>3      | 4<br>11<br>5<br>5<br>88<br>7<br>12<br>-2<br>88<br>5<br>7<br>3<br>8<br>8<br>0<br>3<br>0<br>3<br>5<br>7<br>13<br>12<br>15<br>96<br>44       | 1 4 6 2 4 2 2 1 6 6 5 -2 5 6 -2 3 4 4 -2 3 13 3 2 5   | 1<br>3<br>4<br>2<br>40<br>3<br>4<br>-3<br>48<br>4<br>3<br>1<br>3<br>4<br>-1<br>2<br>-2<br>0<br>1<br>2<br>4<br>7<br>6                      | 0 -4 7 1 50 2 4 4 14 -1 5 2 -1 3 -3 3 4 5 2 -3 11 2 5 85 27                                       | 4<br>3<br>0<br>5<br>79<br>3<br>5<br>-1<br>53<br>1<br>0<br>9<br>5<br>4<br>2<br>1<br>-1<br>2<br>3<br>2<br>11<br>8<br>3<br>89<br>33   | 5<br>1<br>-4<br>-2<br>10<br>4<br>15<br>3<br>70<br>6<br>-3<br>3<br>-2<br>0<br>1<br>7<br>-1<br>3<br>5<br>-2<br>3<br>4<br>1<br>4<br>4<br>1<br>7<br>-1<br>3<br>5<br>-2<br>6<br>6<br>7<br>-1<br>6<br>7<br>-1<br>6<br>7<br>-1<br>6<br>7<br>-1<br>6<br>7<br>-1<br>6<br>7<br>-1<br>6<br>7<br>-1<br>7<br>-1 | 17<br>10<br>10<br>8<br>30<br>6<br>15<br>43<br>51<br>11<br>16<br>5<br>9<br>29<br>7<br>12<br>10<br>8<br>13<br>10<br>69<br>66<br>16<br>69<br>58 | 4<br>3<br>2<br>4<br>7<br>2<br>7<br>42<br>23<br>5<br>4<br>2<br>6<br>34<br>1<br>9<br>7<br>1<br>4<br>2<br>71<br>6<br>6<br>8<br>8<br>2<br>8<br>1          |

| 3        | 1        | 7        | 4        | -2      | -3      | -1     | -3      | 8        | 52       | 18       | 8               | 15       | 2        | 9        | -2       | 4        | 6        | 16       | 19       |
|----------|----------|----------|----------|---------|---------|--------|---------|----------|----------|----------|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|
| 5        | 11       | 9        | 6        | 8       | 9       | 8      | 1       | 7        | 54       | 22       | 10              | 15       | 3        | 7        | -1       | 5        | 8        | 19       | 16       |
| 0        | 4        | -2       | -1       | -2      | 0       | -2     | 2       | 4        | 16       | 3        | 1               | 0        | 0        | 0        | 2        | 9        | 11       | 5        | 6        |
| 21<br>43 | 80<br>55 | 63<br>41 | 75<br>65 | 3<br>3  | 9<br>19 | 7<br>9 | -1<br>3 | 44<br>20 | 67<br>65 | 16<br>41 | 55<br>18        | 93<br>24 | 0<br>10  | 70<br>5  | 74<br>13 | 48<br>18 | 6<br>32  | 97<br>78 | 20<br>71 |
| 43       | 10       | 11       | 14       | 3<br>8  | 7       | 9<br>7 | 3<br>1  | 1        | 12       | 7        | 7               | 6        | 7        | 2        | 0        | 3        | -2       | 60       | 28       |
| 5        | 14       | 13       | 33       | -3      | 11      | 4      | -4      | 1        | 11       | -5       | 25              | 83       | 4        | 6        | 19       | 7        | 10       | 54       | 46       |
| 13       | 8        | 4        | 6        | 8       | 6       | 6      | 0       | 1        | 8        | 2        | 2               | 2        | 1        | 4        | -2       | 4        | 8        | 15       | 6        |
| 2        | 3        | 5        | 3        | 5       | 6       | 4      | 0       | 0        | 6        | 2        | 1               | 4        | 1        | 2        | 2        | 2        | 6        | 8        | 2        |
| 11       | 9        | 9        | 14       | 4       | 13      | 3      | 1       | 6        | 10       | -10      | 36              | 66       | 4        | 4        | 22       | 4        | 0        | 51       | 22       |
| 1        | 5        | 5        | 9        |         | 7       | 5      | -1      | 2        | 14       | 14       | 12              | 6        | -1       | 0        | -2       | 3        | 12       | 15       | 3        |
| 10<br>5  | 52<br>9  | 76<br>10 | 60<br>29 | 4<br>4  | 9<br>4  | 5<br>4 | 2<br>2  | 5<br>2   | 34<br>12 | 27<br>-1 | 6<br>-1         | 10<br>5  | 9<br>4   | 6<br>3   | 1<br>3   | 18<br>3  | 33<br>1  | 54<br>14 | 58<br>4  |
| 41       | 69       | 44       | 67       | 40      | 68      | 70     | 8       | 56       | 73       | 78       | 72              | 97       | 8        | 68       | 38       | 68       | 79       | 58       | 55       |
| 4        | 0        | 10       | 10       | 2       | 3       | 4      | 2       | 0        | 6        | 3        | 6               | 7        | 2        | 2        | 4        | 7        | 2        | 15       | 2        |
| 2        | 19       | 4        | 9        | 5       | 8       | 6      | 1       | 2        | 9        | 1        | 3               | 3        | -1       | 1        | 3        | 1        | 4        | 11       | 1        |
| 1        | 6        | 9        | 7        | 9       | 9       | 7      | 1       | 2        | 13       | 2        | 5               | 9        | 6        | 5        | -2       | 3        | 4        | 15       | 4        |
| 0        | 20       | 7        | 3        | 0       | 0       | 0      | 0       | 0        | 9        | 4        | 1               | 0        | -2       | 1        | 0        | -1       | -1       | 6        | 2        |
| 12       | 29       | 54       | 32       | 3       | 15      | 10     | -2      | 7        | 39       | 26       | 28              | 42       | 5        | 11       | 3        | 38<br>5  | 73       | 50       | 41       |
| 3        | 3<br>5   | 9<br>10  | 15<br>7  | 8<br>5  | 12<br>4 | 7<br>6 | 2       | 5<br>1   | 9<br>8   | 7<br>14  | 9<br>7          | 10<br>1  | 6<br>-2  | 5<br>1   | -1<br>-2 | 5<br>2   | -2<br>-7 | 19<br>10 | 6<br>2   |
| 2        | 22       | 7        | 23       | 10      | 21      | 9      | 2       | 7        | 27       | 15       | 3               | 3        | 4        | 1        | 1        | 1        | 1        | 40       | 24       |
| 3        | 7        | 12       | 13       | 12      | 12      | 9      | 1       | 2        | 12       | 6        | 12              | 10       | 5        | 4        | -1       | 7        | -1       | 16       | 5        |
| 8        | 19       | 12       | 31       | 1       | 2       | 3      | -2      | 5        | 20       | -13      | 3               | 7        | 9        | 10       | 4        | 3        | 1        | 30       | 12       |
| 22       | 31       | 8        | 27       | 1       | 5       | 4      | -1      | 19       | 66       | 31       | 22              | 62       | 9        | 45       | 8        | 28       | 62       | 78       | 89       |
| -1       | 3        | 5        | 4        | -3      | 0       | 5      | -2      | 5        | 12       | -10      | 9               | 6        | 6        | 1        | 2        | 3        | 2        | 11       | 3        |
| 4        | 12<br>73 | 10<br>7  | 15<br>71 | -2<br>7 | 7       | 1      | 1       | 5<br>44  | 13       | -11      | 41              | 33       | 2<br>7   | 0        | 11       | 2        | -4       | 21       | 4        |
| 10<br>6  | 5        | 7<br>16  | 11       | 10      | 9<br>5  | 6<br>6 | 2<br>3  | 3        | 71<br>7  | 30<br>7  | 5<br>0          | 8<br>7   | 4        | 3<br>6   | 4<br>-1  | 19<br>2  | 22<br>1  | 18<br>8  | 13<br>4  |
| 6        | 6        | 14       | 15       | 7       | 7       | 8      | 2       | 3        | 67       | 10       | 2               | 8        | 9        | 7        | 0        | 2        | 1        | 28       | 41       |
| 4        | 7        | 9        | 9        | 4       | 8       | 6      | 3       | 4        | 7        | 4        | 3               | 8        | 4        | 3        | 4        | 5        | 0        | 10       | 5        |
| 5        | 6        | 17       | 15       | 4       | 7       | 7      | 1       | 4        | 8        | 2        | 5               | 12       | 6        | 12       | 9        | 5        | 3        | 15       | 1        |
| 3        | 5        | 6        | 10       | 6       | 7       | 5      | 0       | 6        | 8        | 2        | 5               | 4        | 4        | 3        | 2        | 3        | 9        | 11       | 2        |
| 0        | 5        | 2        | 5        | 2       | 2       | 1      | 1       | 2        | 6        | 5        | 4               | 3        | 2        | 1        | 0        | 0        | -1       | 8        | 3        |
| 20       | 18<br>5  | 25<br>-1 | 24<br>1  | 4<br>2  | 9<br>5  | 9<br>3 | 2       | 16<br>1  | 15<br>3  | 2        | 17<br>2         | 85<br>0  | 5<br>-3  | 20<br>-3 | 38<br>4  | 67<br>0  | 14<br>-2 | 36<br>8  | 17<br>2  |
| -1       | 0        | 1        | -1       | -5      | -4      | 0      | 0       | -2       | 3        | 1        | 5               | 10       | -3       | -3       | 7        | 1        | 3        | 13       | 5        |
| 3        | 13       | 11       | 31       | 2       | 5       | 4      | 0       | 0        | 18       | 6        | 4               | 5        | 2        | 3        | 11       | 1        | 6        | 26       | 10       |
| 4        |          | 4        | 7        | -2      | 0       | 5      | 1       | 10       | 11       | 10       | 19              | 27       | 3        | 4        | 7        | 1        | -5       | 6        | 3        |
| 1        | 11       | 22       | 13       | 0       | 1       | -1     | 0       | 1        | 11       | -7       | 2               | 2        | 0        | 0        | 4        | 4        | 2        | 19       | 5        |
| 3        | 2        | 6        | 4        | 6       | 8       | 9      | 2       | 1        | 9        | 15       | 4<br>1 <i>E</i> | 5        | 3        | 4        | -3       | 4        | -4<br>40 | 11       | 2        |
| 22<br>1  | 58<br>11 | 83<br>10 | 64<br>13 | 12<br>8 | 11<br>6 | 8<br>6 | 2<br>2  | 11<br>3  | 43<br>13 | 26<br>4  | 15<br>5         | 8<br>2   | 7<br>1   | 4<br>0   | 3<br>5   | 23<br>2  | 48<br>-3 | 66<br>15 | 63<br>2  |
| 1        | 5        | 2        | 7        | 1       | 6       | 3      | 2       | 3        | 10       | 2        | 8               | 12       | 0        | 1        | 2        | 3        | 1        | 5        | 5        |
| 13       | 29       | 9        | 40       | 4       | 8       | 3      | 0       | 3        | 48       | 15       | 3               | 9        | 3        | 3        | 2        | 6        | 2        | 37       | 7        |
| 6        | 42       | 5        | 42       | 8       | 10      | 6      | 2       | 15       | 42       | 16       | 32              | 67       | -1       | 10       | 40       | 4        | -1       | 31       | 19       |
| 2        | 6        | 10       | 13       | 3       | 9       | 6      | 0       | 2        | 8        | 6        | 11              | 5        | 2        | 6        | 2        | 5        | 2        | 32       | 14       |
| 5        | 3        | 6        | 4        | 8       | 8       | 7      | 3       | 0        | 10       | 5        | 6               | 6        | 4        | 2        | 0        | 5        | 1        | 11       | 4        |
| 3<br>1   | 3<br>3   | 3<br>1   | 5<br>3   | 1<br>2  | 4<br>4  | 3<br>2 | -1<br>0 | 1<br>1   | 4<br>4   | 12<br>5  | 0<br>3          | 1        | -2<br>-1 | 5<br>1   | -2<br>2  | 2<br>0   | -2<br>-4 | 12<br>8  | 2<br>3   |
| 30       | 81       | 77       | 76       | 44      | 69      | 53     | 9       | 74       | 68       | 56       | 95              | 91       | 11       | 88       | 82       | 78       | 33       | 80       | 67       |
| 2        | 5        | 3        | 0        | 2       | 8       | 4      | 1       | -1       | 6        | 0        | 2               | 0        | 5        | 0        | 1        | 4        | 7        | 4        | 1        |
| 5        | 3        | 15       | 10       | 4       | 6       | 5      | -1      | 3        | 11       | 3        | 3               | 9        | 3        | 5        | 1        | 2        | -3       | 16       | 3        |
| 3        | 15       | 8        | 14       | 4       | 12      | 11     | 3       | 7        | 71       | 12       | 8               | 10       | 5        | 5        | 3        | 4        | 7        | 52       | 62       |
| 19       | 86       | 75       | 84       | 1       | 2       | -1     | 0       | 41       | 72       | 0        | 17              | 92       | 0        | 70       | 77       | 61       | 2        | 76       | 4        |
| 4        | 8        | 12       | 6        | 3       | 7       | 6      | 6       | -1       | 10       | -4       | 6               | 18       | 2        | 4        | -1<br>-1 | 6        | 2        | 9        | 3        |
| 6        | 0<br>13  | 3<br>16  | 2<br>17  | 2<br>4  | 0<br>3  | 2<br>1 | 2<br>1  | 2<br>3   | 5<br>19  | 3<br>15  | 1<br>4          | 3<br>3   | -4<br>-1 | 1<br>3   | -1<br>6  | 0        | 0<br>-3  | 5<br>12  | 0        |
|          | 13       | 10       | 17       | -       | 3       | I      |         | 3        | 19       | 13       | -               | 3        |          | 3        | U        | J        | -3       | 12       | U        |

| 3       | 12       | 10       | 7        | -1      | 2       | 1       | 4       | 0        | 11       | 6       | 3       | 3        | -1      | -2       | 2       | 1       | 3       | 6        | 2       |
|---------|----------|----------|----------|---------|---------|---------|---------|----------|----------|---------|---------|----------|---------|----------|---------|---------|---------|----------|---------|
| 4       | 7        | 17       | 14       | 1       | 5       | 6       | 1       | 1        | 9        | -1      | 2       | 10       | 8       | 6        | 3       | 5       | 1       | 15       | 5       |
| 43      | 9        | 21       | 10       | 7       | 33      | 32      | 4       | 14       | 34       | 30      | 40<br>- | 85       | 1       | 24       | 9       | 21      | 17      | 16       | 4       |
| 6       | 8<br>29  | 5<br>14  | 23<br>44 | 6<br>6  | 6<br>11 | 5<br>7  | 3<br>12 | 2<br>5   | 8<br>10  | 5<br>5  | 5<br>10 | 5<br>41  | 1<br>5  | 0<br>6   | 5<br>21 | -1<br>0 | -2<br>0 | 13<br>20 | 2<br>6  |
| 2       | 3        | 10       | 14       | -6      | 0       | -2      | 1       | -1       | 3        | -3      | 0       | 2        | 4       | 1        | 4       | -1      | 2       | 9        | 2       |
| 9       | 15       | 8        | 19       | 0       | 8       | 7       | 3       | 3        | 21       | 7       | 6       | 17       | 8       | 6        | 5       | 8       | 12      | 42       | 45      |
| 2       | 10       | 12       | 12       | 4       | 5       | 5       | 0       | 1        | 14       | 3       | 10      | 2        | 3       | 1        | 1       | 3       | 0       | 9        | 2       |
| 8       | 18       | 9        | 19       | -3      | 0       | 0       | -5      | 3        | 34       | -2      | 3       | 14       | 2       | 7        | -1      | 7       | 14      | 50       | 48      |
| 6       | 8        | 18       | 14       | 6       | 2       | 4       | -2      | 1        | 8        | -13     | 0       | 7        | 8       | 5        | -2      | 3       | _       | 14       | 5       |
| 2       | 13<br>8  | 8<br>3   | 16<br>11 | 2<br>2  | 5<br>2  | 4<br>1  | 1       | 2<br>3   | 8<br>15  | 1<br>4  | 1<br>5  | 7<br>20  | 2<br>2  | 2<br>1   | 3<br>1  | 2<br>-3 | 2<br>5  | 16<br>12 | 3<br>7  |
| 2       | 1        | 1        | 6        | -1      | 0       | 2       | -1      | 0        | 4        | 1       | 6       | 3        | -1      | Ö        | 0       | -2      | 1       | 8        | 2       |
| 8       | 31       | 49       | 34       | 9       | 27      | 21      | 4       | 15       | 35       | 15      | 25      | 64       | 2       | 45       | 9       | 36      | 26      | 26       | 15      |
| 3       | 7        | 2        | 6        | 4       | 5       | 3       | 1       | 4        | 9        | -2      | 3       | 5        | 5       | 4        | -2      | 4       | 3       | 12       | 3       |
| 4       | 7        | 8        | 9        | 3       | 9       | 6       | 1       | 1        | 9        | -1      | 8       | 8        | 6       | 5        | 0       | 7       | 5       | 14       | 5       |
| 3       | 2        | 3        | 7        | 7       | 11      | 11      | 1       | 2        | 6        | 4       | 5       | 8        | 2       | 2        | 3       | 3       | 9       | 8        | 5       |
| 1<br>33 | 9<br>81  | 6<br>46  | 14<br>75 | 2<br>4  | 1<br>9  | 2<br>8  | 0       | -1<br>15 | 3<br>50  | 0<br>24 | 2<br>27 | 5<br>67  | 5<br>0  | 1<br>38  | 6<br>12 | 2<br>55 | 2<br>57 | 9<br>78  | 3<br>80 |
| 3       | -1       | 46<br>7  | 13       | -2      | 3       | 4       | ა<br>1  | 2        | 50<br>5  | 3       | 5       | 9        | 9<br>5  | 36<br>1  | 0       | ວວ<br>1 | -7      | 8        | 80      |
| 0       | 12       | 5        | 11       | 9       | 10      | 7       | 2       | 2        | 9        | 0       | 3       | 22       | 0       | 2        | 7       | 5       | -4      | 16       | 6       |
| 3       | 5        | 6        | 12       | 7       | 7       | 6       | -1      | 2        | 8        | 3       | 14      | 18       | 3       | 3        | 0       | 5       | 6       | 27       | 10      |
| 7       | 19       | 13       | 28       | -2      | 4       | 4       | 4       | 2        | 11       | 2       | 6       | 10       | 8       | 3        | 4       | 2       | 2       | 26       | 18      |
| 6       | 5        | 5        | 25       | 1       | 5       | 2       | -1      | 0        | 11       | 17      | 2       | 11       | 5       | 0        | 2       | 3       | -6      | 15       | 6       |
| 2       | 1        | 4        | 7        | 0       | 3       | 2       | -2      | -1       | 4        | 2       | 6       | 0        | 0       | 2        | -1      | 1       | -2      | 10       | 3       |
| 2       | 9<br>1   | 13       | 10       | 1       | 2       | 0       | -1      | 5<br>-2  | 8<br>1   | -14     | 1<br>1  | 2        | 1       | 2<br>-1  | -1      | 4       | -1      | 11       | 3       |
| 4       | 7        | 0<br>3   | 0<br>4   | -3<br>4 | -4<br>4 | -4<br>4 | 0<br>2  | 1        | 6        | 3<br>2  | 4       | -5<br>6  | -1<br>4 | 3        | -2      | -2<br>3 | 5<br>-7 | 2<br>6   | 3<br>3  |
| 7       | 52       | 51       | 47       | 15      | 32      | 30      | 4       | 13       | 54       | 55      | 19      | 28       | 3       | 10       | -2      | 18      | 34      | 67       | 65      |
| 9       | 5        | 12       | 15       | 2       | 6       | 4       | 0       | 1        | 6        | 1       | 5       | 8        | 8       | 6        | 0       | 5       | -1      | 12       | 5       |
| 4       | 13       | 5        | 5        | 0       | 4       | 2       | 4       | 6        | 19       | 23      | 17      | 56       | 3       | 14       | 6       | 15      | 17      | 30       | 18      |
| 3       | 3        | 2        | 7        | 4       | 4       | 3       | 4       | 1        | 3        | -3      | 3       | 5        | 1       | 4        | -3      | 3       | -11     | 8        | 4       |
| 6       | 12<br>7  | 20       | 29       | 8       | 11      | 11      | 4       | 2        | 24<br>4  | 19<br>0 | 3       | 10<br>-4 | 4       | 6<br>-1  | 8       | 1<br>0  | -1      | 19       | 6       |
| 1       | 3        | -4<br>5  | 8<br>9   | 0       | 5<br>3  | 3<br>3  | 2<br>1  | 1        | 6        | 7       | 1<br>16 | 37       | 6<br>1  | 6        | -2<br>2 | 18      | 3<br>27 | 10<br>43 | 7<br>34 |
| 1       | 6        | 7        | 19       | 6       | 3       | 3       | 2       | -1       | 2        | -1      | 8       | 34       | -1      | 7        | 7       | 8       | 11      | 17       | 8       |
| 15      | 81       | 67       | 84       | 1       | 3       | 3       | 2       | 54       | 68       | 12      | 43      | 101      | 4       | 57       | 86      | 57      | 5       | 87       | 14      |
| 19      | 8        | 17       | 10       | 9       | 10      | 7       | 0       | 0        | 8        | 8       | 6       | 10       | 4       | 5        | 0       | 5       | 0       | 13       | 7       |
| 48      | 28       | 14       | 13       | 6       | 11      | 6       | 1       | 3        | 13       | 9       | 67      | 32       | 6       | 8        | 0       | 4       | 3       | 38       | 30      |
| 1       | 5        | 1        | 7        | 6       | 10      | 7       | 4       | 2        | 7        | -1<br>- | 4       | 3        | 2       | -3       | 3       | 6       | -1      | 12       | 7       |
| 1<br>4  | 10<br>9  | 10<br>10 | 4<br>7   | 2<br>2  | 7<br>8  | 1<br>5  | 3<br>0  | 2<br>4   | 10<br>6  | -1<br>2 | 96<br>5 | 7<br>11  | -3<br>8 | -3<br>4  | 8<br>6  | 1<br>4  | -2<br>5 | 16<br>17 | 2<br>1  |
| 17      | 15       | 11       | 17       | 1       | 5       | 3       | 1       | 2        | 24       | 8       | 36      | 13       | 5       | 5        | 1       | 3       | 2       | 23       | 9       |
| 12      | 13       | 6        | 11       | 2       | 5       | 3       | 0       | 4        | 24       | 3       | 28      | 12       | 6       | 3        | 2       | 2       | -2      | 17       | 6       |
| 4       | 2        | 3        | 8        | -2      | 11      | -2      | -4      | 3        | 6        | -15     | 1       | 4        | 2       | 7        | -1      | 1       | 0       | 9        | 3       |
| 14      | 7        | 9        | 7        | 6       | 8       | 6       | 1       | 3        | 10       | 2       | 3       | 6        | 3       | 2        | 1       | 6       | 4       | 29       | 10      |
| 1       | 11       | 3        | 6        | 6       | 3       | 2       | 1       | 3        | 6        | 3       | 6       | 9        | 0       | 1        | 0       | 3       | 2       | 15       | 5       |
| 3 2     | 0<br>8   | 2        | 8<br>3   | 2<br>0  | 3<br>3  | 3<br>3  | 1       | 2<br>-1  | 7<br>3   | -1<br>1 | -1<br>5 | 6<br>2   | 3<br>2  | 2<br>-1  | 1<br>2  | 1<br>2  | 3<br>8  | 7<br>5   | 1<br>1  |
| -2      | 21       | -1       | 2        | -2      | -1      | 0       | 0       | -1<br>-1 | 3<br>7   | 3       | 0       | 2        | -1      | -1<br>-1 | 1       | -2      | -4      | 7        | 3       |
| -1      | 3        | 2        | 2        | -1      | -3      | -2      | -1      | -1       | 0        | 0       | -2      | -1       | -4      | 0        | 3       | -1      | -1      | 5        | 3       |
| 6       | 22       | 4        | 27       | 7       | 6       | 6       | 3       | 2        | 48       | 10      | -1      | 5        | 4       | 5        | 0       | 1       | -3      | 24       | 12      |
| 2       | 4        | 1        | 2        | 3       | 2       | 1       | 1       | 1        | 12       | 16      | 2       | 2        | 0       | 3        | -1      | 0       | 4       | 7        | 2       |
| 2       | 3        | 2        | 6        | 1       | 0       | 1       | 2       | 0        | 3        | 3       | 15      | 2        | 0       | 0        | 1       | 0       | 0       | 9        | 4       |
| 8 2     | 14<br>13 | 0<br>6   | 34<br>15 | 4<br>6  | 3<br>5  | 4<br>5  | 8<br>1  | 1<br>5   | 18<br>14 | 2<br>4  | 3<br>8  | 3<br>5   | 2<br>5  | 0        | 3<br>0  | 2<br>1  | 2<br>-5 | 8<br>15  | 5<br>7  |
| 3       | 6        | 3        | 4        | 2       | 4       | 2       | 0       | 6        | 32       | 5       | 4       | 3        | 4       | 1        | 4       | 2       | 2       | 20       | 34      |
| 2       | 8        | 5        | 2        | 3       | 2       | 2       | 4       | 1        | 9        | 0       | 1       | 5        | 4       | 4        | 3       | 2       | 1       | 16       | 6       |
|         |          |          |          |         |         |         |         |          |          |         |         |          |         |          |         |         |         |          |         |

| 25   | 65   | 5  | 66  | 16  | 24   | 14   | 3   | 31   | 76   | 48   | 59  | 92  | 4   | 27   | 64   | 7   | 3   | 55  | 56  |
|--|--|--|---|---|--|--|---|--|--|--|---|---|---|--|--|---|---|---|---|
| 5  | 77   | 7  | 76  | 1   | 7  | 5  | 3   | 71   | 75   | 69   | 6   | 2   | 5   | 1  | 6  | 3   | 2   | 26  | 31  |
| 12   | 26   | 40   | 21  | 7   | 9  | 6  | 3   | 3  | 24   | 10   | 17  | 16  | 4   | 3  | 0  | 8   | 5   | 16  | 12  |
| 4  | 13   | 8  | 28  | 15  | 10   | 11   | 13  | 11   | 10   | 11   | 15  | 19  | 8   | 7  | 8  | 1   | -2  | 24  | 6   |
| 22   | 77   | 67   | 83  | 4   | 13   | 5  | 3   | 43   | 69   | 38   | 81  | 88  | 3   | 59   | 93   | 84  | 25  | 78  | 46  |
| 2  | 3  | 7  | 7   | 2   | 3  | 5  | 3   | 4  | 3  | 2  | 3   | 20  | 0   | 6  | 6  | 13  | 1   | 12  | 3   |
| 6  | 18   | 16   | 19  | 1   | 7  | 8  | 1   | 6  | 21   | 9  | 15  | 28  | 5   | 11   | 4  | 4   | 2   | 18  | 9   |
| 2  | 22   | 3  | 28  | 3   | 2  | 3  | 3   | 6  | 49   | 9  | 1   | 4   | -3  | 1  | 0  | -1  | 5   | 12  | 2   |
| 2  | -2   | 9  | 4   | -2  | -2   | 2  | 1   | 1  | 4  | 1  | 8   | 3   | -2  | 0  | 3  | 6   | 1   | 4   | 3   |
| 8  | 44   | 25   | 55  | 7   | 15   | 12   | 1   | 10   | 51   | 35   | 12  | 12  | 4   | 7  | 4  | 4   | 2   | 78  | 73  |
| 12<br>4  | 10<br>12   | 3<br>8   | 11<br>16  | 2<br>4  | 6<br>0   | 2  | -3  | 2<br>1   | 12<br>12   | 1<br>-14   | 3<br>9  | 7<br>2  | 4<br>2  | 3<br>2   | 1<br>2   | 5<br>2  | -2<br>1   | 18<br>16  | 8<br>5  |
| 23   | 32   | 3  | 22  | 5   | 9  | 8  | 2   | 12   | 50   | 19   | 7   | 25  | 2   | 3  | 5  |   | 3   | 15  | 6   |
| 2  | 4  | 5  | 6   | 5   | 6  | 4  | 1   | -1   | 9  | 2  | 9   | 13  | 2   | 3  | 6  | 32  | 4   | 14  | 2   |
| 3  | 16   | 8  | 16  | 9   | 11   | 11   | 2   | 9  | 48   | 30   | 34  | 21  | 5   | 3  | 5  | 17  | 37  | 77  | 76  |
| 9  | 58   | 75   | 55  | 8   | 26   | 19   | 7   | 4  | 19   | 12   | 74  | 63  | 1   | 21   | 7  | 13  | 30  | 26  | 20  |
| 9  | 10   | 8  | 9   | 2   | 5  | 4  | 3   | 8  | 14   | 2  | 3   | 2   | 0   | 2  | 7  | 9   | 4   | 11  | 6   |
| -1   | 7  | 0  | 12  | 0   | 3  | 0  | 1   | -1   | 3  | 5  | -1  | -4  | -1  | -1   | -2   | -4  | -4  | 14  | 7   |
| 10   | 47   | 3  | 56  | 11  | 22   | 13   | 2   | 27   | 64   | 56   | 67  | 85  | 1   | 35   | 62   | -1  | 0   | 30  | 12  |
| 22   | 2  | 9  | 9   | 0   | 0  | 1  | 0   | 0  | 3  | 1  | 2   | 7   | 3   | 3  | 3  | 3   | 5   | 12  | 5   |
| 42   | 50   | 31   | 66  | 8   | 15   | 12   | 8   | 28   | 69   | 38   | 30  | <u>57</u>   | 13  | 47   | 11   | 28  | 52  | 80  | 87  |
| 5  | 2  | 8  | 14  | 7   | 5  | 4  | -1  | 2  | 22   | 1  | 3   | 7   | 4   | 8  | 1  | 3   | 1   | 20  | 21  |
| 2  | 9<br>17  | 10<br>5  | 11<br>19  | 2<br>8  | 7<br>10  | 4<br>7   | -1<br>1   | 0  | 10<br>17   | -13<br>1   | 3<br>9  | 3<br>25   | 7<br>2  | 3<br>3   | 1<br>1   | 7<br>5  | 2<br>-1   | 21<br>17  | 6<br>9  |
| 17   | 90   | 79   | 87  | 7   | 19   | 6  | 1   | 4<br>39  | 68   | 36   | 9<br>48   | 85  | 4   | 52   | 67   | 53  | 14  | 78  | 9   |
| -1   | 10   | 2  | 13  | -4  | 3  | 2  | 1   | 2  | 18   | 3  | 2   | 1   | -2  | -2   | 1  | 0   | -2  | 11  | 9   |
| 14   | 4  | 3  | 2   | 6   | 3  | 3  | 1   | 1  | 19   | 2  | 2   | 5   | 6   | 5  | 0  | 4   | 2   | 15  | 13  |
| 4  | 4  | 4  | 9   | 5   | 7  | 5  | -1  | -1   | 5  | -1   | 9   | 6   | 2   | 5  | -1   | 4   | 4   | 10  | 4   |
| 14   | 90   | _  | 00  | 4-7   | 40   | 00   | 31  | 00   | 0.4  | 89   | 20  | 40  | 74  | 3  | 11   | 4   | 4   | 90  | 96  |
|  | 90   | 3  | 93  | 47  | 43   | 26   | 31  | 96   | 94   | 09   | 20  | 43  | 74  | 3  | 41   | 4   |   | 90  | 30  |
| 49   | 94   | 88   | 93<br>95  | 47<br>66  | 76   | 64   | 49  | 96   | 74   | 98   | 90  | 96  | 5   | 88   | 79   | 4   | 47  | 89  | 54  |
|  | 94   |  | 95<br>9   | 66<br>-1  |  |  |   |  | _  |  | 90  | 96<br>5   | 5<br>5  | 88<br>5  | 79<br>1  | -1  | 47<br>2   |   |   |
| 49<br>2<br>4   | 94<br>9<br>27  | 88<br>5<br>6   | 95<br>9<br>42   | 66<br>-1<br>7   | 76<br>7<br>8   | 64<br>1<br>6   | 49<br>1<br>1  | 97<br>2<br>6   | 74<br>0<br>11  | 98<br>14<br>6  | 90<br>2<br>65   | 96<br>5<br>75   | 5<br>5<br>7   | 88<br>5<br>5   | 79<br>1<br>25  | -1<br>5   | 47<br>2<br>3  | 89<br>4<br>36   | 54<br>-1<br>11  |
| 49<br>2<br>4<br>10   | 94<br>9<br>27<br>8   | 88<br>5<br>6<br>16   | 95<br>9<br>42<br>1  | 66<br>-1<br>7<br>2  | 76<br>7<br>8<br>6  | 64<br>1<br>6<br>8  | 49<br>1<br>1<br>3   | 97<br>2<br>6<br>2  | 74<br>0<br>11<br>10  | 98<br>14<br>6<br>4   | 90<br>2<br>65<br>8  | 96<br>5<br>75<br>4  | 5<br>5<br>7<br>3  | 88<br>5<br>5<br>1  | 79<br>1<br>25<br>2   | -1<br>5<br>8  | 47<br>2<br>3<br>14  | 89<br>4<br>36<br>20   | 54<br>-1<br>11<br>12  |
| 49<br>2<br>4<br>10<br>4  | 94<br>9<br>27<br>8<br>8  | 88<br>5<br>6<br>16<br>10   | 95<br>9<br>42<br>1<br>7   | 66<br>-1<br>7<br>2<br>9   | 76<br>7<br>8<br>6<br>16  | 64<br>1<br>6<br>8<br>11  | 49<br>1<br>1<br>3<br>2  | 97<br>2<br>6<br>2<br>13  | 74<br>0<br>11<br>10<br>24  | 98<br>14<br>6<br>4<br>9  | 90<br>2<br>65<br>8<br>32  | 96<br>5<br>75<br>4<br>89  | 5<br>5<br>7<br>3<br>2   | 88<br>5<br>5<br>1<br>59  | 79<br>1<br>25<br>2<br>52   | -1<br>5<br>8<br>79  | 47<br>2<br>3<br>14<br>22  | 89<br>4<br>36<br>20<br>35   | 54<br>-1<br>11<br>12<br>10  |
| 49<br>2<br>4<br>10<br>4<br>0   | 94<br>9<br>27<br>8<br>8<br>5   | 88<br>5<br>6<br>16<br>10<br>1  | 95<br>9<br>42<br>1<br>7<br>8  | 66<br>-1<br>7<br>2<br>9<br>2  | 76<br>7<br>8<br>6<br>16<br>2   | 64<br>1<br>6<br>8<br>11<br>2   | 49<br>1<br>1<br>3<br>2<br>2   | 97<br>2<br>6<br>2<br>13<br>2   | 74<br>0<br>11<br>10<br>24<br>12  | 98<br>14<br>6<br>4<br>9  | 90<br>2<br>65<br>8<br>32<br>5   | 96<br>5<br>75<br>4<br>89<br>5   | 5<br>5<br>7<br>3<br>2<br>3  | 88<br>5<br>5<br>1<br>59<br>2   | 79<br>1<br>25<br>2<br>52<br>0  | -1<br>5<br>8<br>79<br>2   | 47<br>2<br>3<br>14<br>22<br>6   | 89<br>4<br>36<br>20<br>35<br>7  | 54<br>-1<br>11<br>12<br>10<br>5   |
| 49<br>2<br>4<br>10<br>4<br>0<br>16   | 94<br>9<br>27<br>8<br>8<br>5<br>6  | 88<br>5<br>6<br>16<br>10<br>1  | 95<br>9<br>42<br>1<br>7<br>8<br>11  | 66<br>-1<br>7<br>2<br>9<br>2<br>3   | 76<br>7<br>8<br>6<br>16<br>2<br>8  | 64<br>1<br>6<br>8<br>11<br>2<br>6  | 49<br>1<br>1<br>3<br>2<br>2<br>1  | 97<br>2<br>6<br>2<br>13<br>2<br>2  | 74<br>0<br>11<br>10<br>24<br>12<br>13  | 98<br>14<br>6<br>4<br>9<br>0<br>17   | 90<br>2<br>65<br>8<br>32<br>5   | 96<br>5<br>75<br>4<br>89<br>5<br>7  | 5<br>5<br>7<br>3<br>2<br>3<br>8   | 88<br>5<br>5<br>1<br>59<br>2<br>4  | 79<br>1<br>25<br>2<br>52<br>0<br>4   | -1<br>5<br>8<br>79<br>2<br>3  | 47<br>2<br>3<br>14<br>22<br>6<br>5  | 89<br>4<br>36<br>20<br>35<br>7<br>20  | 54<br>-1<br>11<br>12<br>10<br>5<br>9  |
| 49<br>2<br>4<br>10<br>4<br>0   | 94<br>9<br>27<br>8<br>8<br>5<br>6  | 88<br>5<br>6<br>16<br>10<br>1<br>0<br>44   | 95<br>9<br>42<br>1<br>7<br>8<br>11  | 66<br>-1<br>7<br>2<br>9<br>2<br>3<br>2  | 76<br>7<br>8<br>6<br>16<br>2<br>8<br>4   | 64<br>1<br>6<br>8<br>11<br>2<br>6<br>3   | 49<br>1<br>1<br>3<br>2<br>2   | 97<br>2<br>6<br>2<br>13<br>2<br>2  | 74<br>0<br>11<br>10<br>24<br>12<br>13<br>15  | 98<br>14<br>6<br>4<br>9<br>0<br>17<br>3  | 90<br>2<br>65<br>8<br>32<br>5<br>5  | 96<br>5<br>75<br>4<br>89<br>5<br>7<br>5   | 5<br>5<br>7<br>3<br>2<br>3<br>8<br>3  | 88<br>5<br>5<br>1<br>59<br>2<br>4<br>-1  | 79<br>1<br>25<br>2<br>52<br>0<br>4<br>-1   | -1<br>5<br>8<br>79<br>2<br>3<br>9   | 47<br>2<br>3<br>14<br>22<br>6<br>5<br>41  | 89<br>4<br>36<br>20<br>35<br>7<br>20<br>31  | 54<br>-1<br>11<br>12<br>10<br>5<br>9<br>22  |
| 49<br>2<br>4<br>10<br>4<br>0<br>16<br>3  | 94<br>9<br>27<br>8<br>8<br>5<br>6  | 88<br>5<br>6<br>16<br>10<br>1  | 95<br>9<br>42<br>1<br>7<br>8<br>11  | 66<br>-1<br>7<br>2<br>9<br>2<br>3   | 76<br>7<br>8<br>6<br>16<br>2<br>8  | 64<br>1<br>6<br>8<br>11<br>2<br>6  | 49<br>1<br>1<br>3<br>2<br>2<br>1<br>7   | 97<br>2<br>6<br>2<br>13<br>2<br>2  | 74<br>0<br>11<br>10<br>24<br>12<br>13  | 98<br>14<br>6<br>4<br>9<br>0<br>17   | 90<br>2<br>65<br>8<br>32<br>5   | 96<br>5<br>75<br>4<br>89<br>5<br>7  | 5<br>5<br>7<br>3<br>2<br>3<br>8   | 88<br>5<br>5<br>1<br>59<br>2<br>4  | 79<br>1<br>25<br>2<br>52<br>0<br>4   | -1<br>5<br>8<br>79<br>2<br>3  | 47<br>2<br>3<br>14<br>22<br>6<br>5  | 89<br>4<br>36<br>20<br>35<br>7<br>20  | 54<br>-1<br>11<br>12<br>10<br>5<br>9  |
| 49<br>2<br>4<br>10<br>4<br>0<br>16<br>3  | 94<br>9<br>27<br>8<br>8<br>5<br>6<br>9   | 88<br>5<br>6<br>16<br>10<br>1<br>0<br>44<br>82   | 95<br>9<br>42<br>1<br>7<br>8<br>11<br>17  | 66<br>-1<br>7<br>2<br>9<br>2<br>3<br>2  | 76<br>7<br>8<br>6<br>16<br>2<br>8<br>4<br>16   | 64<br>1<br>6<br>8<br>11<br>2<br>6<br>3<br>15   | 49<br>1<br>1<br>3<br>2<br>2<br>1<br>7<br>4  | 97<br>2<br>6<br>2<br>13<br>2<br>2<br>1   | 74<br>0<br>11<br>10<br>24<br>12<br>13<br>15  | 98<br>14<br>6<br>4<br>9<br>0<br>17<br>3<br>63  | 90<br>2<br>65<br>8<br>32<br>5<br>5<br>48<br>51  | 96<br>5<br>75<br>4<br>89<br>5<br>7<br>5   | 5<br>5<br>7<br>3<br>2<br>3<br>8<br>3  | 88<br>5<br>5<br>1<br>59<br>2<br>4<br>-1<br>44<br>3   | 79<br>1<br>25<br>2<br>52<br>0<br>4<br>-1<br>31   | -1<br>5<br>8<br>79<br>2<br>3<br>9   | 47<br>2<br>3<br>14<br>22<br>6<br>5<br>41  | 89<br>4<br>36<br>20<br>35<br>7<br>20<br>31<br>84  | 54<br>-1<br>11<br>12<br>10<br>5<br>9<br>22  |
| 49<br>2<br>4<br>10<br>4<br>0<br>16<br>3<br>64<br>1<br>27<br>61   | 94<br>9<br>27<br>8<br>8<br>5<br>6<br>9<br>77<br>9<br>72<br>67  | 88<br>5<br>6<br>16<br>10<br>1<br>0<br>44<br>82<br>13<br>86<br>50   | 95<br>9<br>42<br>1<br>7<br>8<br>11<br>17<br>67<br>19<br>92<br>72  | 66<br>-1<br>7<br>2<br>9<br>2<br>3<br>2<br>3<br>2<br>20<br>10  | 76<br>7<br>8<br>6<br>16<br>2<br>8<br>4<br>16<br>3<br>54  | 64<br>1<br>6<br>8<br>11<br>2<br>6<br>3<br>15<br>5<br>23<br>10  | 49<br>1<br>1<br>3<br>2<br>2<br>1<br>7<br>4<br>5<br>3<br>4   | 97<br>2<br>6<br>2<br>13<br>2<br>2<br>1<br>19<br>30   | 74<br>0<br>11<br>10<br>24<br>12<br>13<br>15<br>68<br>66<br>100<br>69   | 98<br>14<br>6<br>4<br>9<br>0<br>17<br>3<br>63<br>16  | 90<br>2<br>65<br>8<br>32<br>5<br>5<br>48<br>51<br>12<br>86<br>38  | 96<br>5<br>75<br>4<br>89<br>5<br>7<br>5<br>80<br>11<br><b>95</b><br>66  | 5<br>5<br>7<br>3<br>2<br>3<br>8<br>3<br>75<br>20<br>2   | 88<br>5<br>5<br>1<br>59<br>2<br>4<br>-1<br>44<br>3<br>90<br>52   | 79<br>1<br>25<br>2<br>52<br>0<br>4<br>-1<br>31<br>5<br>93                                  | -1<br>5<br>8<br>79<br>2<br>3<br>9<br>79<br>2<br>87<br>55  | 47<br>2<br>3<br>14<br>22<br>6<br>5<br>41<br>93<br>5<br>43<br>76   | 89<br>4<br>36<br>20<br>35<br>7<br>20<br>31<br>84<br>65<br>87<br>74  | 54<br>-1<br>11<br>12<br>10<br>5<br>9<br>22<br>96<br>76<br>46<br>89  |
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| 49<br>2<br>4<br>10<br>4<br>0<br>16<br>3<br>64<br>1<br>27<br>61<br>3<br>10<br>-1<br>4<br>4<br>19<br>26<br>2<br>18<br>36<br>25<br>2<br>0           | 94<br>9<br>27<br>8<br>8<br>5<br>6<br>9<br>77<br>9<br>72<br>67<br>1<br>24<br>11<br>6<br>7<br>89<br>47<br>8<br>28<br>91<br>15<br>41                  | 88<br>5<br>6<br>16<br>10<br>1<br>0<br>44<br>82<br>13<br>86<br>50<br>2<br>58<br>4<br>6<br>11<br>81<br>0<br>7<br>51<br>85<br>7<br>0<br>3<br>14       | 95<br>9<br>42<br>1<br>7<br>8<br>11<br>17<br>67<br>19<br>92<br>72<br>1<br>26<br>13<br>17<br>7<br>86<br>51<br>8<br>36<br>86<br>50<br>12<br>19<br>47       | 66<br>-1<br>7<br>2<br>9<br>2<br>3<br>2<br>3<br>20<br>10<br>2<br>7<br>6<br>-1<br>1<br>9<br>11<br>0<br>2<br>30<br>16<br>-3<br>8<br>5      | 76<br>7<br>8<br>6<br>16<br>2<br>8<br>4<br>16<br>3<br>54<br>11<br>4<br>7<br>7<br>5<br>2<br>44<br>13<br>1<br>6<br>52<br>33<br>0<br>51          | 64<br>1<br>6<br>8<br>11<br>2<br>6<br>3<br>15<br>5<br>23<br>10<br>2<br>7<br>5<br>5<br>3<br>18<br>9<br>1<br>2<br>34<br>23<br>0<br>5  | 49<br>1<br>1<br>3<br>2<br>2<br>1<br>7<br>4<br>5<br>3<br>4<br>3<br>2<br>5<br>7<br>1<br>10<br>2<br>0<br>12<br>17<br>6<br>3<br>1<br>17<br>6<br>3<br>1<br>17<br>6<br>17<br>6<br>17<br>6<br>17<br>6<br>1                             | 97<br>2<br>6<br>2<br>13<br>2<br>2<br>1<br>19<br>30<br>96<br>37<br>1<br>6<br>16<br>8<br>3<br>74<br>22<br>1<br>0<br>85<br>15<br>3                  | 74<br>0<br>11<br>10<br>24<br>12<br>13<br>15<br>68<br>66<br>100<br>69<br>7<br>18<br>61<br>48<br>8<br>78<br>64<br>9<br>19<br>71<br>34<br>7<br>83<br>71 | 98<br>14<br>6<br>4<br>9<br>0<br>17<br>3<br>63<br>16<br>90<br>53<br>0<br>27<br>8<br>4<br>2<br>75<br>28<br>-13<br>2<br>97<br>13<br>-1<br>39<br>69      | 90<br>2<br>65<br>8<br>32<br>5<br>5<br>48<br>51<br>12<br>86<br>38<br>5<br>63<br>9<br>5<br>1<br>81<br>45<br>1<br>81<br>96<br>44<br>0<br>2             | 96<br>5<br>75<br>4<br>89<br>5<br>7<br>5<br>80<br>11<br>95<br>66<br>6<br>12<br>2<br>10<br>9<br>100<br>76<br>10<br>24<br>102<br>98<br>0<br>2<br>3       | 5<br>5<br>7<br>3<br>2<br>3<br>8<br>3<br>75<br>20<br>2<br>15<br>4<br>3<br>8<br>12<br>-5<br>0<br>0<br>5<br>4<br>5<br>0<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18  | 88<br>5<br>5<br>1<br>59<br>2<br>4<br>-1<br>44<br>3<br>90<br>52<br>4<br>1<br>-2<br>4<br>0<br>96<br>4<br>4<br>9<br>98<br>6<br>6<br>-1<br>-1<br>0 | 79 1 25 2 52 0 4 -1 31 5 93 6 -1 -3 10 3 6 98 28 -4 1 79 50 -1 0 2                         | -1<br>5<br>8<br>79<br>2<br>3<br>9<br>79<br>2<br>87<br>55<br>1<br>10<br>1<br>3<br>90<br>4<br>2<br>20<br>89<br>6<br>-2<br>0<br>-1       | 47<br>2<br>3<br>14<br>22<br>6<br>5<br>41<br>93<br>5<br>43<br>76<br>2<br>21<br>2<br>2<br>5<br>26<br>-2<br>-4<br>56<br>35<br>-1<br>1<br>-2<br>3       | 89 4 36 20 35 7 20 31 84 65 87 74 7 41 59 42 10 90 48 12 46 93 72 7 55 31   | 54<br>-1<br>11<br>12<br>10<br>5<br>9<br>22<br>96<br>76<br>46<br>89<br>4<br>24<br>71<br>59<br>-1<br>38<br>47<br>4<br>44<br>67<br>42<br>3<br>69<br>39       |

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|----|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|
| 38 | 38 | 31 | 40 | 6  | 9  | 8  | 2  | 18 | 61 | 29  | 69 | 88 | 39 | 51 | 20 | 39 | 63 | 83 | 94 |
| 32 | 87 | 80 | 86 | 38 | 53 | 34 | 13 | 91 | 77 | 100 | 78 | 97 | 7  | 84 | 98 | 94 | 35 | 93 | 76 |
| 1  | 14 | 9  | 18 | -5 | -4 | -2 | 0  | -1 | 2  | -1  | 0  | -3 | 2  | -3 | 4  | -3 | 4  | 33 | 9  |
| -1 | 10 | 19 | 13 | -4 | 0  | -2 | -1 | 4  | 46 | 17  | 76 | 21 | -2 | 13 | 3  | 4  | 20 | 18 | 17 |
| 24 | 71 | 74 | 69 | 33 | 53 | 57 | 6  | 51 | 75 | 93  | 59 | 90 | 14 | 59 | 20 | 80 | 81 | 87 | 92 |

| TK           | TK           | TK       | ¥       | ТK       | ТK       | ТK      | ТK         | ТK         | ¥          | ТK               | ТK       | TK       | TKL     | TKL      | TKL          | TKL      | TKL      | TKL        | STE        |
|--------------|--------------|----------|---------|----------|----------|---------|------------|------------|------------|------------------|----------|----------|---------|----------|--------------|----------|----------|------------|------------|
| PDGFRα-T674I | PDGFRα-V561D | PDGFRß   | TIE2    | TNK2     | TNK1     | EGFR    | EGFR-L858R | EGFR-L861Q | EGFR-T790M | EGFR-T790M-L858R | ERBB2    | ERBB4    | L IRAK4 | LRRK2    | LRRK2-G2019S | CRAF     | BRAF     | BRAF-V599E | ∾ ∽ MAP4K2 |
| 26<br>6      | 87<br>3      | 80<br>6  | 40<br>6 | 29<br>1  | 52<br>3  | 12<br>7 | 32<br>4    | 13<br>2    | 15<br>2    | 5<br>3           | 6<br>6   | 20<br>11 | 7<br>2  | 9<br>5   | 26<br>6      | 4<br>4   | 10<br>7  | 8<br>5     | 9          |
| 78           | 76           | 74       | 5       | 0        | 28       | 14      | 0          | 0          | 1          | -1               | -2       | -3       | 1       | 9        | 21           | -5       | -2       | 5<br>-1    | 11         |
| 59           | 97           | 88       | 50      | 53       | 77       | 22      | 30         | 16         | 5          | 21               | 0        | 28       | 6       | 18       | 44           | -10      | 9        | 7          | 7          |
| 1<br>5       | 8<br>7       | 12<br>14 | 7<br>9  | 27<br>20 | 31<br>22 | 6<br>6  | 2<br>7     | 2<br>1     | 0<br>4     | -1<br>23         | 0<br>3   | 16<br>40 | 2<br>1  | 21<br>10 | 50<br>25     | -1<br>2  | 39<br>43 | 38<br>45   | 4<br>3     |
| 27           | 22           | 47       | 4       | 0        | 2        | 2       | 3          | -1         | 0          | 0                | 4        | 8        | 1       | 8        | 12           | 0        | 0        | 0          | 3          |
| 47           | 62           | 63       | 4       | 3        | 66       | 5       | 9          | 4          | 1          | 3                | 5        | 5        | 1       | 65       | 61           | -1       | 2        | 3          | 6          |
| 4            | 55           | 42       | 5       | 6        | 14       | 11      | 19         | 6          | 2          | 2                | -1       | 14       | 1       | 6        | 13           | 5        | 11       | 9          | 9          |
| 8            | 4<br>70      | 4<br>84  | 5       | 2<br>48  | 4<br>58  | 5<br>24 | 7<br>70    | 2          | 5<br>-2    | 2                | 2        | 31<br>-2 | 1       | 5        | 13<br>31     | -6<br>-3 | 36       | 36         | 4          |
| 5<br>36      | 37           | 26       | 48<br>2 | 40<br>1  | 15       | 24      | 3          | 28<br>3    | 3          | 8<br>3           | 2<br>4   | 9        | 3<br>1  | 9<br>2   | 3 i<br>4     | -3<br>0  | 4<br>4   | 4<br>5     | 24<br>3    |
| 50           | 49           | 37       | 5       | 3        | 4        | 3       | 3          | 2          | 3          | 1                | 3        | 9        | 1       | 8        | 12           | -2       | 6        | 3          | 4          |
| 2            | 9            | 10       | 3       | 2        | 24       | 3       | 2          | -1         | -1         | -1               | -3       | 8        | 1       | 18       | 47           | 0        | 12       | 11         | 4          |
| 14           | 11           | 24       | 7       | 1        | 3        | 0       | 3          | 2          | 2          | 0                | 4        | 7        | 3       | 0        | 3            | 1        | 8        | 3          | 3          |
| 70<br>4      | 52<br>52     | 32<br>50 | 3<br>4  | -1<br>7  | 4<br>15  | 1<br>4  | -2<br>18   | -4<br>2    | -3<br>0    | -3<br>0          | -5<br>-2 | 7<br>13  | 0       | 13<br>11 | 46<br>19     | -10<br>1 | 3<br>10  | 3<br>9     | 5<br>5     |
| 1            | 2            | 6        | 5       | 1        | 9        | 8       | 5          | 1          | 1          | 12               | 1        | 18       | 1       | 5        | 9            | 2        | 32       | 31         | 2          |
| 15           | 95           | 84       | 71      | 55       | 14       | 37      | 72         | 32         | 8          | 5                | 6        | 52       | 4       | 19       | 48           | 9        | 33       | 26         | 31         |
| 62           | 65           | 85       | 20      | 20       | 26       | 4       | 20         | 6          | 3          | 7                | 5        | 13       | 6       | 17       | 33           | 8        | 11       | 5          | 14         |
| 2            | 15           | 9        | 7       | 13       | 22       | 3       | 3          | 1          | 10         | 35               | 2        | 6        | 0       | 23       | 63           | 10       | 1        | 1          | 3          |
| 96           | 92           | 79       | 53      | 4        | 60       | 1       | 12         | 4          | 3          | 13<br>-2         | -3<br>4  | 12       | 3       | 10       | 13           | 41       | 10       | 13<br>-1   | 41         |
| 96<br>6      | 62<br>16     | 43<br>45 | 2<br>5  | 1<br>2   | 10<br>7  | 2<br>47 | 0<br>85    | 0<br>51    | 0<br>16    | -2<br>49         | -4<br>16 | -8<br>27 | 0<br>1  | 18<br>3  | 47<br>5      | -4<br>0  | 0<br>4   | 7          | 18<br>10   |
| 10           | 3            | 5        | 4       | 2        | 9        | 10      | 11         | 8          | 8          | 7                | 12       | 16       | 2       | 6        | 6            | -2       | 6        | 5          | 1          |
| 8            | 68           | 84       | 9       | 7        | 67       | 9       | 17         | 6          | 5          | 7                | 6        | 11       | 1       | 5        | 12           | 9        | 6        | 6          | 3          |
| 7            | 1            | 10       | 11      | 4        | 16       | 1       | 0          | 2          | 3          | 2                | 3        | 10       | 2       | 20       | 43           | 7        | 4        | 5          | 13         |
| 1            | 7            | 26       | 1       | 1        | 0        | 6       | 11         | 4          | -1         | 2                | 2        | 9        | 0       | 3        | 3            | -3       | 8        | 7          | 4          |
| 35<br>36     | 72<br>88     | 59<br>78 | 3<br>15 | 1<br>38  | 15<br>78 | 7<br>12 | 3<br>46    | 0<br>8     | 1<br>9     | 2<br>62          | -1       | 8<br>9   | 0<br>11 | 10<br>84 | 13<br>62     | -3<br>3  | 1<br>8   | 2<br>7     | 3<br>41    |
| 6            | 46           | 54       | 10      | 22       | 44       | 11      | 31         | 10         | 2          | 3                | 3        | 13       | 3       | 10       | 18           | -1       | 4        | 3          | 14         |
| 9            | 4            | 9        | 7       | 0        | 6        | 3       | 2          | 3          | 2          | 3                | 2        | 10       | 2       | 9        | 29           | 6        | 7        | 6          | -1         |
| 4            | 55           | 45       | 12      | 6        | 8        | 10      | 12         | 3          | 0          | 2                | 3        | 6        | 3       | 8        | 19           | 2        | 2        | 2          | 10         |
| 62           | 51           | 38       | 2       | 1        | 7        | 1       | -6         | -1         | -2         | -5               | -2       | -9<br>-  | 0       | 18       | 31           | -3       | -3       | -2         | 19         |
| 3<br>95      | 90           | 7<br>77  | 3<br>29 | 4<br>8   | 31<br>63 | 1<br>1  | 5<br>7     | 1<br>4     | 1<br>4     | -1<br>3          | -1<br>4  | 5<br>5   | 1<br>1  | 5<br>10  | 15<br>15     | -3<br>8  | 6<br>7   | 6<br>7     | 3<br>4     |
| 4            | 3            | 6        | 29      | 1        | 7        | 8       | 7          | 3          | 1          | 0                | 3        | 12       | 1       | 7        | 26           | -4       | 6        | 6          | 2          |
| 3            | 5            | 14       | 2       | 0        | 11       | 82      | 62         | 46         | 4          | 2                | 24       | 58       | 0       | 3        | 3            | -1       | 2        | 2          | 0          |
| 17           | 69           | 83       | 14      | 13       | 77       | 9       | 20         | 8          | 3          | 3                | 6        | 18       | 5       | 15       | 28           | -3       | 10       | 5          | 8          |
| 1            | 21           | 30       | 5       | 0        | 8        | 36      | 77         | 33         | 1          | 15               | 5        | 46       | -1      | 1        | 4            | -9       | -1       | -3         | 16         |
| 73           | 68           | 53<br>64 | 22      | -1<br>o  | 24       | 4       | -2         | 0          | -1         | -4<br>5          | -4       | -6<br>15 | -1      | 13       | 30           | 1        | -2<br>1  | -4         | 6          |
| 6            | 60           | 64       | 19      | 8        | 62       | 23      | 62         | 24         | 1          | 5                | 2        | 15       | 0       | 12       | 19           | -8       | 1        | 2          | 2          |

| 8 5 12 4 4 3 9 9 76 54 42 00 2 8 95 25 2 11 14 0 0 7 5 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   | 0  | _  | 40 | 4  | 2  | 0  | 70 | E 1 | 40 | 0  | 2  | 0  | 25  | 2  | 4.4 | 1.1 | 0   | 7  | _  | 0  |
|--|----|----|----|----|----|----|----|-----|----|----|----|----|-----|----|-----|-----|-----|----|----|----|
| 17   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 10   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| Table   Tabl |    | 7  |    |    |    |    | -  |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 69 63 48 6 6 3 14 5 0 0 2 2 1 7 7 16 3 9 11 2 7 4 4 3 5 28 17 41 8 1 0 3 2 0 1 1 0 4 10 2 7 12 2 6 6 3 3 8 4 12 2 1 1 -4 11 1 1 2 5 5 4 5 16 2 2 3 3 2 6 5 5 4 1 3 7 55 37 1 5 2 0 3 12 7 4 4 4 3 10 2 7 1 1 4 4 13 -3 -4 3 1 1 1 1 2 7 6 1 1 -1 -1 -1 -3 -10 -1 1 1 4 -1 3 -3 -4 3 1 1 1 1 2 7 6 1 1 1 1 1 1 1 2 7 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 28   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 1  | 28 |    | 41 | 8  | 1  | 0  |    | 2   |    |    | 0  |    |     |    | 7   |     |     |    | 3  | 3  |
| 7         55         37         1         5         20         3         12         7         4         4         39         10         9         4         16         2         6         6         3         7         6         3         4         47         4         4         2         2         7         -1         9         2         11         23         -1         7         5         7         2         18         6         7         2         8         5         7         2         5         5         4         12         3         29         52         1         7         7         4         6         6         3         6         3         5         6         6         6         5         0         7         2         1         -1         1         0         0         0         1         2         2         0         9         9         9         1         7         6         4         0         1         0         0         1         1         0         9         9         9         1         7         7         3         2         1         4   | 8  | 4  | 12 | 2  | 1  | -4 | 11 | 1   | 2  | 5  | 4  | 5  | 16  | 2  | 2   | 3   | 2   | 6  | 5  | 4  |
| The color  | 1  | 3  | 7  | 3  | 0  | 1  | 7  | 6   | 1  | -1 | -1 | -3 | -10 | -1 | 1   | 4   | -13 | -3 | -4 | 3  |
| 43   | 7  | 55 | 37 | 1  | 5  | 20 | 3  | 12  | 7  | 4  | 4  | 3  | 10  | 2  | 7   | 10  | -7  | 10 | 8  | 5  |
| 11   | 7  | 6  | 8  | 11 | 1  | 2  | 76 | 54  |    | 50 | ·  | 41 | 86  |    | 6   |     | -3  | 7  | 6  | 3  |
| 1  | 43 |    |    |    |    |    |    |     |    |    |    | -1 |     |    |     |     | -1  |    |    | 2  |
| 5         6         6         5         0         7         2         1         -1         1         0         0         10         1         7         27         -4         6         6         4           76         64         63         8         2         5         3         7         3         7         13         -1         7         6         6         4         3         3         1         7         6         6         9         9         19         9         8         5         4         6         4         21         4         18         45         6         9         8         10           3         2         3         6         3         3         5         4         4         0         1         0         9         2         13         15         0         9         8         10           3         4         9         11         4         1         1         2         -1         1         -0         -5         1         16         52         9         9         7         2         9         8         9         3         3 <th>11</th> <td></td>   | 11 |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 76 64 63 8 8 3 31 5 2 5 2 0 4 15 3 7 7 13 -1 7 6 10  76 64 63 8 3 31 5 2 5 2 0 4 15 3 7 7 13 -1 7 6 10  76 67 9 9 19 9 8 5 4 6 4 21 4 18 45 6 9 8 10  3 2 3 6 3 3 3 5 4 4 4 0 0 1 0 9 2 13 15 0 3 3 2 2  1 9 11 4 -1 9 1 0 1 0 0 -1 1 0 9 2 2 13 15 0 3 3 2 2  1 9 11 4 -1 9 1 0 1 0 0 -1 1 0 0 9 2 1 13 15 0 3 3 3 2  8 5 16 12 3 10 2 10 8 2 7 1 1 -6 6 6 1 18 30 3 6 7 21  8 5 16 12 3 10 2 10 8 2 7 3 3 15 2 7 7 3 15 2 7 7 9 70 89 90 3  3 4 9 3 2 10 6 4 2 0 4 -1 1 4 2 5 8 -2 3 3 3 0  3 4 9 3 2 10 6 4 2 0 4 -1 1 4 2 5 8 -2 3 3 3 0  3 4 9 3 2 10 6 4 2 0 4 -1 1 4 2 5 8 -2 3 3 3 0  3 5 44 16 7 1 17 -2 2 2 0 1 2 4 0 0 4 3 1 2 5 8 -2 3 3 3 0  4 9 52 30 3 5 10 2 0 -2 11 2 4 0 0 4 3 1 2 2 6 6 6 2  8 15 38 6 4 4 49 1 5 8 8 6 4 4 49 1 5 8 8 6 5 4 8 1 1 17 40 -2 15 13 8  6 6 7 7 5 2 15 82 91 84 16 -1 74 80 2 -6 0 4 4 4 4 1  2 4 9 12 0 21 8 7 4 1 10 0 5 13 0 4 2 2 0 1 1 2 4 8 4 8 1 1 17 40 -2 15 13 8  6 6 7 7 5 2 15 82 91 84 16 -7 7 17 2 2 3 3 14 3 5 0 10 9 14  2 4 9 12 0 21 8 7 4 1 1 0 5 0 2 7 12 1 4 6 6 0 4 4 4 1  2 4 9 12 0 21 8 7 4 1 1 0 0 5 13 0 4 2 2 40 85 86 5  80 70 57 9 5 2 1 8 7 2 2 3 3 4 3 14 4 4 4 4 4 1 1 10 13 3 3 9 24 5 7 7 7 13  6 49 69 69 1 0 0 6 17 2 5 2 3 4 4 5 1 1 1 5 5 2 2 1 1 1 1 5 5 2 2 4 6 0 4 4 4 4 1  2 4 9 12 0 21 8 7 4 4 1 0 0 0 5 14 1 1 5 0 2 2 4 6 6 3  6 3 2 6 1 1 6 1 8 0 2 1 8 7 4 1 1 0 0 5 13 0 4 2 2 40 85 86 5  80 70 57 9 5 2 1 8 7 2 2 3 3 4 3 14 4 4 4 4 4 4 1 1 10 13 3 3 9 24 5 7 7 7 13  6 49 26 3 2 2 7 2 5 2 3 3 4 5 1 6 7 7 1 1 10 0 0 5 14 1 6 6 6 5 2 2 2 4 6 6 33  6 7 45 33 4 3 14 4 4 4 4 4 4 4 1 10 0 13 3 1 4 5 0 0 4 8 3 1 1 8 7 1 1 8 1 1 1 1 1 1 1 1 1 1 1 1 1   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| T6   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 17   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 3         2         3         6         3         3         5         4         4         0         1         0         9         2         13         15         0         3         3         2           19         11         4         -1         9         1         0         -1         1         -6         6         1         18         30         3         6         7         2         1         1         -6         6         1         18         30         3         6         7         2         2         10         6         4         2         0         4         -1         14         2         5         8         -2         3         3         0         0         -1         1         4         2         -1         1         4         4         0         0         4         3         1         -2         -1         1         1         -2         2         0         0         4         4         1         1         -2         2         0         0         4         4         3         7         2         2         3         3         0         0  |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 1  |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 96         95         58         82         1         59         -1         1         -2         -1         1         0         -5         1         16         52         40         61         73         29           8         5         16         12         3         10         2         10         8         2         7         3         15         2         7         9         70         89         90         3           3         4         9         3         2         10         6         4         2         0         4         -1         11         2         2         3         3         0           49         52         30         3         5         10         2         0         -2         -1         -2         2         2         0         10         11         0         -1         -1         -2         2         -1         1         -2         -1         -1         -2         2         -1         1         -1         -1         -1         -1         -1         -1         -1         -1         -1         -1         -1         -1         -1   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 8  |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 3  |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 35   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 1         5         10         11         2         2         7         3         3         0         0         -1         8         2         8         8         -5         4         3         7           49         52         30         3         5         10         2         0         -2         -1         -2         2         2         0         10         11         0         -1         -1         2         6         3         2         6         1         10         66         46         41         3         -2         7         17         2         2         3         12         6         6         2         4         8         1         17         40         -2         15         13         8         6         6         7         5         2         15         8         6         7         4         8         1         17         40         4         2         40         85         86         5         4         8         1         17         40         4         2         40         85         86         5         4         8         1         1  |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 49         52         30         3         5         10         2         0         -2         -1         -2         2         2         0         10         11         0         -1         -1         2         2         2         0         10         11         0         -1         -1         2         2         2         0         10         11         0         -1         -1         2         2         2         3         12         6         6         2         8         1         17         2         2         1         1         1         0         6         6         2         4         4         4         4         1         0         5         7         4         80         2         -1         4         6         -4         4         4         1         2         8         0         0         0         0         5         13         0         4         2         40         85         86         5         4         8         1         1         7         1         1         1         0         0         5         13         0         4         4 <td< td=""><th></th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 6         3         2         6         1         10         66         46         41         3         -2         7         17         2         2         3         12         6         6         2           8         15         38         6         4         49         1         5         8         6         5         4         8         1         17         40         -2         15         13         8           6         6         7         5         2         1         8         4         16         -1         74         80         2         -6         0         4         4         4         1         0         5         13         0         4         2         40         85         86         5           80         70         57         9         5         21         8         7         4         1         0         5         13         0         4         2         40         85         86         5           80         70         57         9         5         21         8         7         4         1         0         0  |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 8  |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 6 6 7 5 2 15 82 91 84 16 -1 74 80 2 -6 0 4 4 2 0 9 9 6 9 1 0 6 17 2 5 0 2 7 12 1 4 6 6 -4 4 4 1 1 2 4 1 2 4 9 12 0 21 8 7 4 1 0 5 13 0 4 2 40 85 86 5 80 70 57 9 5 21 8 7 4 1 0 0 5 13 0 4 2 40 85 86 5 80 70 57 9 5 21 8 7 6 7 3 3 3 15 3 14 35 0 10 9 15 98 91 78 72 4 84 6 9 7 7 2 3 7 17 1 15 20 2 4 6 6 33 67 45 33 4 3 14 4 4 4 4 4 1 10 13 3 3 9 24 5 7 7 13 6 49 26 3 2 7 2 5 2 3 4 5 1 1 0 13 3 3 9 24 5 7 7 13 6 49 26 3 2 7 2 5 2 3 4 5 5 14 1 6 6 6 5 2 2 5 5 1 2 4 2 10 71 50 42 2 1 10 33 1 4 5 0 0 4 3 1 8 15 12 6 1 1 80 2 1 4 2 2 4 4 18 2 18 55 9 11 8 5 0 4 3 1 8 15 12 6 1 1 80 2 1 4 2 2 4 4 18 2 18 55 9 11 8 5 0 4 3 1 8 15 12 6 1 1 80 2 1 4 4 2 4 4 4 1 8 2 18 55 9 11 8 5 7 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 9 6 9 1 0 6 17 2 5 0 2 7 12 1 4 6 -4 4 4 1 1 2 4 5 86 5 86 5 80 70 57 9 5 21 8 7 4 1 1 0 5 13 0 4 2 40 85 86 5 80 70 57 9 5 21 8 7 6 7 3 3 3 15 3 14 35 0 10 9 15 98 91 78 72 4 84 6 9 7 2 3 7 17 1 15 20 2 4 6 33 67 45 33 4 3 14 4 4 4 4 4 1 10 13 3 9 24 5 7 7 7 13 6 49 26 3 2 7 2 5 2 3 4 -5 14 1 6 6 6 5 2 2 2 5 5 1 2 4 2 10 71 50 42 2 1 10 33 1 4 5 0 0 4 3 1 8 5 7 6 5 7 5 1 2 4 2 10 71 50 42 2 1 10 33 1 4 5 0 0 4 3 1 8 5 7 6 5 7 7 7 8 7 8 7 9 1 1 8 5 7 65 7 2 1 0 10 5 5 -1 -1 -1 -1 -1 -1 4 8 8 -1 15 38 -4 44 44 44 3 3 8 87 45 5 -1 -4 1 1 1 -4 -2 3 -2 6 0 2 5 5 -13 4 6 3 3 1 2 1 2 1 4 9 4 8 7 31 3 8 87 45 5 -1 -4 1 1 1 -4 -2 3 3 -2 6 0 0 2 5 -13 4 6 3 3 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 2         4         9         12         0         21         8         7         4         1         0         5         13         0         4         2         40         85         86         5           80         70         57         9         5         21         8         7         6         7         3         3         15         3         14         35         0         10         9         15           98         91         78         72         4         84         6         9         7         2         3         7         17         1         15         20         2         4         6         33           67         45         33         4         3         14         4         4         4         1         10         13         3         9         24         5         7         7         13           6         49         26         3         1         4         5         14         1         6         6         5         2         2         5           5         1         2         4         2         10  |    |    |    |    |    |    | 17 | 2   |    |    | 2  | 7  |     |    |     |     |     |    |    |    |
| 98 91 78 72 4 84 6 9 7 2 3 7 17 1 15 20 2 4 6 33 67 45 33 4 3 14 4 4 4 4 1 10 13 3 9 24 5 7 7 13 6 49 26 3 2 7 2 5 2 3 4 5 14 1 6 6 6 5 2 2 5 5 1 2 4 2 10 71 50 42 2 1 10 33 1 4 5 0 4 3 1 8 15 12 6 1 80 2 1 4 2 4 2 4 -4 18 2 18 55 -9 11 8 5 7 65 72 1 0 10 5 -1 -1 -1 -1 -1 4 8 -1 15 38 -4 44 44 3 7 5 5 3 3 0 7 5 7 7 7 4 -1 5 12 2 1 1 9 8 7 2 1 1 9 8 7 2 1 1 1 9 8 8 7 2 1 1 1 9 8 8 7 2 1 1 1 9 8 8 7 2 1 1 1 9 8 8 7 2 1 1 1 9 8 8 7 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   | 2  | 4  | 9  | 12 | 0  |    |    |     |    | 1  |    |    |     | 0  | 4   | 2   | 40  | 85 |    | 5  |
| 67   | 80 | 70 | 57 | 9  | 5  | 21 | 8  | 7   | 6  | 7  | 3  | 3  | 15  | 3  | 14  | 35  | 0   | 10 | 9  | 15 |
| 6  | 98 | 91 | 78 | 72 | 4  | 84 | 6  | 9   | 7  | 2  | 3  | 7  | 17  | 1  | 15  | 20  | 2   | 4  | 6  | 33 |
| 3         5         6         4         1         6         7         1         1         0         0         5         14         1         6         6         5         2         2         5           5         1         2         4         2         10         71         50         42         2         1         10         33         1         4         5         0         4         3         1           8         15         12         6         1         80         2         1         4         2         4         -4         18         2         18         55         -9         11         8         5           7         65         72         1         0         10         5         -1         -1         -1         -1         4         8         -1         15         38         -4         44         44         43         3           7         5         5         3         0         7         5         7         7         4         -1         5         12         2         1         1         9         8         7         2 <th>67</th> <th>45</th> <th>33</th> <th>4</th> <th>3</th> <th>14</th> <th>4</th> <th>4</th> <th></th> <th>4</th> <th>1</th> <th>10</th> <th>13</th> <th>3</th> <th>9</th> <th>24</th> <th>5</th> <th>7</th> <th>7</th> <th>13</th>   | 67 | 45 | 33 | 4  | 3  | 14 | 4  | 4   |    | 4  | 1  | 10 | 13  | 3  | 9   | 24  | 5   | 7  | 7  | 13 |
| 5       1       2       4       2       10       71       50       42       2       1       10       33       1       4       5       0       4       3       1         8       15       12       6       1       80       2       1       4       2       4       -4       18       2       18       55       -9       11       8       5         7       65       72       1       0       10       5       -1       -1       -1       -1       4       8       -1       15       38       -4       44       44       43         7       5       5       3       0       7       5       7       7       4       -1       5       12       2       1       1       9       8       7       2         15       70       62       52       10       81       14       16       9       7       13       10       29       6       7       12       4       8       7       31         38       87       45       5       -1       -4       1       1       -4       -2 <td< th=""><th>6</th><th>49</th><th>26</th><th>3</th><th>2</th><th>7</th><th>2</th><th>5</th><th>2</th><th>3</th><th>4</th><th>-5</th><th>14</th><th>3</th><th>12</th><th>17</th><th>-2</th><th>8</th><th></th><th>11</th></td<>  | 6  | 49 | 26 | 3  | 2  | 7  | 2  | 5   | 2  | 3  | 4  | -5 | 14  | 3  | 12  | 17  | -2  | 8  |    | 11 |
| 8       15       12       6       1       80       2       1       4       2       4       -4       18       2       18       55       -9       11       8       5         7       65       72       1       0       10       5       -1       -1       -1       -1       4       8       -1       15       38       -4       44       44       3         7       5       5       3       0       7       5       7       7       4       -1       5       12       2       1       1       9       8       7       2         15       70       62       52       10       81       14       16       9       7       13       10       29       6       7       12       4       8       7       31         38       87       45       5       -1       -4       1       1       -4       -2       3       -2       6       0       2       5       -13       4       6       3         4       3       4       3       4       3       4       1       1       5       66<   | 3  | 5  |    | 4  |    |    |    |     |    | 0  | 0  |    |     | 1  | 6   | 6   | 5   | 2  |    | 5  |
| 7       65       72       1       0       10       5       -1       -1       -1       -1       4       8       -1       15       38       -4       44       44       44       3         7       5       5       3       0       7       5       7       7       4       -1       5       12       2       1       1       9       8       7       2         15       70       62       52       10       81       14       16       9       7       13       10       29       6       7       12       4       8       7       31         38       87       45       5       -1       -4       1       1       -4       -2       3       -2       6       0       2       5       -13       4       6       3         63       47       37       3       4       20       6       5       3       4       3       4       1       15       50       -2       4       4       3         98       65       48       8       2       45       1       3       -1       3 <td< th=""><th>_</th><th></th><th></th><th></th><th>2</th><th></th><th>71</th><th>50</th><th></th><th></th><th>1</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>1</th></td<>   | _  |    |    |    | 2  |    | 71 | 50  |    |    | 1  |    |     |    |     |     |     |    |    | 1  |
| 7       5       5       3       0       7       5       7       7       4       -1       5       12       2       1       1       9       8       7       2         15       70       62       52       10       81       14       16       9       7       13       10       29       6       7       12       4       8       7       31         38       87       45       5       -1       -4       1       1       -4       -2       3       -2       6       0       2       5       -13       4       6       3         63       47       37       3       4       20       6       5       3       4       3       4       1       15       50       -2       4       4       3         98       65       48       8       2       45       1       3       -1       3       5       -3       14       5       66       64       -4       10       9       53         1       3       9       6       1       -2       1       -3       -2       -1       4       1<   |    |    |    |    | 1  |    |    | 1   |    |    |    |    |     |    |     |     |     |    |    |    |
| 15       70       62       52       10       81       14       16       9       7       13       10       29       6       7       12       4       8       7       31         38       87       45       5       -1       -4       1       1       -4       -2       3       -2       6       0       2       5       -13       4       6       3         63       47       37       3       4       20       6       5       3       4       3       4       1       15       50       -2       4       4       3         98       65       48       8       2       45       1       3       -1       3       5       -3       14       5       66       64       -4       10       9       53         1       3       9       6       1       -2       1       -3       -2       -1       4       1       6       1       6       5       8       3       1       2         3       2       5       5       0       17       1       0       0       -1       -4       2   | -  |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 38       87       45       5       -1       -4       1       1       -4       -2       3       -2       6       0       2       5       -13       4       6       3         63       47       37       3       4       20       6       5       3       4       3       4       1       15       50       -2       4       4       3         98       65       48       8       2       45       1       3       -1       3       5       -3       14       5       66       64       -4       10       9       53         1       3       9       6       1       -2       1       -3       -2       -1       4       1       6       1       6       5       8       3       1       2         3       2       5       5       0       17       1       0       0       -1       -4       2       10       1       21       14       9       4       3       5         9       5       7       6       6       53       3       13       6       25       49       6   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 63       47       37       3       4       20       6       5       3       4       3       4       1       15       50       -2       4       4       3         98       65       48       8       2       45       1       3       -1       3       5       -3       14       5       66       64       -4       10       9       53         1       3       9       6       1       -2       1       -3       -2       -1       4       1       6       1       6       5       8       3       1       2         3       2       5       5       0       17       1       0       0       -1       -4       2       10       1       21       14       9       4       3       5         9       5       7       6       6       53       3       13       6       25       49       6       11       2       16       59       0       8       8       3         2       2       2       4       1       0       4       11       4       2       1       4   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 98       65       48       8       2       45       1       3       -1       3       5       -3       14       5       66       64       -4       10       9       53         1       3       9       6       1       -2       1       -3       -2       -1       4       1       6       1       6       5       8       3       1       2         3       2       5       5       0       17       1       0       0       -1       -4       2       10       1       21       14       9       4       3       5         9       5       7       6       6       53       3       13       6       25       49       6       11       2       16       59       0       8       8       3         2       2       2       4       1       0       4       11       4       2       1       4       11       0       8       5       -8       0       0       2         6       51       43       4       5       16       5       17       5       3       1       <  |    |    |    |    |    |    |    |     |    |    |    |    | O   |    |     |     |     |    |    |    |
| 1       3       9       6       1       -2       1       -3       -2       -1       4       1       6       1       6       5       8       3       1       2         3       2       5       5       0       17       1       0       0       -1       -4       2       10       1       21       14       9       4       3       5         9       5       7       6       6       53       3       13       6       25       49       6       11       2       16       59       0       8       8       3         2       2       2       4       1       0       4       11       4       2       1       4       11       0       8       5       -8       0       0       2         6       51       43       4       5       16       5       17       5       3       1       2       16       1       9       11       0       8       6       8         5       4       7       5       2       12       76       46       39       6       4       31<  |    |    |    |    |    |    |    |     |    |    |    |    | 1./ |    | _   |     |     |    | 1  |    |
| 3       2       5       5       0       17       1       0       0       -1       -4       2       10       1       21       14       9       4       3       5         9       5       7       6       6       53       3       13       6       25       49       6       11       2       16       59       0       8       8       3         2       2       2       4       1       0       4       11       4       2       1       4       11       0       8       5       -8       0       0       2         6       51       43       4       5       16       5       17       5       3       1       2       16       1       9       11       0       8       6       8         5       4       7       5       2       12       76       46       39       6       4       31       85       1       5       13       -10       3       2       2         11       40       50       15       2       13       8       9       0       0       5       <  |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 9 5 7 6 6 53 3 13 6 25 49 6 11 2 16 59 0 8 8 3 2 2 2 4 1 0 4 11 4 2 1 4 11 0 8 5 -8 0 0 2 6 51 43 4 5 16 5 17 5 3 1 2 16 1 9 11 0 8 6 8 5 4 7 5 2 12 76 46 39 6 4 31 85 1 5 13 -10 3 2 2 11 4 0 50 15 2 13 8 9 0 0 5 2 13 1 11 33 -9 3 3 7 10 4 5 8 3 22 77 87 75 18 9 53 85 2 7 8 1 7 6 1 4 4 4 3 2 0 7 91 85 69 11 1 75 89 1 3 8 -3 6 6 2 3 12 5 3 6 22 17 15 14 27 47 3 60 0 77 60 -4 8 5 11 1 4 6 3 -3 -6 3 -4 -1 0 0 -4 10 1 3 6 14 2 4 3   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 2       2       2       4       1       0       4       11       4       2       1       4       11       0       8       5       -8       0       0       2         6       51       43       4       5       16       5       17       5       3       1       2       16       1       9       11       0       8       6       8         5       4       7       5       2       12       76       46       39       6       4       31       85       1       5       13       -10       3       2       2         11       40       50       15       2       13       8       9       0       0       5       2       13       1       11       33       -9       3       3       7         10       4       5       8       3       22       77       87       75       18       9       53       85       2       7       8       1       7       6       1         4       4       3       2       0       7       91       85       69       11       1   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 6       51       43       4       5       16       5       17       5       3       1       2       16       1       9       11       0       8       6       8         5       4       7       5       2       12       76       46       39       6       4       31       85       1       5       13       -10       3       2       2         11       40       50       15       2       13       8       9       0       0       5       2       13       1       11       33       -9       3       3       7         10       4       5       8       3       22       77       87       75       18       9       53       85       2       7       8       1       7       6       1         4       4       3       2       0       7       91       85       69       11       1       75       89       1       3       8       -3       6       6       2         3       12       5       3       6       22       17       15       14       27       47 <th></th> <td></td>  |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 5       4       7       5       2       12       76       46       39       6       4       31       85       1       5       13       -10       3       2       2         11       40       50       15       2       13       8       9       0       0       5       2       13       1       11       33       -9       3       3       7         10       4       5       8       3       22       77       87       75       18       9       53       85       2       7       8       1       7       6       1         4       4       3       2       0       7       91       85       69       11       1       75       89       1       3       8       -3       6       6       2         3       12       5       3       6       22       17       15       14       27       47       3       60       0       77       60       -4       8       5       11         1       4       6       3       -3       -6       3       -4       -1       0       0   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 11       40       50       15       2       13       8       9       0       0       5       2       13       1       11       33       -9       3       3       7         10       4       5       8       3       22       77       87       75       18       9       53       85       2       7       8       1       7       6       1         4       4       3       2       0       7       91       85       69       11       1       75       89       1       3       8       -3       6       6       2         3       12       5       3       6       22       17       15       14       27       47       3       60       0       77       60       -4       8       5       11         1       4       6       3       -3       -6       3       -4       -1       0       0       -4       10       1       3       6       14       2       4       3   |    |    |    |    |    |    |    |     |    |    |    |    | _   |    |     |     |     |    |    |    |
| 10     4     5     8     3     22     77     87     75     18     9     53     85     2     7     8     1     7     6     1       4     4     3     2     0     7     91     85     69     11     1     75     89     1     3     8     -3     6     6     2       3     12     5     3     6     22     17     15     14     27     47     3     60     0     77     60     -4     8     5     11       1     4     6     3     -3     -6     3     -4     -1     0     0     -4     10     1     3     6     14     2     4     3  |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 4     4     3     2     0     7     91     85     69     11     1     75     89     1     3     8     -3     6     6     2       3     12     5     3     6     22     17     15     14     27     47     3     60     0     77     60     -4     8     5     11       1     4     6     3     -3     -6     3     -4     -1     0     0     -4     10     1     3     6     14     2     4     3  |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 3 12 5 3 6 22 17 15 14 27 47 3 60 0 77 60 -4 8 5 11<br>1 4 6 3 -3 -6 3 -4 -1 0 0 -4 10 1 3 6 14 2 4 3  |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
| 1 4 6 3 -3 -6 3 -4 -1 0 0 -4 10 1 3 6 14 2 4 3   |    |    |    |    |    |    |    |     |    |    |    |    |     |    |     |     |     |    |    |    |
|  | 1  |    |    |    | -3 |    |    |     |    |    |    |    |     | 1  |     | 6   |     |    |    |    |
|  | 6  | 6  | 12 | 6  | 3  | 4  | 8  | 15  | 9  | 2  | 5  | 4  | 11  | 4  | 6   | 9   | -2  | 10 | 5  | 4  |
| 3 3 4 83 0 8 3 1 1 -1 1 0 23 1 4 5 10 5 5 1  | 3  |    | 4  | 83 | 0  | 8  | 3  |     |    |    | 1  | 0  |     | 1  |     |     | 10  | 5  |    | 1  |
| 7 10 27 0 11 73 8 22 8 54 81 3 20 3 27 64 -10 4 9 4  | 7  | 10 | 27 | 0  | 11 | 73 | 8  | 22  | 8  | 54 | 81 | 3  | 20  | 3  | 27  | 64  | -10 | 4  | 9  | 4  |

| 6       | 17      | 20      | 0       | 8      | 21      | 4        | 12      | 6       | 4        | 7      | 7        | 15        | 2      | 7        | 10       | -3       | 8       | 7         | 2       |
|---------|---------|---------|---------|--------|---------|----------|---------|---------|----------|--------|----------|-----------|--------|----------|----------|----------|---------|-----------|---------|
| 4       | 19      | 11      | 3       | 2      | 6       | 2        | 0       | -1      | -2       | -1     | 0        | 2         | 0      | 4        | 3        | -1       | 0       | 2         | 5       |
| 2       | 5       | 3       | 1       | -1     | -4      | 5        | 6       | -1      | 0        | 1      | 0        | -2        | -1     | -3       | 3        | 0        | -3      | -1        | 2       |
| 18      | 9       | 37      | 3       | 6      | 4       | 2        | 2       | 2       | 3        | 5      | 3        | 18        | 2      | 53       | 54       | 4        | 10      | 9         | 18      |
| 92      | 94      | 56      | 78      | 1      | 27      | 3        | 2       | 1       | -1       | -3     | -1       | 3         | 0      | 49       | 38       | 60       | 22      | 37        | 29      |
| 0       | 3       | 6       | 2       | -2     | -7      | 1        | -3      | -3      | -2       | 2      | -7       | 4         | -1     | 3        | 4        | -6       | 1       | 1         | 1       |
| 7       | 8       | 11      | 4       | 3      | 4       | 3        | 9       | 4       | 2        | 2      | 6        | 10        | 2      | 1        | 5        | -2       | 7       | 5         | 3       |
| 3       | 2       | 7       | 5       | -1     | 10      | 83       | 56      | 44      | 9        | -1     | 48       | 104       | 0      | 4        | 4        | -2       | -3      | 0         | 2       |
| 15      | 4       | 15      | 7       | 2      | 17      | 82       | 55      | 51      | 4        | 3      | 15       | 76<br>-   | 1      | 6        | 9        | 1        | 5       | 3         | 4       |
| 8<br>6  | 6<br>4  | 11<br>6 | 3<br>2  | 0      | 4<br>23 | -1<br>77 | 8<br>84 | 4<br>76 | 2<br>5   | 1      | 4<br>67  | 5<br>74   | 1      | -4<br>-8 | 2<br>-2  | -1<br>-3 | 6<br>2  | 4<br>2    | -1      |
| 5       | 8       | 5       | 4       | 3      | 17      | 94       | 71      | 56      | 12       | 4      | 73       | 97        | 2      | 7        | 7        | 2        | 6       | 3         | 2       |
| 4       | 1       | -1      | 3       | 1      | 5       | 6        | 1       | 0       | 1        | 1      | 6        | 11        | 2      | 4        | 3        | 0        | 2       | 2         | 0       |
| 12      | 15      | 14      | 5       | 1      | 5       | 59       | 27      | 34      | 2        | 4      | 4        | 28        | 3      | 6        | 8        | -2       | 9       | 6         | 2       |
| 17      | 26      | 21      | 5       | 5      | 10      | 5        | 12      | 6       | 2        | 3      | 3        | 12        | 4      | 19       | 28       | 0        | 11      | 6         | 4       |
| -1      | 3       | 2       | 2       | 1      | 6       | -1       | 2       | -2      | 1        | 2      | -4       | 5         | 2      | 19       | 58       | -1       | 4       | 4         | 4       |
| 47      | 42      | 57      | 7       | 4      | -4      | 13       | 2       | 2       | 5        | 3      | 3        | 29        | 1      | 30       | 63       | -2       | 5       | 2         | 16      |
| 10      | 26      | 7       | 2       | 2      | 8       | 1        | 5       | 4       | 4        | 3      | 3        | 7         | 1      | 2        | 5        | 4        | 2       | 3         | 1       |
| 3       | 7       | 3       | 5       | 4      | 75      | 6        | 0       | 2       | 1        | 0      | 4        | 16        | 0      | 8        | 6        | -5       | 2       | 3         | 1       |
| 0       | 6       | 12      | 4       | -1     | -4      | 1        | -1      | -4<br>- | -1       | 0      | -6       | 0         | -1     | 2        | 4        | -8       | -2      | -1        | 2       |
| 10      | 19      | 33      | 5       | 4      | 45      | 3        | 5       | 5       | 3        | 3      | 3        | 10        | 3      | 15       | 39       | -13      | 8       | 6         | 5       |
| 9       | 8       | 9       | 5       | 2      | 4       | 9        | 11      | 7       | 4        | 2      | 5        | 14        | 2      | 3        | 5        | 2        | 15      | 12        | 26      |
| 20<br>5 | 59<br>5 | 42<br>6 | 5<br>2  | 2      | 10<br>1 | 7<br>12  | 2<br>13 | -2<br>7 | 0<br>2   | 6<br>0 | 3<br>11  | 9<br>15   | 5<br>0 | 21<br>-7 | 55<br>-1 | -26<br>1 | 7<br>4  | 5<br>4    | 18<br>5 |
| 14      | 6       | 10      | 6       | 2      | 7       | 6        | 10      | 4       | 3        | 3      | 6        | 14        | 2      | 3        | 7        | 3        | 9       | 6         | 5       |
| 10      | 5       | 8       | 6       | 2      | 4       | 9        | 5       | 4       | 2        | 0      | 13       | 19        | 3      | 11       | 10       | -2       | 8       | 4         | 10      |
| 9       | 4       | 14      | 4       | 2      | 1       | 8        | 16      | 6       | 5        | 8      | 8        | 12        | 3      | 6        | 7        | -1       | 10      | 9         | 15      |
| 9       | 4       | 21      | 3       | 3      | 11      | 7        | 11      | 6       | 4        | 6      | 7        | 12        | 1      | 4        | 5        | 1        | 9       | 8         | 2       |
| 4       | 2       | 1       | 3       | 0      | 5       | 86       | 39      | 36      | 5        | -2     | 20       | 79        | 1      | 4        | 2        | 6        | 2       | 3         | 3       |
| 13      | 69      | 71      | 46      | 23     | 82      | 35       | 43      | 31      | 19       | 4      | 13       | 60        | 2      | 23       | 27       | 3        | 8       | 6         | 13      |
| 3       | 11      | 15      | 0       | 14     | 73      | 5        | 6       | 5       | 30       | 54     | 0        | 32        | 2      | 90       | 89       | 0        | 6       | 7         | 44      |
| 5       | 6       | 2       | 8       | 3      | 4       | 3        | 8       | 6       | 4        | 1      | 5        | 13        | 2      | 6        | 9        | 1        | 9       | 4         | 2       |
| 6       | 0       | 9       | 4       | 1      | 11      | 2        | 5       | 3       | 4        | 3      | 2        | 10        | 2      | 5        | 8        | 18       | 3       | 5         | 2       |
| 7       | 2       | 4       | 2       | 1      | 0       | 3        | 3       | 0       | 1        | 0      | -1       | 10        | 2      | 7        | 10       | 2        | 7       | 6         | 2       |
| 37      | 46      | 36      | 4       | 1      | 10<br>4 | 11       | 3<br>23 | 4       | 3        | 4<br>5 | 8<br>3   | 16        | 3      | 4<br>5   | 9        | 1<br>-2  | 8       | 4<br>2    | 6       |
| 10<br>7 | 4<br>7  | 4<br>9  | 2<br>9  | 2      | 0       | 78<br>3  | 23<br>5 | 35<br>3 | 2        | 3      | -4       | 32<br>24  | 1<br>2 | 9        | 6<br>11  | 0        | 3<br>8  | 7         | 2<br>6  |
| 1       | 34      | 26      | 32      | 0      | -2      | 67       | 76      | 31      | -3       | 0      | -3       | -10       | -2     | 4        | 10       | 9        | -6      | -4        | 5       |
| 9       | 39      | 64      | 14      | 2      | 72      | 4        | 12      | 2       | 2        | 0      | 3        | 7         | 1      | 5        | 9        | -1       | 0       | 0         | 2       |
| 6       | 5       | 8       | 4       | 1      | 9       | -2       | 5       | 2       | 4        | 4      | 1        | 11        | 2      | 6        | 13       | -3       | 7       | 6         | 8       |
| 6       | 4       | 13      | 8       | 6      | 16      | 4        | 8       | 7       | 5        | 4      | 11       | 7         | 2      | 11       | 9        | -4       | 0       | 1         | 7       |
| 3       | 4       | 4       | 1       | 1      | 2       | 8        | 4       | 3       | 0        | 2      | 5        | 9         | 1      | 4        | 5        | -4       | 3       | 2         | 6       |
| 7       | 4       | 5       | 5       | 2      | 6       | 3        | 4       | 5       | 4        | 4      | 3        | 11        | 4      | 0        | 7        | -2       | 12      | 6         | 2       |
| 30      | 17      | 45      | 4       | 1      | 11      | -4       | 6       | 2       | 4        | 3      | 5        | 3         | 1      | 5        | 17       | 1        | 3       | 3         | 2       |
| 2       | 4       | 6       | 4       | 3      | -3      | 5        | 8       | 0       | 1        | 4      | -2       | 17        | 1      | 3        | 8        | -7       | 6       | 5         | 3       |
| 6       | 4       | 26      | 0       | 1      | 11      | 8        | 5       | 9       | 6        | 5      | 4        | 2         | -2     | 6        | 12       | 2        | -5      | -4        | 5       |
| 1       | 7       | 5       | 4       | 0      | 3       | 1        | -2      | 67      | -1<br>11 | 3      | -5<br>60 | -4<br>101 | -1     | 1        | 2        | -3       | -2<br>4 | -2        | 7       |
| 3<br>6  | 2<br>4  | 6<br>7  | 4<br>14 | 1<br>0 | 10      | 98<br>5  | 81<br>1 | 67<br>2 | 11<br>-1 | 4<br>0 | 60<br>-4 | 101<br>16 | 6<br>1 | 4<br>3   | 7<br>7   | -11<br>2 | 4<br>6  | 2<br>5    | 2       |
| 7       | 4       | 4       | 4       | 2      | 1       | 4        | 11      | 6       | 4        | 6      | 2        | 9         | 2      | 5<br>5   | 8        | 0        | 12      | 9         | ა<br>10 |
| 17      | 61      | 85      | 1       | 3      | 17      | 6        | 4       | 5       | 5        | 3      | 6        | 7         | 2      | 12       | 31       | -3       | 57      | <u>56</u> | 4       |
| 45      | 71      | 55      | 14      | 6      | 4       | 2        | 7       | 0       | 0        | 2      | -2       | 11        | 2      | 11       | 19       | 3        | 9       | 7         | 3       |
| 11      | 7       | 12      | 3       | 2      | 14      | 4        | 7       | 6       | 3        | 2      | 2        | 13        | 2      | 11       | 14       | -4       | 7       | 5         | 5       |
| 94      | 77      | 68      | 9       | 2      | 27      | 5        | 3       | 1       | -2       | 0      | -3       | 9         | 2      | 13       | 23       | 4        | 1       | 2         | 14      |
| 75      | 56      | 17      | 71      | 2      | 25      | 3        | 3       | 1       | 0        | 2      | 1        |           | 1      | 10       | 5        | 50       | 15      | 17        | 27      |
| 17      | 98      | 77      | 18      | 6      | 24      | 81       | 99      | 96      | 31       | 13     | 26       | 69        | 3      | 9        | 18       | -1       | 10      | 9         | 6       |
| 5       | 4       | 7       | 5       | 1      | 6       | 8        | 35      | 9       | 2        | 7      | 6        | 11        | 1      | 6        | 6        | -3       | 6       | 5         | 6       |
| 2       | 23      | 20      | 4       | 6      | 28      | 6        | 11      | 7       | 5        | -1     | 6        | 9         | 0      | 5        | 6        | -3       | 0       | 1         | 2       |

| 20        | 12      | 22       | 5        | 0       | 10       | -4            | 3        | -1       | 2       | 7       | 0        | 0          | 2       | 10      | 35      | 3         | 5       | 6       | 13      |
|-----------|---------|----------|----------|---------|----------|---------------|----------|----------|---------|---------|----------|------------|---------|---------|---------|-----------|---------|---------|---------|
| 20        | 14      | 27       | 5        | 4       | 9        | 4             | 1        | 0        | 0       | 6       | -2       | 7          | 3       | 15      | 45      | 5         | 9       | 8       | 14      |
| 4         | 94      | 14       | 11       | 0       | 5        | 4<br>7        | 3<br>5   | 1        | -1      | 0       | -2<br>7  | -7         | -1<br>1 | 2       | 2       | 1         | -5      | -5      | 2       |
| 100<br>38 | 68      | 56<br>79 | 56<br>36 | 4       | 14<br>48 | 33            | 72       | 2<br>31  | 2<br>5  | 4<br>3  | 4        | 15<br>43   | 1       | 9<br>12 | 8<br>38 | 5<br>-4   | 12<br>2 | 14<br>3 | 5<br>4  |
| 9         | 45      | 44       | 10       | 4       | 29       | 2             | 0        | 1        | 0       | 1       | 4        | 10         | 2       | 10      | 7       | 1         | 6       | 5       | 7       |
| 18        | 51      | 50       | 10       | 3       | 19       | 8             | 31       | 11       | 6       | 7       | 7        | 2          | 0       | 7       | 18      | -4        | -1      | -1      | 1       |
| 1         | 9       | 6        | 7        | 2       | 5        | 5             | 2        | -2       | 0       | 2       | 0        | 8          | 1       | 3       | 8       | 9         | 5       | 3       | 2       |
| 3         | 2       | 6        | 2        | 2       | 2        | 7             | 5        | 5        | 1       | 3       | 8        | 10         | 1       | 3       | 6       | -3        | 3       | 4       | 1       |
| 6         | 59      | 50       | 4        | 22      | 84       | 16            | 57       | 21       | 3       | 2       | 1        | 37         | 2       | 10      | 35      | 61        | 10      | 9       | 5       |
| 9<br>12   | 8       | 13       | 8        | 2       | 51       | 10            | 5        | 6        | 1       | 3<br>5  | 8        | 21         | 2       | 11      | 9       | 1         | 12      | 5       | 4       |
| 9         | 47<br>5 | 69<br>9  | 6<br>7   | 4<br>4  | 16<br>10 | 6<br>3        | 7<br>4   | 5<br>5   | 5<br>2  | 0       | 6<br>3   | 15<br>8    | 2<br>2  | 19<br>8 | 39<br>7 | 18<br>2   | 38<br>6 | 39<br>5 | 8<br>3  |
| 10        | 69      | 75       | ,<br>16  | 15      | 91       | 8             | 28       | 6        | 0       | 0       | 0        | 22         | 2       | 20      | 43      | -3        | 6       | 5       | 6       |
| 9         | 8       | 5        | 5        | 1       | 6        | 86            | 51       | 42       | 5       | -1      | 51       | 80         | 1       | 4       | 3       | -2        | 1       | 1       | 1       |
| 4         | 7       | 6        | 5        | 2       | 12       | 88            | 81       | 67       | 7       | 5       | 50       | 120        | 1       | 2       | 7       | 6         | 6       | 6       | 3       |
| 9         | 7       | 11       | 6        | 2       | 5        | 5             | 5        | 7        | 3       | 3       | 3        | 12         | 2       | 6       | 9       | -3        | 8       | 6       | 3       |
| 4         | 3       | 6        | 4        | 0       | -1       | 76            | 54       | 42       | 0       | 2       | -1       | 50         | 1       | 8       | 8       | -4        | 1       | 1       | 3       |
| 14        | 47      | 50       | 5        | 1       | 44       | 13            | 6        | 5        | 2       | 5       | 14       | 14         | 1       | 52      | 56      | 0         | 6       | 4       | 5       |
| 13<br>9   | 8<br>4  | 12<br>7  | 9<br>2   | 1<br>-1 | 22<br>5  | 83<br>85      | 79<br>77 | 78<br>68 | 6<br>2  | 2       | 60<br>70 | 89<br>83   | 3<br>1  | 5<br>9  | 9<br>10 | 1<br>-1   | 9<br>3  | 6<br>3  | 6<br>3  |
| 1         | 4<br>27 | 34       | 4        | 8       | 49       | 0             | -1       | -2       | -1      | -1      | -1       | 03         | 0       | 9<br>15 | 17      | -1<br>-4  | ა<br>1  | 3       | 2       |
| 16        | 5       | 13       | 12       | 2       | 7        | 13            | 19       | 10       | 6       | 7       | 12       | 19         | 3       | 11      | 11      | 0         | 13      | 8       | 10      |
| 25        | 11      | 21       | 12       | 7       | 21       | 85            | 98       | 98       | 15      | 23      | 30       | 64         | 2       | 2       | 6       | -1        | 6       | 5       | 5       |
| 81        | 86      | 78       | 31       | 2       | 20       | 23            | 58       | 21       | 1       | 6       | 4        | 8          | 1       | -2      | 7       | -6        | 16      | 20      | 1       |
| 7         | 4       | 3        | 4        | 0       | 2        | -1            | 5        | 3        | 2       | 2       | 2        | 4          | 2       | -8      | -1      | 1         | 9       | 4       | 1       |
| 5         | 43      | 18       | 4        | 11      | 39       | 1             | 14       | 4        | 1       | 3       | 3        | 9          | 2       | 7       | 15      | 1         | 10      | 4       | 2       |
| 5<br>10   | 10<br>3 | 17<br>4  | 16       | 3<br>3  | 12<br>10 | 4<br>13       | 20<br>13 | 8<br>9   | 3<br>6  | 4<br>7  | 4<br>14  | 19<br>21   | 2       | 9<br>9  | 9<br>4  | 12<br>0   | 30<br>8 | 29<br>7 | 4       |
| 10        | 27      | 15       | 2<br>6   | 3       | 12       | 7             | 16       | 10       | 7       | 8       | 6        | 28         | 2       | 9<br>7  | 9       | 0         | 10      | 9       | 2<br>4  |
| 10        | 4       | 8        | 4        | 3       | 9        | -1            | 4        | 3        | 5       | 5       | 5        | 5          | 3       | 9       | 9       | -1        | 7       | 5       | 3       |
| 7         | 0       | 14       | 3        | 3       | 12       | 0             | 9        | 4        | 4       | 4       | 5        | 9          | 1       | 19      | 16      | -3        | 6       | 5       | 3       |
| 7         | -2      | 8        | 2        | 3       | 6        | 1             | 2        | 4        | 2       | 1       | 4        | 9          | 1       | 4       | 6       | 2         | 7       | 6       | 3       |
| 4         | 2       | 1        | 2        | 1       | 5        | 70            | 11       | 27       | 10      | -1      | 32       | 107        | 0       | 3       | 4       | 0         | 4       | 3       | 1       |
| 43        | 51      | 38       | 5        | 3       | 16       | 3             | 7        | 6        | 4       | 2       | 6        | 11         | 1       | 10      | 12      | -8        | 5       | 5       | 5       |
| 0         | 5<br>14 | 10<br>7  | 5<br>3   | 0       | 9<br>4   | 91<br>2       | 82<br>-2 | 68<br>-1 | 6<br>-3 | 3<br>-6 | 27<br>-5 | 130<br>-13 | 1<br>-1 | 0<br>3  | 4<br>4  | -11<br>-3 | 3<br>-6 | 3<br>-3 | 2<br>5  |
| 9         | 9       | 9        | 6        | 3       | 27       | 78            | 102      | 97       | 18      | 11      | 35       | 83         | 1       | 6       | 2       | -1        | 3       | 4       | 3       |
| 5         | 5       | 6        | 9        | 1       | 9        | 19            | 22       | 12       | 2       | 7       | 10       | 83         | 2       | 3       | 0       | -1        | 6       | 4       | 2       |
| 5         | 6       | 14       | 10       | 1       | 0        | 1             | 2        | -3       | -1      | 2       | -2       | -1         | 2       | 2       | 3       | 0         | 2       | 2       | 7       |
| 9         | 3       | 5        | 3        | 0       | 5        | 2             | 4        | 4        | 3       | 2       | 2        | 8          | 3       | 5       | 7       | 1         | 11      | 6       | 2       |
| 15        | 55      | 83       | 3        | 3       | 10       | 4             | 5        | 3        | 2       | 6       | 1        | 8          | 2       | 17      | 50      | -16       | 17      | 16      | 7       |
| 1         | 5<br>6  | 7<br>13  | 7<br>5   | 6<br>1  | 1        | 77<br>19      | 57<br>54 | 43<br>18 | 1<br>2  | 2<br>5  | 11<br>2  | 57<br>27   | 2<br>0  | 7<br>4  | 8<br>5  | 2<br>-9   | 1<br>7  | 2<br>5  | 2<br>7  |
| 17        | о<br>23 | 6        | ວ<br>10  | 1<br>5  | 36       | 85            | 94       | 85       | 36      | 5<br>3  | 83       | 94         | 1       | 4<br>14 | ว<br>14 | -9<br>-2  | 3       | 5<br>2  | 2       |
| 9         | 42      | 39       | 19       | 4       | 11       | 62            | 88       | 58       | 14      | 53      | 6        | 69         | 2       | 6       | 8       | -3        | 5       | 6       | 5       |
| 13        | 20      | 22       | 8        | 3       | 24       | 2             | 3        | 0        | 1       | 1       | 4        | 10         | 1       | 6       | 7       | -2        | 6       | 4       | 7       |
| 6         | 8       | 6        | 6        | 2       | 4        | 1             | 3        | 5        | 4       | 2       | 3        | 9          | 4       | 5       | 7       | 1         | 11      | 6       | 2       |
| 8         | 6       | 4        | 1        | 0       | 10       | 77            | 94       | 91       | 27      | 6       | 73       | 84         | 1       | 3       | 5       | -1        | 4       | 3       | 2       |
| 3         | 2       | 6        | 0        | 2       | 4        | 2             | 1        | 1        | -2      | 0       | -2       | 12         | 2       | 8       | 14      | 3         | 5       | 5       | 4       |
| 95<br>3   | 96<br>3 | 81<br>4  | 77<br>11 | 1<br>1  | 34<br>-6 | 0<br>7        | -3<br>2  | -2<br>2  | -2<br>0 | 0<br>-1 | -3<br>-3 | 6<br>12    | 1<br>1  | 17<br>3 | 26<br>7 | 3<br>-3   | 7<br>3  | 8<br>4  | 49<br>2 |
| 8         | 3<br>6  | 8        | 7        | 2       | 8        | <i>7</i><br>8 | 4        | 6        | 4       | 5       | -3<br>14 | 12<br>24   | 3       | 3<br>4  | 7       | 9         | ა<br>8  | 8       | 3       |
| 12        | 50      | 43       | 4        | 4       | 7        | 22            | 61       | 22       | 6       | 15      | 7        | 49         | 2       | 6       | 10      | -6        | 8       | 8       | 4       |
| 91        | 81      | 26       | 54       | 6       | 5        | 0             | 0        | -4       | -3      | -4      | -2       | 3          | 1       | 10      | 4       | -6        | 14      | 17      | 8       |
| 6         | 7       | 2        | 6        | 3       | 85       | -1            | 3        | 4        | 2       | -1      | 2        | 10         | 2       | 72      | 78      | 11        | 15      | 14      | 4       |
| 5         | 3       | 5        | 4        | 0       | -2       | 0             | 0        | -1       | -1      | 2       | -3       | 4          | 0       | 5       | 6       | 2         | 1       | 1       | 2       |
| 1         | 4       | 9        | 10       | 2       | 1        | 3             | 1        | 1        | 0       | 3       | 1        | 0          | 2       | 20      | 56      | 5         | 24      | 24      | 9       |

| 0       | 3        | 8        | 4       | 0      | 37      | 6       | 9        | 2       | -2      | 4       | 3       | 0        | 0      | 14      | 44      | 27                | 14      | 15      | 6      |
|---------|----------|----------|---------|--------|---------|---------|----------|---------|---------|---------|---------|----------|--------|---------|---------|-------------------|---------|---------|--------|
| 12      | 3        | 8        | 3       | 2      | 11      | 3       | 7        | 6       | 5       | 4       | 6       | 13       | 3      | 6       | 8       | 2                 | 7       | 6       | 3      |
| 5       | 15       | 28       | 8       | 3      | 67      | 1       | 7        | 1       | 3       | 0       | 1       | 5        | 4      | 10      | 13      | -3                | 0       | 1       | 5      |
| -1      | 17       | 9        | 4       | 5      | -3      | 14      | 0        | 1       | -2      | -1      | -2      | 18       | 2      | 7       | 3       | 0                 | 3       | 3       | 2      |
| 6       | 12       | 17       | 34      | 8      | 22      | 19      | 40       | 28      | 8       | 10      | 12      | 44       | 1      | 8       | 10      | -1                | -1      | -1      | 7      |
| 0       | 1        | 10       | 3       | 2      | 13      | 78      | 73       | 56      | 9       | 4       | 0       | 63       | -1     | 5       | 5       | -3                | -3      | -2      | 2      |
| 30      | 37       | 45       | 6       | 4      | 12      | 8       | 35       | 12      | 4       | 1       | 4       | 11       | 1      | 7       | 9       | -22               | 8       | 7       | 1      |
| 11      | 5        | 6        | 10      | 1      | 11      | 86      | 94       | 88      | 18      | 2       | 70      | 88       | 1      | 8       | 8       | -2<br>-           | 1       | 1       | 8      |
| 22      | 41       | 51<br>-  | 9       | 0<br>9 | 2<br>61 | 8<br>1  | 38       | 7       | 0       | 3       | -1      | 3        | 2      | 0<br>14 | 2<br>56 | -7<br>2           | 6       | 6       | 5      |
| 9<br>7  | 4<br>5   | 5<br>11  | 6<br>5  | 2      | 5       | 8       | 11<br>3  | 9<br>2  | 26<br>2 | 60<br>2 | 11<br>2 | 16<br>16 | 3<br>1 | 14      | 8       | <b>-</b> 9        | 6<br>4  | 5<br>4  | 1<br>2 |
| 6       | 8        | 17       | 4       | 2      | 2       | 14      | 41       | 13      | 3       | 2       | 5       | 13       | -1     | -2      | 0       | -3                | 6       | 5       | 2      |
| 4       | 0        | 6        | 2       | 1      | 0       | 2       | 1        | 1       | -2      | -1      | 2       | 0        | 1      | 5       | 5       | -3                | -2      | -1      | 0      |
| 46      | 31       | 22       | 8       | 1      | 6       | 10      | 3        | 2       | 1       | 5       | 0       | 15       | 2      | 16      | 34      | 3                 | 8       | 8       | 29     |
| 5       | 4        | 1        | 6       | 1      | 6       | 6       | 5        | 4       | 2       | 4       | 4       | 14       | 2      | 2       | 2       | 0                 | 5       | 5       | 1      |
| 11      | 6        | 11       | 11      | 6      | 6       | 84      | 61       | 58      | 6       | 7       | 60      | 77       | 3      | 5       | 5       | -3                | 10      | 5       | 4      |
| 6       | 6        | 14       | 7       | 3      | 5       | 4       | 1        | 2       | 2       | 1       | 6       | 8        | 2      | 4       | 5       | -3                | 5       | 4       | 4      |
| 6       | 5        | 7        | 5       | 1      | -1      | 5       | 4        | 2       | 2       | -1      | 0       | 11       | 1      | 5       | 3       | 16                | 4       | 5       | 2      |
| 39      | 69       | 69       | 52      | 5      | 51      | 36      | 80       | 38      | 2       | 13      | -2      | 7        | 4      | 22      | 41      | -6                | 3       | 3       | 19     |
| 5       | 3        | 6        | 4       | 2      | 13      | 4       | 14       | 6       | 3       | 5       | 8       | 51       | 0      | 1       | 4       | -8                | 4       | 4       | 1      |
| 5       | 28       | 12       | 7       | 1      | -5      | 2       | 1        | -1      | 0       | 1       | -4      | 15       | 1      | 6       | 7       | 4                 | 7       | 7       | 6      |
| 9       | 16       | 20       | 7       | 1      | 15      | 2       | -2       | 0       | 0       | 0       | 3       | 7        | 1      | 7       | 10      | -1                | 2       | 1       | 6      |
| 5<br>8  | 17<br>9  | 30<br>12 | 3<br>8  | 1      | 9<br>6  | 12<br>6 | 17<br>32 | 7<br>11 | 2<br>4  | 1<br>1  | 4<br>6  | 19<br>32 | 1<br>2 | 2<br>2  | 9<br>2  | -4<br>3           | 5<br>6  | 5<br>7  | 5<br>0 |
| 5       | 4        | 6        | 10      | 2      | 5       | 2       | 3        | -1      | 3       | 1       | 4       | 10       | 1      | 4       | 5       | 10                | 3       | 2       | 5      |
| 6       | 5        | 8        | 6       | 0      | -2      | 3       | 14       | 2       | 1       | 1       | 1       | 10       | 2      | -3      | -1      | 0                 | 7       | 6       | 7      |
| 4       | 3        | 2        | 0       | 0      | -6      | 1       | -1       | -3      | -4      | -1      | -5      | -12      | -1     | -2      | 2       | -1                | -5      | -3      | 2      |
| 6       | 3        | 4        | 3       | 2      |         | 83      | 35       | 37      | 3       | 0       | 10      | 54       | 1      | 3       | 4       | -1                | 4       | 3       | 2      |
| 28      | 61       | 71       | 6       | 2      | 6       | 12      | 6        | 3       | 1       | 6       | 3       | 8        | 1      | 17      | 36      | -7                | 5       | 5       | 30     |
| 10      | 5        | 9        | 2       | 3      | 9       | 73      | 22       | 30      | 4       | 5       | 4       | 19       | 2      | 7       | 6       | 5                 | 4       | 6       | 1      |
| 8       | 33       | 29       | 14      | 1      | 12      | 5       | 3        | 2       | 0       | -2      | 2       | 4        | 1      | 5       | 13      | -2                | 1       | 1       | 3      |
| 5       | 3        | 2        | 5       | 2      | 3       | 5       | 3        | 4       | 3       | -1      | 5       | 12       | 2      | 2       | 4       | 1                 | 6       | 3       | 2      |
| 10      | 5        | 20       | 9       | 8      | 20      | 1       | 8        | 6       | 6       | 5       | 10      | 18       | 2      | 9       | 12      | 1                 | 3       | 2       | 11     |
| 1       | 6        | 23       | 2       | -3     | -5      | 3       | -1       | -2      | -2      | 0       | -5<br>2 | 11       | 0      | 3       | 4       | 10                | 86      | 83      | 4      |
| 10<br>7 | 39<br>41 | 37<br>10 | 5<br>1  | 1<br>2 | 9<br>6  | 1<br>9  | -1<br>6  | 0<br>1  | 0       | 0       | 2<br>1  | 8<br>11  | 0<br>1 | 0<br>7  | 5<br>10 | 0<br>-17          | 5<br>5  | 4<br>3  | 2<br>1 |
| 98      | 95       | 36       | 54      | 0      | 9       | 3       | 5        | 4       | 3       | 0       | 1       | 11       | 1      | 13      | 11      | 44                | 21      | 21      | 10     |
| 7       | 8        | 8        | 5       | 1      |         | 84      | 99       | 96      | 22      | 6       | 80      | 91       | 2      | 4       | 11      | -3                | 8       | 5       | 5      |
| 33      | 32       | 25       | 4       | 4      | 7       | 9       | 3        | 5       | 1       | 6       | 0       | 11       | 2      | 12      | 17      | -3                | 5       | 5       | 2      |
| 6       | 7        | 11       | 6       | 3      | -5      | 6       | 2        | 0       | 1       | 0       | -3      | 13       | 2      | 7       | 10      | -8                | 7       | 7       | 3      |
| 1       | 6        | 10       | 9       | 4      | -8      | 5       | -1       | -2      | -3      | -2      | -3      | 3        | 1      | 5       | 5       | 1                 | 0       | 1       | 4      |
| 6       | 13       | 15       | 6       | 3      | 11      | 67      | 11       | 22      | 3       | 0       | 52      | 115      | 2      | 4       | 9       | 8                 | 6       | 5       | 6      |
| 20      | 12       | 13       | 18      | 4      | 23      | 79      | 97       | 91      | 16      | 3       | 65      | 98       | 3      | 5       | 6       | 12                | 9       | 9       | 8      |
| 14      | 13       | 6        | 17      | 2      | 18      | 85      | 94       | 87      | 11      | 3       | 62      | 93       | 1      | 6       | 7       | -3                | 6       | 5       | 13     |
| 6       | 2        | 3        | 7       | 0      | 5       | 0       | 3        | 1       | 4       | 2       | 5       | 7        | 2      | -3      | -4<br>4 | 0                 | 4       | 4       | 2      |
| 4<br>6  | 27<br>6  | 8<br>14  | 11<br>5 | 3<br>2 | 5<br>4  | 2<br>9  | 0<br>25  | -2<br>7 | 0       | 1<br>5  | -3<br>0 | 10<br>14 | 2<br>1 | 5<br>7  | 15<br>8 | 5<br>-7           | 7<br>12 | 6<br>10 | 6<br>1 |
| 3       | 3        | 6        | 5<br>2  | 1      | 3       | 2       | 25<br>2  | -2      | 0<br>0  | 5<br>0  | -1      | 14<br>7  | 1      | 1       | 5       | - <i>1</i><br>-14 | 3       | 3       | 4      |
| 3       | 5        | 4        | 1       | 1      | -1      | 7       | 4        | 4       | 0       | 2       | 9       | ,<br>18  | 2      | 2       | 6       | -1                | 2       | 4       | 0      |
| 0       | 4        | 9        | 0       | -1     | -3      | ,<br>13 | -2       | 3       | -1      | 1       | 0       | -2       | 0      | 3       | 2       | -1                | 4       | -3      | 4      |
| 4       | 3        | 4        | 3       | 3      | -1      | 4       | 4        | -1      | -1      | 0       | 1       | 1        | 0      | 2       | 3       | -1                | -2      | 1       | 3      |
| 10      | 15       | 13       | 79      | 4      | 29      | 6       | 11       | 11      | 3       | 3       | 8       | 44       | 2      | 7       | 10      | 2                 | 6       | 6       | 0      |
| 2       | 2        | 5        | 1       | 1      | 0       | 0       | -1       | 1       | 1       | 1       | -1      | 2        | 1      | 4       | 4       | -1                | 2       | 4       | 3      |
| 3       | 5        | 5        | 6       | 1      | 2       | 3       | 6        | 5       | 1       | 2       | 4       | 16       | -1     | 2       | 4       | 1                 | 1       | 1       | 2      |
| 9       | 6        | 8        | 5       | 2      | 15      | 87      | 93       | 82      | 35      | 6       | 87      | 95       | 2      | 9       | 8       | 7                 | 4       | 4       | 0      |
| 5       | 10       | 14       | 6       | 2      | 19      | 1       | 5        | 3       | 2       | 1       | 4       | 9        | 3      | 11      | 19      | -1                | 6       | 4       | 8      |
| 3       | 21       | 11       | 7       | 0      | 0       | 3       | 0        | -1      | 1       | -3      | -1      | 6        | 0      | 5       | 7       | 1                 | 4       | 3       | 3      |
| 5       | 7        | 9        | 6       | 1      | 12      | 78      | 95       | 88      | 9       | 4       | 82      | 79       | 1      | 5       | 7       | 0                 | 4       | 4       | 3      |

| 18      | 72       | 70       | 23       | 13      | 30      | 82      | 98       | 90       | 64       | 88     | 41       | 95       | 2       | 8       | 7        | 0        | 26       | 22      | 12       |
|---------|----------|----------|----------|---------|---------|---------|----------|----------|----------|--------|----------|----------|---------|---------|----------|----------|----------|---------|----------|
| 2       | 26       | 31       | 21       | -1      | 1       | 22      | 32       | 13       | 0        | 5      | -1       | 29       | 0       | 2       | 5        | 77       | 55       | 59      | 4        |
| 4       | 12       | 6        | 3        | 9       | 70      | 3       | 11       | 4        | 1        | 3      | 3        | 14       | 3       | 89      | 92       | 42       | 20       | 18      | 4        |
| 7       | 23       | 12       | 4        | 5       | 21      | 78      | 48       | 40       | 7        | 7      | 68       | 100      | 2       | 7       | 14       | -7       | 7        | 11      | 2        |
| 86      | 94       | 79       | 67       | 61      |         | 7       | 2        | 4        | 1        | 3      | 4        | 17       | 1       | 21      | 51       | -1       | 15       | 12      | 33       |
| 10      | 20       | 10       | 1        | 3       | 3       | 4       | 1        | 3        | 0        | 4      | 1        | 5        | 1       | 4       | 7        | 2        | 1        | 2       | 2        |
| 11      | 11       | 15       | 7        | 5       | 10      | 9       | 21       | 10       | 6        | 9      | 6        | 71       | 2       | 10      | 8        | -4       | 5        | 4       | 1        |
| 2       | 6        | 5        | 82       | 1       | 13      | 8       | 6        | 9        | 0        | 4      | 5        | 37       | 0       | 1       | 4        | 3        | -1       | 0       | 0        |
| 7       | 1        | 5        | 3        | 0       | 0       | 2       | 1        | -1       | 0        | -2     | 0        | 1        | 0       | 3       | 2        | -3       | 0        | 1       | 4        |
| 58      | 73       | 73       | 27       | 9       | 54      | 2       | 19       | 8        | 6        | 5      | 12       | 7        | 2       | 9       | 54       | 6        | 0        | 1       | 36       |
| 10      | 13       | 14       | 9        | -1      | 7       | 2<br>77 | 4        | -1       | 1        | 2      | 2        | 8<br>69  | 1       | 3       | 6        | -1       | 8        | 6       | 5        |
| 4       | 6<br>16  | 9<br>14  | 9<br>11  | 1<br>0  | 2<br>6  | 45      | 83<br>56 | 72<br>33 | 3<br>8   | 16     | 15<br>11 | 82       | 2       | -3<br>5 | 0<br>8   | 1<br>-9  | 2<br>6   | 3<br>7  | 5<br>12  |
| 16      | 20       | 10       | 7        | 3       | 3       | 64      | 44       | 35       | 0        | -4     | 4        | 26       | 1       | 6       | 5        | -3<br>-1 | 2        | 0       | 4        |
| 17      | 72       | 52       | 6        | 1       | 18      | 6       | 2        | 2        | 0        | 2      | 2        | 15       | 5       | 16      | 37       | -12      | 12       | 9       | 6        |
| 11      | 27       | 19       | 3        | 6       | 85      | 5       | 14       | 20       | 2        | 5      | 5        | 16       | 5       | 24      | 64       | 49       | 27       | 27      | 8        |
| 6       | 8        | 6        | 10       | 1       | 1       | 5       | 4        | 2        | -1       | -1     | 1        | 2        | 1       | 7       | 8        | 0        | 3        | 4       | 5        |
| -1      | 6        | 8        | 3        | 1       | 12      | 2       | 3        | 0        | 0        | -2     | 3        | 13       | -1      | 15      | 31       | 0        | 1        | 2       | 7        |
| 15      | 40       | 21       | 46       | 3       | 51      | 34      | 57       | 34       | 5        | 18     | 17       | 108      | -1      | 11      | 10       | -8       | 5        | 5       | 4        |
| 7       | 10       | 6        | 6        | 1       | 12      | 1       | 4        | 2        | 4        | 5      | 3        | 4        | 0       | 5       | 3        | -11      | 2        | 2       | 0        |
| 82      | 85       | 81       | 38       | 9       | 52      | 29      | 73       | 36       | 6        | 9      | 6        | 21       | 4       | 17      | 37       | 4        | 22       | 23      | 7        |
| 10      | 12       | 12       | 2        | 1       | 18      | 2       | 9        | 8        | 6        | 6      | 7        | 13       | 2       | 5       | 5        | -2       | 8        | 7       | 2        |
| 6       | 12       | 13       | 5        | 1       | -3      | -3      | -1       | -3       | 1        | 3      | -3       | 6        | 2       | 6       | 8        | -6       | 15       | 15      | 14       |
| 7       | 14       | 18       | 7        | 5       | 3       | 17      | 51<br>-  | 17       | 3        | 7      | 3        | 39       | 2       | 7       | 9        | -4       | 22       | 20      | 7        |
| 83      | 79<br>7  | 31       | 61       | 5       | 40      | 1       | 7        | 4        | 5        | 2      | 4        | 9        | 2       | 18      | 36       | 18       | 33       | 43      | 19       |
| 0       | 7<br>13  | 14       | 5<br>7   | -1<br>1 | -5<br>5 | 8       | -2<br>4  | 0        | -1       | 1<br>1 | -4<br>-1 | 10<br>12 | -2<br>1 | 2<br>5  | 3<br>7   | -5<br>-3 | 1<br>6   | 1       | 2<br>5   |
| 8<br>8  | 4        | 8<br>5   | 9        | 2       | 3       | 4<br>3  | 7        | 2<br>4   | 2<br>3   | 1      | 2        | 12       | 2       | 4       | 5        | -3<br>-1 | 6        | 5<br>4  | 4        |
| 7       | 105      | 87       | 48       | 18      | 38      | 92      | 98       | 92       | 15       | 30     | 12       | 76       | 2       | 11      | 31       | -15      | 12       | 9       | 26       |
| 72      | 86       | 80       | 86       | 10      | 85      | 2       | 6        | 8        | 3        | 7      | 9        | 15       | 3       | 15      | 17       | 6        | 20       | 24      | 47       |
| 0       | 2        | 3        | 1        | 2       | 12      | 1       | 2        | 0        | 2        | 9      | 0        | 6        | 1       | 19      | 57       | -4       | 2        | 2       | 3        |
| 12      | 38       | 26       | 6        | 7       | 7       | 18      | 40       | 12       | 3        | 10     | 9        | 34       | 3       | 8       | 12       | -6       | 9        | 9       | 1        |
| 6       | 24       |          | 3        | 3       | 81      | 5       | 10       | 2        | 1        | 5      | 5        | 15       | 4       | 22      | 61       | 22       | 18       | 18      | 3        |
| 65      | 50       | 47       | 3        | 3       | 19      | 1       | 6        | 3        | 1        | 1      | 3        | 11       | 2       | 15      | 19       | -4       | 8        | 6       | 9        |
| 7       | 4        | 7        | 2        | 0       | 1       | 8       | 6        | 4        | 1        | -1     | 3        | 17       | 1       | 11      | 21       | 9        | 4        | 4       | 7        |
| 10      | 19       | 13       | 3        | 4       | 8       | 6       | 5        | 1        | 5        | 3      | 1        | 16       | 2       | 6       | 8        | 1        | 6        | 7       | 4        |
| 5       | 22       | 27       | 4        | 62      | 74      | 00      | 39       | 23       | 79       | 90     | 4        | 77       | 2       | 95      | 62       | -2       | 16       | 14      | 31       |
| 94      | 97       | 85       | 5        | 16      | 89      | 23      | 65       | 21       | 18       | 53     | 6        | 46       | 5       | 24      | 63       | -2       | 8        | 7       | 12       |
| 6<br>87 | 57<br>97 | 66<br>82 | 70       | 1<br>5  | 6<br>82 | 6       | 25<br>3  | 6        | 1        | 3<br>2 | -2<br>4  | 3<br>14  | 1<br>3  | 7<br>28 | 15<br>17 | -2<br>-4 | 2<br>23  | 1<br>18 | 7        |
| 78      | 85       | 78       | 79<br>46 | 13      | 68      | 3<br>56 | 91       | 6<br>69  | 2<br>4   | 26     | 11       | 50       | 2       | 17      | 50       | 1        | 28<br>28 | 24      | 69<br>22 |
| 6       | 3        | 5        | 3        | 0       | -2      | 0       | 1        | 1        | 2        | 1      | 0        | 8        | 1       | 2       | 5        | -5       | 20<br>7  | 24<br>5 | 2        |
| 10      | 29       | 37       | 4        | 13      | 70      | 8       | 9        | 7        | 25       | 52     | 3        | 28       | 5       | 88      | 64       | 4        | 33       | 28      | 36       |
| -1      | 55       | 52       | 7        | 5       | -5      | 7       | -2       | -2       | -1       | -2     | -4       | 3        | 0       | 8       | 14       | 0        | -3       | -1      | 7        |
| 10      | 41       | 32       | 3        | 3       | 12      | 6       | 9        | 4        | 5        | 5      | 6        | 11       | 2       | 7       | 7        | 0        | 7        | 6       | 2        |
| 1       | 23       | 8        | 8        | 1       | 5       | 3       | 0        | -2       | 3        | 1      | 2        | 5        | 1       | 4       | 5        | -10      | 17       | 21      | 13       |
| 83      | 97       | 81       | 81       | -1      | 26      | 16      | 3        | 1        | 1        | -2     | 6        | 4        | 0       | 19      | 29       | -6       | 1        | 5       | 66       |
| 4       | 59       | 68       | 18       | 8       | 14      | 78      | 97       | 88       | 51       | 82     | 32       | 89       | 2       | 8       | 8        | -22      | 16       | 13      | 4        |
| 4       | 3        | 6        | 5        | 1       | 3       | 0       | 22       | 1        | 1        | 3      | 0        | 5        | 2       | -2      | 0        | -3       | 4        | 4       | 3        |
| 9       | 36       | 55       | 5        | 44      | 93      | 40      | 46       | 28       | 82       | 89     | 13       | 76       | 4       | 90      | 64       | 17       | 38       | 37      | 52       |
| 98      | 98       | 87       | 79       | 2       | 50      | 5       | 1        | 2        | 0        | 0      | -4       | 4        | 2       | 18      | 35       | -6<br>-  | 7        | 11      | 66       |
| 11      | 78       | 53       | 11       | 37      | 36      | 14      | 23       | 10       | 6        | 3      | 6        | 30       | 2       | 46      | 51       | -5       | 15       | 10      | 31       |
| 1       | 1<br>53  | 3<br>27  | 6        | 3<br>1  | 11      | 3       | -3       | 2<br>-1  | -1<br>0  | -1     | 3        | 64       | 0       | 3       | 4        | -3       | 5        | 8       | 10       |
| 0<br>28 | 19       | 51       | 3<br>10  | 1<br>5  | 0<br>3  | 0<br>4  | -2<br>-2 | -1<br>-2 | 0<br>-2  | 0      | -1<br>0  | -4       | 0<br>0  | 10<br>8 | 11<br>20 | -14<br>4 | 1<br>3   | 1<br>3  | 1<br>9   |
| 8       | 33       | 32       | 4        | 5<br>41 | 81      | 38      | 37       | -2<br>28 | -2<br>79 | 86     | 3        | -4<br>75 | 3       | 88      | 83       | -5       | ა<br>40  | ა<br>35 | 9<br>49  |
| 9       | 52       | 85       | 8        | 2       | 19      | 70      | 95       | 88       | 58       | 88     | 38       | 79       | 3       | 7       | 5        | 3        | 14       | 9       | 9        |
| 2       | 8        | 14       | 4        | 3       | 15      | 3       | 5        | 1        | 0        | 3      | 3        | 1        | 2       | 14      | 13       | -1       | 4        | 3       | 10       |
|         |          |          |          |         |         |         |          |          |          |        |          |          |         |         |          |          |          |         |          |

| 5  | 3  | 3  | 4  | 0  | 5  | 6  | 0  | 0  | 0  | 1  | 4  | 14 | 1  | 8  | 9  | -1  | 4  | 3  | 2  |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|----|----|----|
| 82 | 93 | 81 | 28 | 15 | 42 | 42 | 82 | 45 | 3  | 23 | 2  | 22 | 5  | 14 | 26 | -11 | 11 | 11 | 12 |
| 85 | 99 | 95 | 74 | 2  | 53 | 8  | 6  | 3  | 5  | 5  | 4  | 15 | 2  | 58 | 43 | -3  | 13 | 13 | 59 |
| 1  | 19 | 32 | 2  | -2 | -3 | 6  | 6  | 1  | -2 | -3 | -2 | -7 | -2 | 3  | 4  | 8   | 0  | 1  | 5  |
| 20 | 14 | 26 | 3  | -2 | 21 | 8  | 0  | -3 | -3 | -1 | -1 | -5 | -1 | 20 | 46 | 14  | 5  | 5  | 20 |
| 61 | 91 | 87 | 10 | 2  | 38 | 5  | 5  | 3  | 1  | 3  | 6  | 11 | 3  | 59 | 59 | 0   | 41 | 37 | 52 |

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| STE   | STE  | STE  | STE   | STE   | STE  | STE  | STE   | STE   | STE   | STE  | STE   | CK1   | CK1  | CK1   | CK1  | Other   | AGC   | AGC   | AGC  |
|---|--|--|---|---|--|--|---|---|---|--|---|---|--|---|--|---|---|---|--|
| MST1  | MST2   | MST4   | 6 MAP4K4  | YNIW<br>22  | УОТ 39   | PAK1   | PAK3  | PAK2  | PAK5  | PAK6   | MEK1  | CK1a  | CK1-g2   | CK1-g1  | CK1-g3   | PLK1  | GRK7  | GRK6  | PDK1   |
| 4<br>0<br>8<br>8<br>12<br>2<br>84<br>7<br>5<br>13<br>5<br>4<br>6<br>7 | 5<br>-2<br>6<br>5<br>10<br>2<br>82<br>4<br>5<br>7<br>5<br>5<br>5<br>7<br>55<br>5 | 0<br>-5<br>3<br>-2<br>-3<br>-1<br>35<br>0<br>8<br>3<br>-1<br>2<br>-2<br>-1<br>17 | 5<br>26<br>12<br>2<br>4<br>3<br>31<br>14<br>10<br>39<br>24<br>14<br>5<br>6<br>72<br>9 | 5<br>17<br>11<br>4<br>4<br>1<br>25<br>7<br>9<br>29<br>19<br>10<br>3<br>6<br>62<br>7 | 7<br>11<br>78<br>4<br>3<br>6<br>10<br>20<br>7<br>32<br>4<br>8<br>2<br>9<br>4<br>17 | 9<br>7<br>-1<br>8<br>4<br>5<br>8<br>1<br>3<br>5<br>-1<br>0<br>3<br>4<br>5<br>5<br>5<br>5 | 4<br>4<br>0<br>5<br>3<br>1<br>4<br>2<br>3<br>4<br>-3<br>3<br>6<br>4<br>5<br>-1<br>4 | 1<br>0<br>-1<br>3<br>2<br>2<br>17<br>1<br>0<br>2<br>-1<br>-1<br>2<br>1<br>2 | 11<br>1<br>7<br>15<br>-2<br>3<br>50<br>3<br>1<br>5<br>13<br>1<br>10<br>5<br>12<br>-11<br>-2 | 4<br>-7<br>-11<br>-1<br>6<br>-3<br>58<br>0<br>11<br>-3<br>0<br>-3<br>4<br>0<br>1<br>1<br>-9<br>0 | 4<br>1<br>4<br>36<br>44<br>0<br>2<br>3<br>36<br>1<br>2<br>3<br>9<br>4<br>1<br>4 | 4<br>8<br>1<br>0<br>3<br>3<br>3<br>3<br>2<br>2<br>0<br>10<br>4<br>8<br>0<br>4 | 1<br>2<br>-1<br>9<br>3<br>2<br>2<br>1<br>2<br>4<br>2<br>2<br>3<br>3<br>6<br>1<br>3 | 1<br>3<br>-1<br>1<br>4<br>3<br>3<br>1<br>3<br>5<br>3<br>5<br>4<br>4<br>1<br>3 | 0<br>2<br>0<br>-1<br>2<br>3<br>3<br>2<br>2<br>3<br>10<br>4<br>3<br>5<br>2<br>-1<br>4 | 6<br>3<br>2<br>4<br>1<br>2<br>-4<br>1<br>1<br>4<br>3<br>2<br>6<br>39<br>8<br>1<br>3 | 0<br>2<br>-9<br>-2<br>-5<br>5<br>14<br>-1<br>-1<br>16<br>6<br>11<br>4<br>-5<br>3<br>5<br>-8 | 6<br>0<br>-4<br>15<br>13<br>1<br>9<br>0<br>13<br>2<br>9<br>5<br>-5<br>4<br>-1<br>-2 | LYQQ 6 2 6 5 2 4 5 56 2 2 3 1 3 15 4 9 2 2                   |
| 4<br>8<br>57<br>0<br>8<br>55<br>6<br>8<br>13<br>44<br>1<br>49<br>66   | 3<br>8<br>40<br>1<br>8<br>42<br>4<br>8<br>13<br>34<br>1<br>30<br>52              | -1<br>-1<br>-31<br>2<br>-2<br>16<br>5<br>0<br>2<br>15<br>2<br>10<br>0            | 4<br>35<br>12<br>8<br>55<br>88<br>41<br>8<br>10<br>11<br>21<br>17                     | 2<br>30<br>10<br>7<br>55<br>85<br>41<br>9<br>9<br>8<br>17<br>11                     | 5<br>37<br>87<br>1<br>64<br>9<br>9<br>12<br>10<br>73<br>0<br>0                     | 3<br>13<br>11<br>-1<br>5<br>2<br>4<br>8<br>1<br>8<br>0<br>2<br>6                         | 1<br>6<br>7<br>0<br>7<br>-1<br>2<br>6<br>4<br>4<br>0<br>1<br>6                      | 0<br>3<br>4<br>0<br>3<br>-1<br>0<br>2<br>1<br>2<br>2<br>1<br>2              | -3<br>8<br>7<br>-2<br>-1<br>3<br>4<br>-1<br>9<br>3<br>3<br>5                                | 2<br>4<br>-3<br>-4<br>-6<br>1<br>-7<br>2<br>7<br>3<br>-1<br>-4                                   | 30<br>8<br>6<br>0<br>11<br>1<br>4<br>5<br>3<br>4<br>6<br>3<br>7                 | 2<br>44<br>6<br>2<br>5<br>9<br>84<br>2<br>2<br>4<br>86<br>0<br>4              | 1<br>6<br>8<br>-1<br>1<br>19<br>35<br>5<br>2<br>2<br>7<br>1<br>4                   | 2<br>7<br>9<br>-1<br>2<br>6<br>42<br>6<br>3<br>3<br>14<br>1<br>4              | 2<br>9<br>6<br>0<br>1<br>19<br>62<br>5<br>1<br>3<br>20<br>0<br>3                     | 1<br>3<br>101<br>1<br>4<br>-1<br>3<br>3<br>3<br>1<br>3<br>2<br>47                   | -5<br>10<br>10<br>0<br>9<br>3<br>6<br>11<br>4<br>0<br>0<br>5<br>40                          | 7<br>8<br>9<br>0<br>1<br>9<br>3<br>11<br>11<br>6<br>0<br>2<br>4                     | 1<br>8<br>1<br>3<br>40<br>3<br>-1<br>1<br>3<br>1<br>20<br>24 |
| 12<br>3<br>8<br>52<br>6<br>19<br>2<br>9<br>9<br>22<br>13<br>1         | 6<br>4<br>8<br>25<br>7<br>14<br>1<br>8<br>8<br>15<br>10                          | 3<br>3<br>0<br>0<br>1<br>0<br>4<br>0<br>4<br>3                                   | 45<br>13<br>21<br>73<br>11<br>15<br>3<br>5<br>19<br>73<br>76                          | 33<br>12<br>19<br>64<br>13<br>7<br>2<br>5<br>16<br>62<br>66<br>7                    | 12<br>10<br>22<br>1<br>5<br>34<br>2<br>5<br>24<br>9<br>16<br>15                    | 3<br>6<br>3<br>-3<br>10<br>4<br>4<br>1<br>11<br>-4<br>-1<br>-1                           | 2<br>3<br>1<br>-3<br>2<br>4<br>1<br>1<br>9<br>-4<br>-3<br>0                         | 1<br>0<br>0<br>-3<br>0<br>2<br>0<br>2<br>2<br>0<br>-1<br>-1                 | 1<br>0<br>5<br>1<br>6<br>14<br>-2<br>-3<br>10<br>0<br>-2<br>3                               | -5<br>-9<br>-12<br>-8<br>-2<br>9<br>2<br>1<br>-6<br>-2<br>-4<br>2                                | 1<br>4<br>1<br>0<br>6<br>7<br>3<br>1<br>5<br>-3<br>-4<br>0                      | 1<br>1<br>1<br>8<br>1<br>3<br>3<br>0<br>7<br>90<br>4<br>5                     | 2<br>3<br>1<br>2<br>2<br>1<br>2<br>1<br>5<br>3<br>2                                | 2<br>3<br>3<br>2<br>2<br>3<br>3<br>1<br>5<br>6<br>1                           | 0<br>2<br>3<br>4<br>0<br>2<br>2<br>1<br>5<br>11<br>4<br>0                            | 6<br>3<br>5<br>-1<br>2<br>1<br>2<br>1<br>10<br>-1<br>-3<br>-10                      | 2<br>10<br>7<br>-5<br>6<br>5<br>-3<br>-1<br>4<br>-2<br>-1<br>-1                             | 1<br>9<br>78<br>1<br>7<br>8<br>-3<br>4<br>3<br>-2<br>-1<br>-1                       | 3<br>4<br>3<br>32<br>1<br>5<br>5<br>3<br>6<br>2<br>7<br>2    |

| 10       | 7        | -8       | 5        | 6        | 11       | 4      | 3       | 2       | -4        | 1        | 4       | 5       | 4       | 4       | 3       | 4       | 1       | -5       | 4        |
|----------|----------|----------|----------|----------|----------|--------|---------|---------|-----------|----------|---------|---------|---------|---------|---------|---------|---------|----------|----------|
| 4        | 5        | 1        | 6        | 7        | 12       | 9      | 5       | 2       | 1         | 3        | 6       | 4       | 4       | 4       | 3       | 8       | 11      | 8        | 8        |
| 48       | 22       | 1        | 15       | 15       | 17       | 7      | 6       | 3       | -3        | 3        | 12      | 15      | 21      | 21      | 24      | 89      | 63      | 87       | 14       |
| 32       | 22       | 7        | 20       | 18       | 32       | 7      | 7       | 3       | 4         | -5       | 6       | 7       | 13      | 5       | 4       | 3       | 10      | 9        | 2        |
| 3        | 4        | 3        | 7        | 5        | 6        | 5      | 3       | 0       | 3         | -5       | 3       | 4       | 2       | 2       | 1       | 5       | 5       | 12       | 4        |
| 5        | 7        | 0        | 26       | 17       | 8        | 13     | 6       | 2       | -3        | -10      | 4       | 3       | 4       | 5       | 6       | 4       | 2       | 4        | 0        |
| 5        | 6        | 4        | 6        | 6        | 11       | 9      | 8       | 13      | 80        | 76       | 3       | 9       | 4       | 5       | 3       | 5       | 17      | 7        | 8        |
| 4        | 5        | -2       | 7        | 6        | 6        | 10     | 5       | 2       | -5        | -2       | 4       | 6       | 5       | 5       | 3       | 4       | 5       | 4        | 9        |
| -4<br>10 | -3<br>10 | 0<br>-1  | 1<br>19  | -1<br>15 | -1<br>26 | 2<br>1 | -3<br>4 | -2<br>1 | 0<br>3    | -1<br>8  | -3<br>4 | -1<br>4 | -2<br>3 | -2<br>5 | -1<br>3 | -2<br>2 | -5<br>4 | -1<br>9  | 2        |
| 4        | 2        | 1        | 6        | 5        | 8        | 9      | 6       | 2       | -5        | -1       | 5       | 5       | 6       | 5       | 5<br>5  | 11      | 4       | 5        | 1        |
| 11       | 7        | -2       | 15       | 10       | 37       | 9      | 4       | 3       | 6         | -1       | 4       | 6       | 5       | 5       | 4       | 4       | -1      | -1       | 11       |
| 7        | 7        | -4       | 11       | 11       | 18       | 7      | 5       | 3       | 8         | -1       | 4       | 5       | 5       | 6       | 4       | 6       | 7       | 6        | 7        |
| 4        | 3        | 2        | 8        | 4        | 10       | 4      | 1       | 0       | 2         | 3        | 0       | 2       | -1      | -2      | -1      | 0       | -8      | 0        | 2        |
| 1        | 2        | 1        | 29       | 28       | 6        | 7      | 2       | 0       | -3        | -3       | 3       | 7       | 1       | 2       | 1       | 2       | 4       | 3        | 3        |
| 12       | 11       | -4       | 11       | 13       | 11       | 7      | 7       | 3       | -1        | -4       | 6       | 4       | 4       | 5       | 3       | 4       | 5       | 3        | 2        |
| 6        | 7        | -4       | 19       | 19       | 13       | 7      | 3       | 2       | 5         | -5       | 4       | 3       | 5       | 5       | 3       | 3       | 19      | -1       | 0        |
| 19       | 15       | 5        | 38       | 25       | 19       | 7      | 4       | 1<br>2  | 12<br>-1  | 4        | 4       | 14      | 25      | 19      | 20      | 8       | 5       | 5        | 24       |
| 27<br>75 | 22<br>67 | 3<br>11  | 7<br>7   | 6<br>8   | 49<br>46 | 4<br>4 | 3<br>1  | 0       | -1<br>-13 | 11<br>-3 | 2<br>8  | 3<br>9  | 3<br>1  | 3<br>1  | 1<br>1  | 3<br>3  | -6<br>6 | 2<br>1   | 3<br>5   |
| 0        | -1       | 0        | 5        | -1       | 77       | 0      | 0       | 1       | 6         | 6        | 1       | 1       | -2      | -2      | -2      | 1       | -5      | -4       | 5        |
| 7        | 5        | -1       | 47       | 37       | 69       | 9      | 5       | 2       | 7         | 10       | 3       | 7       | 4       | 5       | 4       | 2       | 0       | 3        | 2        |
| 5        | 4        | -4       | 7        | 6        | 5        | 2      | 3       | 2       | -1        | 12       | 3       | 6       | 5       | 5       | 5       | 2       | -9      | -1       | 0        |
| 11       | 11       | 3        | 6        | 4        | 7        | 2      | 1       | 0       | 3         | 4        | 1       | 1       | -2      | -2      | 0       | 1       | -3      | -1       | 3        |
| 3        | 2        | 1        | 13       | 12       | 8        | 7      | 3       | 0       | 6         | -3       | 3       | 3       | 3       | 2       | -1      | 4       | -7      | 0        | 3        |
| 11       | 9        | 0        | 62       | 49       | 2        | 4      | 0       | -2      | -1        | -5       | 2       | 0       | 0       | 1       | 0       | 1       | -1      | -1       | 2        |
| 5        | 5        | -1       | 8        | 7        | 7        | 8      | 4       | 2       | 0         | -12      | 5       | 2       | 4       | 5       | 2       | 4       | 9       | 5        | 1        |
| 18       | 13       | 6        | 34       | 29       | 12       | 9      | 8       | 3       | 16        | 11       | 11      | 6       | 4       | 4       | 5       | 84      | 7       | 5        | 8        |
| 3        | 5<br>-1  | -1<br>-1 | 6<br>17  | 5<br>10  | 16<br>5  | 9<br>5 | 4<br>3  | 2       | 0<br>0    | -8<br>-8 | 2<br>3  | 1<br>2  | 0       | 0       | -2      | 4       | 0<br>1  | 2<br>2   | -3<br>1  |
| 1        | 1        | 4        | 17       | 12       | 63       | -1     | -2      | -3      | -1        | 2        | 2       | -2      | -1      | 0       | 0       | 3<br>-1 | -6      | 0        | 0        |
| 67       | 59       | 3        | 75       | 64       | 17       | 8      | 5       | 2       | 3         | -6       | 7       | 22      | 8       | 7       | 8       | 4       | 16      | 24       | 41       |
| 17       | 11       | -4       | 73       | 65       | 86       | 2      | 1       | 2       | 12        | 1        | 5       | 1       | 1       | 1       | -1      | 0       | 2       | 4        | 22       |
| 54       | 36       | 5        | 66       | 57       | 13       | 8      | 5       | 2       | -3        | -21      | 6       | 10      | 8       | 7       | 5       | 3       | 15      | 15       | 20       |
| 16       | 13       | -5       | 18       | 19       | 9        | 8      | 7       | 3       | -7        | -5       | 6       | 6       | 6       | 6       | 2       | 5       | 5       | 4        | 3        |
| 3        | 2        | 3        | 12       | 11       | 35       | 2      | 1       | -2      | 0         | 0        | 2       | 0       | 1       | 0       | 1       | 69      | 6       | 1        | 3        |
| 4        | 4        | -3       | 5        | 6        | 8        | 8      | 4       | 1       | 4         | -7<br>-7 | 4       | 1       | 4       | 8<br>5  | 3       | 2       | 3       | 1        | -2<br>3  |
| 8 80     | 8<br>77  | 13<br>7  | 14<br>19 | 13<br>13 | 6<br>5   | 3      | 5<br>1  | 0       | 0<br>0    | -7<br>2  | 6<br>43 | 6<br>8  | 4       | 5<br>4  | 3<br>8  | 9<br>1  | 57<br>0 | 30<br>9  | 58<br>58 |
| 6        | 5        | -1       | 9        | 10       | 6        | 6      | 4       | 1       | 1         | -8       | 4       | 2       | 6       | 5       | 3       | 3       | 11      | 7        | 2        |
| 4        | 3        | 2        | 84       | 84       | 51       | 5      | 3       | 1       | 5         | -10      | 4       | 1       | 3       | 3       | 3       | 3       | 10      | 3        | 3        |
| 0        | 0        | 2        | 4        | 3        | 13       | -1     | -1      | 0       | -5        | -7       |         | -1      | 0       | 0       | -1      | 1       | 2       | 0        | 2        |
| 68       | 57       | 13       | 76       | 66       | 7        | 6      | 5       | 1       | 3         | 8        | 5       | 4       | 3       | 3       | 3       | 3       | 3       | 8        | 6        |
| 58       | 52       | -8       | 67       | 59       | 16       | 8      | 6       | 3       | 1         | -3       | 10      | 10      | 8       | 6       | 6       | 4       | 11      | 15       | 60       |
| 5        | 3        | -6       | 2        | -2       | -1       | 4      | 3       | 2       | 6         | 8        | 2       | 3       | 2       | 4       | 2       | 0       | -8      | -2       | 0        |
| 56       | 51       | 10       | 4        | 3        | 14       | -1     | 1       | -1      | -3        | 3        | 3       | 0       | 1       | 2       | 3       | -2      | 4       | 0        | 1        |
| 9        | 9        | 2        | 10       | 9        | 9        | 6      | 5       | 2       | 4         | 0        | 3       | 8       | 5<br>1  | 6       | 4       | 30      | 6<br>4  | 11       | 3        |
| 0<br>8   | -1<br>6  | 0<br>2   | 2<br>15  | 2<br>10  | 3<br>18  | 2<br>3 | 0<br>3  | -2<br>1 | -3<br>4   | 5<br>-1  | 1<br>4  | 11<br>3 | 1<br>3  | 3<br>3  | 2<br>3  | 0<br>3  | 4<br>7  | 0        | -2<br>2  |
| 4        | 4        | -1       | 7        | 4        | 9        | 3      | ა<br>3  | 0       | -2        | -12      | 2       | ა<br>9  | 3<br>2  | ა<br>3  | ა<br>1  | 0       | 7       | 5        | 0        |
| 14       | 11       | -2       | ,<br>26  | 19       | 67       | 5      | 3       | 0       | -6        | -1       | 2       | 4       | 8       | 6       | 6       | 80      | 3       | 0        | 2        |
| 8        | 7        | 0        | 8        | 10       | 19       | 7      | 7       | 2       | 0         | -5       | 6       | 4       | 6       | 5       | 4       | 5       | 16      | 14       | 0        |
| 2        | 3        | 5        | 0        | 1        | 7        | 5      | 2       | 0       | -2        | -1       | 3       | 4       | 3       | 3       | 4       | 1       | -1      | -2       | 1        |
| 4        | 3        | 2        | 3        | 3        | 5        | 8      | 5       | 1       | 4         | 0        | 4       | 11      | 5       | 6       | 7       | 26      | 19      | 27       | 3        |
| 2        | 2        | 0        | 4        | 3        | 4        | 2      | 1       | 2       | -8        | -4       | 1       | 1       | 1       | -1      | 1       | 2       | 2       | -4       | 3        |
| 6        | 7        | 1        | 9        | 8        | 9        | 12     | 10      | 2       | 1         | -7       | 5       | 32      | 6       | 9       | 7       | 7       | 1       | 5        | 4        |
| 5        | 8        | -1<br>-  | 8        | 9        | 78<br>-  | 3      | 3       | 1       | -4        | 0        | 3       | 4       | 3       | 3       | 3       | 4       | 2       | 0<br>= 7 | 1        |
| 13       | 8        | -5       | 6        | 8        | 5        | 7      | 5       | 2       | 0         | 3        | 4       | 7       | 6       | 8       | 6       | 93      | 50      | 57       | 5        |

| 17       | 15      | 2        | 20       | 16       | 9       | 8       | 6      | 2       | 5         | 12       | 5       | 5        | 3       | 4       | 4        | 3       | 0        | 8        | 2       |
|----------|---------|----------|----------|----------|---------|---------|--------|---------|-----------|----------|---------|----------|---------|---------|----------|---------|----------|----------|---------|
| -1       | -1      | 1        | 9        | 7        | 0       | 0       | -1     | -1      | -2        | -10      | 1       | -1       | -1      | 0       | 1        | -1      | -2       | 1        | 1       |
| -1       | -2      | -3       | 0        | -3       | 4       | -3      | -1     | -1      | 2         | -7       | 0       | 6        | 0       | 0       | 1        | 1       | -11      | 1        | -1      |
| 20       | 13      | -1       | 20       | 16       | 24      | 11      | 7      | 5       | -3        | 0        | 9       | 10       | 8       | 8       | 11       | 3       | 16       | 7        | 4       |
| -2       | 0<br>3  | 2<br>0   | 8        | 6<br>3   | 55      | 2       | 0<br>1 | 0<br>-1 | -1<br>-17 | -8<br>-8 | 2       | 3        | 0       | 0       | 0        | 0<br>-1 | 6        | -2<br>-1 | 0       |
| 4        | 3<br>4  | -2       | 6<br>11  | ა<br>11  | 4<br>6  | 3<br>6  | 4      | 1       | -17<br>-2 | -o<br>-8 | 0<br>3  | 5<br>6   | 4       | 2<br>4  | 1        | 5       | 3<br>6   | 4        | 0       |
| 5        | 5       | 2        | 2        | 2        | 7       | 1       | 1      | -1      | -2        | 1        | -1      | 1        | 1       | 1       | 2        | 2       | 0        | 2        | 0       |
| 8        | 9       | 3        | 7        | 7        | 15      | 4       | 4      | 2       | 5         | -3       | 3       | 3        | 5       | 4       | 4        | 5       | 43       | 12       | -1      |
| 8        | 10      | 5        | 11       | 12       | 8       | 4       | 6      | 2       | 0         | -4       | 4       | 15       | 2       | 2       | 2        | 3       | 2        | 2        | 1       |
| 0        | 2       | 0        | 5        | 4        | 7       | 5       | 4      | 0       | -1        | -8       | 0       | 3        | -2      | -3      | -4       | 3       | 2        | 3        | 1       |
| 4        | 4       | 1        | 7        | 6        | 8       | 6       | 3      | -1      | 3         | 0        | 3       | 2        | 3       | 3       | 1        | 4       | 5        | 3        | 3       |
| 2        | 5       | -3       | 1        | 1        | 5       | 5       | 1      | -2      | 3         | -3       | 2       | 1        | 4       | 4       | 3        | -1      | -1       | 1        | -1      |
| 6        | 5       | 0        | 6        | 4        | 12      | 7       | 10     | 3       | 5         | -9       | 5       | 6        | 4       | 5       | 2        | 7       | 0        | 4        | 3       |
| 13       | 11      | -3       | 21       | 16       | 11      | 9       | 6      | 1       | 11        | -8       | 4       | 9        | 12      | 11      | 8        | 14      | 8        | 6        | 3       |
| 5<br>43  | 4<br>42 | -2<br>28 | 5<br>35  | 2<br>21  | 2<br>29 | 1<br>4  | 3<br>5 | 1<br>11 | 2<br>71   | -3<br>77 | 5<br>4  | 6<br>11  | 10<br>5 | 11<br>6 | 27<br>4  | 3<br>8  | -6<br>15 | 18<br>5  | 3<br>4  |
| 7        | 6       | 0        | 57       | 42       | 7       | 2       | 5      | 1       | -1        | -2       | 2       | 1        | 2       | 2       | 1        | 2       | 13       | 11       | 1       |
| 0        | 1       | 12       | 0        | 0        | 2       | 2       | 1      | 0       | -2        | 3        | 3       | -1       | 1       | 2       | 2        | 1       | 50       | -37      | -2      |
| 0        | -2      | 8        | 1        | 0        | 1       | 2       | 0      | -1      | -2        | 0        | 0       | -1       | 0       | 1       | 0        | -1      | 3        | 0        | 1       |
| 10       | 10      | -3       | 11       | 11       | 11      | 7       | 5      | 3       | 6         | 7        | 6       | 9        | 7       | 6       | 6        | 4       | 5        | 6        | 3       |
| 7        | 6       | -2       | 12       | 13       | 8       | 6       | 3      | 2       | 3         | -7       | 13      | 37       | 20      | 24      | 37       | 4       | 1        | 4        | 3       |
| 48       | 34      | 1        | 29       | 24       | 12      | 6       | 3      | 0       | -5        | 1        | 7       | 14       | 4       | 5       | 5        | 2       | 11       | 6        | 3       |
| 2        | 2       | 0        | 6        | 7        | 8       | 2       | 3      | 1       | 2         | -7       | 4       | 31       | 2       | 5       | 10       | 3       | -2       | 1        | 9       |
| 6        | 8       | 5        | 8<br>14  | 9        | 12      | 8       | 6<br>7 | 3       | 2         | -5       | 5       | 21       | 8<br>7  | 13      | 18       | 3       | 2<br>4   | 4        | 0       |
| 11<br>5  | 12<br>6 | 8<br>3   | 11       | 15<br>12 | 10<br>8 | 6<br>10 | 6      | 2<br>2  | -1<br>10  | -11<br>3 | 4<br>9  | 19<br>37 | 12      | 8<br>15 | 11<br>30 | 26<br>7 | 7        | 3<br>5   | 3<br>4  |
| 10       | 9       | 1        | 18       | 16       | 9       | 7       | 4      | 3       | 10        | -2       | 5       | 73       | 6       | 9       | 10       | 2       | 8        | 6        | 3       |
| 1        | 2       | 1        | 6        | 3        | 5       | 4       | 1      | 0       | -4        | 1        | 2       | 1        | 1       | 1       | 2        | 1       | 5        | 5        | 1       |
| 5        | 5       | 0        | 16       | 12       | 83      | 6       | 5      | 2       | 1         | -7       | 5       | 1        | 4       | 5       | 3        | 9       | 2        | 2        | 0       |
| 18       | 8       | -3       | 18       | 14       | 3       | 3       | 2      | 2       | -5        | -3       | 6       | 21       | 20      | 13      | 21       | 92      | 28       | 51       | 3       |
| 5        | 4       | 1        | 6        | 7        | 6       | 12      | 8      | 3       | 4         | -5       | 4       | 13       | 6       | 6       | 6        | 9       | 2        | 7        | 4       |
| 7        | 9       | 1        | 8        | 8        | 7       | 7       | 4      | 1       | 1         | -4       | 3       | 3        | 3       | 2       | 0        | 3       | 9        | 9        | 2       |
| 7<br>5   | 5<br>6  | -1<br>0  | 3<br>26  | 4<br>19  | 1<br>9  | 5<br>11 | 3<br>4 | 2<br>3  | -1<br>3   | 1<br>-5  | 4<br>4  | 5<br>8   | 4<br>5  | 5<br>5  | 4<br>5   | 3<br>5  | 0<br>5   | 0<br>5   | 3<br>10 |
| 0        | 0       | -1       | 6        | 3        | 5       | 2       | 3      | -1      | -7        | -3<br>-8 | 4       | 2        | 0       | 0       | 0        | 3       | 0        | 1        | 10      |
| 8        | 8       | -1       | 10       | 10       | 9       | 7       | 6      | 2       | -3        | -5       | 5       | 5        | 5       | 5       | 4        | 3       | 8        | 3        | 1       |
| -2       | -1      | 2        | 8        | 5        | 6       | -3      | -5     | -1      | -6        | -9       | -5      | -4       | -3      | -3      | -2       | -3      | -4       | -1       | -1      |
| 11       | 9       | 2        | 7        | 7        | 8       | 4       | 2      | 0       | -1        | 5        | 0       | 1        | 0       | 0       | 1        | 0       | -4       | 0        | 1       |
| 4        | 5       | 0        | 10       | 11       | 26      | 8       | 3      | 1       | 3         | -7       | 5       | 3        | 5       | 4       | 2        | 94      | 15       | 10       | 1       |
| 15       | 14      | 4        | 16       | 13       | 21      | 6       | 3      | 1       | 8         | 11       | 0       | 2        | 1       | 0       | 1        | 2       | 11       | 16       | 1       |
| 1        | 1       | 0<br>2   | 1        | 1        | 4       | 4       | 2      | 0       |           | -11<br>1 | 3       | 18       | 3<br>5  | 4<br>7  | 7<br>3   | 2<br>14 | -5<br>0  | 1        | -1      |
| 5<br>16  | 8<br>15 | 3        | 4<br>18  | 6<br>13  | 8<br>14 | 15<br>7 | 9<br>7 | 4<br>13 | 8<br>76   | 1<br>69  | 5<br>4  | 10<br>4  | ວ<br>1  | 1       | -1       | 3       | 9<br>23  | 10<br>11 | 3<br>6  |
| 4        | 4       | -2       | 7        | 7        | 5       | 8       | 3      | 1       | -3        | -2       | 3       | 13       | 11      | 10      | 9        | 3       | 1        | -1       | 2       |
| 5        | 7       | 3        | 7        | 11       | 11      | 2       | -1     | -1      | 4         | 3        | -3      | -4       | -2      | -3      | -3       | -6      | 7        | 6        | 20      |
| -5       | -2      | -46      | 10       | 8        | 7       | 0       | -1     | -1      | -6        | -9       | 3       | 5        | -1      | 0       | 2        | -1      | -1       | 3        | -1      |
| 6        | 5       | -1       | 6        | 6        | 10      | 9       | 3      | 2       | 3         | 5        | 2       | 1        | 3       | 2       | 1        | 3       | 2        | 4        | 4       |
| 4        | 6       | -2       | 9        | 8        | 11      | 7       | 4      | 4       | -2        | 1        | 4       | 3        | 3       | 3       | 1        | 4       | 4        | -1       | 2       |
| 5        | 5       | 3        | 7        | 9        | 7       | 9       | 9      | 4       | 7         | -2       | 8       | 50       | 15      | 21      | 26       | 7       | 3        | 7        | 3       |
| 76<br>10 | 72<br>9 | 7<br>1   | 46<br>10 | 39<br>11 | 9<br>22 | 5<br>9  | 5<br>4 | 2<br>2  | 11<br>-5  | 12<br>1  | 58<br>5 | 3<br>2   | 4<br>5  | 4<br>5  | 6<br>3   | 3<br>14 | 7<br>8   | 22<br>1  | 51<br>3 |
| 8        | 6       | 2        | 13       | 11       | 10      | 9<br>7  | 5      | 2       | 2         | -2       | 5<br>4  | 9        | 5<br>5  | 5<br>4  | 3        | 5       | o<br>20  | 8        | 6       |
| 5        | 3       | -5       | 48       | 36       | 11      | 1       | 1      | 1       | -6        | -3       | 2       | 7        | 4       | 3       | 3        | 2       | 2        | -1       | 10      |
| 3        | 2       | -2       | 7        | 1        | 73      | -1      | 1      | 0       | -2        | 1        | 0       | 2        | 1       | 0       | 0        | 1       | -7       | 0        | 2       |
| 9        | 8       | -1       | 21       | 18       | 70      | 7       | 5      | 2       | 7         | 0        | 6       | 6        | 5       | 5       | 4        | 3       | 8        | 6        | 1       |
| 7        | 7       | -2       | 8        | 10       | 7       | 6       | 5      | 1       | 3         | -6       | 4       | 18       | 8       | 10      | 15       | 3       | 3        | 1        | 0       |
| 8        | 8       | 2        | 15       | 15       | 8       | 1       | 1      | -1      | 4         | 3        | 2       | 0        | -1      | 0       | -1       | -1      | 11       | 11       | 1       |

| 15     | 13      | 0        | 40       | 28      | 14       | 6       | 3       | 1       | 0       | -6       | 7       | 10      | -1      | 0      | 1       | 5       | 8         | 12       | 6       |
|--------|---------|----------|----------|---------|----------|---------|---------|---------|---------|----------|---------|---------|---------|--------|---------|---------|-----------|----------|---------|
| 23     | 18      | -1       | 40       | 30      | 15       | 7       | 5       | 2       | 2       | 7        | 6       | 6       | 4       | 4      | 3       | 6       | 0         | 6        | 6       |
| -4     | -3      | 12       | 10       | 6       | 2        | -4      | -3      | -2      | 16      | -2       | -5      | -1      | -1      | -2     | 0       | -3      | -4        | -3       | 0       |
| 9      | 5<br>10 | 3<br>-1  | 3<br>44  | 3<br>36 | 58<br>28 | 3<br>-1 | 3<br>2  | 0       | -2<br>5 | 1<br>2   | 1<br>2  | 1<br>2  | 0<br>1  | 1<br>2 | 3<br>1  | 1<br>1  | 16<br>4   | 3<br>4   | 1<br>10 |
| 4      | 7       | 5        | 12       | 12      | 32       | 1       | 3       | 1       | 0       | -4       | 4       | 3       | 4       | 4      | 4       | 18      | 3         | 0        | 0       |
| 7      | 7       | -3       | 17       | 17      | 16       | 2       | 0       | -1      | 11      | 3        | -1      | 1       | -5      | -4     | -3      | -1      | 6         | 8        | 1       |
| 6      | 5       | -3       | 5        | 4       | 6        | 2       | 4       | 2       | 3       | 9        | 2       | 3       | 2       | 3      | 0       | 2       | -10       | -2       | 3       |
| 1      | 1       | -2       | 8        | 6       | 5        | 10      | 5       | 1       | 4       | -8       | 5       | 3       | 2       | 2      | 1       | 3       | 2         | 3        | 4       |
| 9      | 11      | 0        | 25       | 22      | 40       | 7       | 5       | 3       | -1      | -5       | 5       | 11      | 4       | 4      | 1       | 4       | 5         | 5        | 2       |
| 8      | 8       | 5        | 13       | 9       | 14       | 7       | 5       | 3       | 0       | -5       | 5       | 8       | 6       | 4      | 5       | 6       | 8         | 1        | 3       |
| 76     | 70      | 7        | 52       | 41      | 12       | 11      | 5       | 3       | -1      | -15      | 38      | 6       | 9       | 11     | 13      | 4       | 18        | 16       | 27      |
| 8      | 6       | 1        | 9        | 5       | 9        | 5       | 4       | 2       | 6       | 2        | 3       | 4       | 3       | 2      | 2       | 2       | 1         | 7        | 2       |
| 11     | 7<br>3  | -4<br>-1 | 26<br>4  | 17<br>3 | 9<br>4   | 6<br>-1 | 2       | 2<br>-2 | -2<br>4 | 3<br>-2  | 4<br>2  | 6<br>0  | 4<br>1  | 6<br>1 | 6<br>0  | 1<br>3  | -8<br>-1  | -5<br>2  | 2<br>1  |
| 5      | 3       | -1       | 4        | 4       | 9        | 2       | 4       | 0       | 2       | 7        | 2       | 3       | 2       | 2      | 1       | 3       | 8         | 1        | 3       |
| 8      | 7       | -5       | 11       | 9       | 13       | 10      | 10      | 3       | 8       | -11      | 4       | 10      | 4       | 4      | 1       | 7       | 2         | 6        | 2       |
| 6      | 4       | 2        | 8        | 9       | 8        | 4       | 0       | 0       | -6      | -3       | 1       | 0       | 1       | 0      | 0       | 1       | 8         | 3        | -1      |
| 77     | 73      | 11       | 78       | 76      | 8        | 3       | 3       | 1       | 0       | -7       | 5       | 3       | 0       | -2     | 0       | 3       | 7         | 3        | 19      |
| 7      | 9       | 0        | 11       | 6       | 18       | 7       | 6       | 4       | 5       | 1        | 6       | 6       | 6       | 7      | 5       | 6       | 2         | 1        | 1       |
| 8      | 6       | 0        | 7        | 6       | 5        | 6       | 2       | 1       | -1      | -7       | 3       | 0       | 2       | 1      | 0       | 3       | 5         | 1        | 1       |
| 3      | 4       | 3        | 2        | 3       | 56       | -2      | -1      | -1      | 0       | -4       | 2       | 1       | 0       | 1      | 1       | 3       | 4         | 1        | 3       |
| 9      | 11      | 0        | 8        | 12      | 7        | 8       | 7       | 3       | 2       | -5       | 9       | 31      | 9       | 13     | 18      | 4       | 3         | 2        | 1       |
| 8      | 7       | 0        | 20       | 18      | 75       | 7       | 6       | 1       | 4       | -3       | 5       | 8       | 2       | 2      | 0       | 3       | 9         | 7        | 2       |
| 4      | 3       | 3        | 59       | 50      | 16       | 3       | 2       | 0       | 10      | 5        | 2       | 6       | -1      | -1     | -2      | 1       | 1         | -2       | 6       |
| 3      | 6       | 1        | 3        | 5       | 7<br>11  | 9       | 9       | 3<br>1  | 3<br>7  | -1<br>0  | 3       | 22<br>7 | 3       | 3      | 2       | 7<br>7  | 1         | 7        | 1       |
| 8<br>9 | 8<br>8  | 0<br>5   | 23<br>12 | 19<br>9 | 17       | 11<br>7 | 5<br>3  | 2       | ,<br>16 | -8<br>2  | 2<br>5  | 7<br>24 | 8<br>3  | 6<br>3 | 5<br>3  | 2       | 8<br>-1   | 4<br>5   | 3<br>3  |
| 6      | 7       | 3        | 10       | 10      | 14       | 11      | 7       | 4       | -12     | 1        | 7       | 5       | 6       | 6      | 4       | 5       | 11        | 11       | 0       |
| 8      | 8       | -1       | 60       | 47      | 14       | 6       | 6       | 2       | -4      | -1       | 5       | 6       | 14      | 17     | 25      | 4       | 14        | 15       | -1      |
| 8      | 8       | -1       | 9        | 7       | 7        | 4       | 5       | 1       | 3       | -4       | 6       | 6       | 6       | 6      | 6       | 2       | 5         | 4        | 1       |
| 12     | 11      | 3        | 5        | 5       | 19       | 3       | 3       | 2       | 3       | 3        | 5       | 2       | 4       | 4      | 4       | 2       | 4         | 12       | 1       |
| 7      | 6       | -1       | 10       | 8       | 6        | 4       | 4       | 2       | 4       | -5       | 3       | 6       | 10      | 13     | 17      | 2       | -1        | 2        | 3       |
| 3      | 4       | -1       | -1       | 1       | 7        | 3       | 3       | 1       | 0       | -6       | 2       | 2       | 3       | 2      | 1       | 1       | 1         | 1        | 0       |
| 16     | 13      | 1        | 70       | 60      | 16       | 9       | 5       | 2       | 12      | 13       | 4       | 3       | 5       | 4      | 5       | 3       | 5         | 8        | 4       |
| 1      | -1      | 0        | 6        | 6       | 6        | 2       | 0       | 0       | -11     | -7       | 1       | 7       | 6       | 6      | 5       | 3       | 11        | -1       | 1       |
| 1      | -2<br>5 | 0        | -1<br>5  | -2<br>3 | -1<br>28 | -3<br>4 | -4<br>3 | -5<br>1 | -2<br>8 | -9<br>1  | -4<br>3 | -3<br>1 | -3<br>1 | -3     | -1<br>3 | -1<br>1 | -9<br>-5  | -2<br>1  | -1      |
| 3      | 5       | -1       | 5        | 5<br>5  | 12       | 5       | 3       | -1      | 2       | -3       | 3       | 2       | 2       | 3      | 2       | 0       | 2         | 2        | 1       |
| 5      | 4       | 1        | 11       | 8       | 7        | 0       | 3       | 2       | 2       | -4       | 3       | 15      | -1      | -1     | -2      | 2       | -6        | -3       | 4       |
| 5      | 5       | 0        | 2        | 4       | 8        | 14      | 9       | 4       | 2       | -1       | 5       | 16      | 6       | 7      | 8       | 7       | 2         | 4        | 1       |
| 87     | 84      | 6        | 40       | 33      | 9        | 8       | 6       | 3       | 3       | 4        | 16      | 8       | 9       | 10     | 16      | 11      | 8         | 9        | 51      |
| 6      | 2       | -1       | 3        | 4       | 4        | 6       | 4       | 1       | 2       | -5       | 3       | 3       | 2       | 2      | 1       | 3       | -3        | -2       | 1       |
| 0      | 1       | 2        | 38       | 22      | 2        | 2       | 2       | 0       | -4      | -2       | 2       | 58      | 7       | 8      | 15      | 1       | 3         | -1       | 1       |
| 7      | 6       | -2       | 10       | 10      | 14       | 7       | 3       | 3       | 2       | -6       | 2       | 1       | 3       | 2      | 2       | 3       | 3         | 2        | 4       |
| 0      | -1      | 2        | 40       | 33      | 41       | -1      | 1       | 0       | -1      | 2        | 2       | 40      | 2       | 2      | 4       | 3       | -2        | 2        | 3       |
| 4      | 7       | -2       | 8        | 9       | 43       | 5       | 2       | 1       | 0       | -3       | 4       | 3       | 4       | 3      | 3       | 68      | 2         | 0        | -1      |
| 5      | 8       | 2<br>2   | 4<br>3   | 7<br>1  | 9<br>12  | 11<br>4 | 9       | 2<br>0  | 1       | -4<br>2  | 5<br>3  | 30      | 7       | 10     | 9<br>4  | 9<br>3  | 2<br>-2   | 7<br>1   | 1       |
| 2<br>7 | 0<br>6  | -1       | 3<br>23  | 13      | 7        | 4<br>7  | 2<br>4  | 2       | 2<br>9  | -2<br>-4 | ა<br>5  | 3<br>3  | 2<br>3  | 2<br>3 | 4<br>5  | 3       | -2<br>-10 | -3       | 8<br>4  |
| 7      | 6       | -10      | 5        | -1      | 7<br>29  | 4       | 4       | 1       | 4       | 8        | 3       | 2       | 2       | 3      | 1       | 2       | -10       | -3<br>-6 | 5       |
| 4      | 3       | -3       | 6        | 8       | 11       | 4       | 3       | 2       | -4      | -4       | 3       | 5       | 3       | 3      | 2       | 2       | 2         | 0        | 0       |
| 13     | 9       | 2        | 14       | 15      | 10       | 7       | 6       | 2       | 7       | -6       | 6       | 4       | 6       | 5      | 5       | 4       | 16        | 15       | 1       |
| 7      | 6       | 9        | 62       | 48      | 10       | 6       | 6       | 2       | 4       | -1       | 4       | 15      | 9       | 11     | 17      | 7       | 8         | 6        | 5       |
| 4      | 4       | 1        | 2        | 1       | 53       | 3       | 3       | 1       | 9       | -4       | 2       | 1       | -2      | -3     | -5      | 1       | -4        | -6       | 2       |
| 17     | 20      | 9        | 84       | 73      | 8        | 12      | 6       | 1       | 10      | -10      | 4       | 7       | 6       | 5      | 3       | 10      | 16        | 18       | 5       |
| 0      | -1      | -5       | 3        | 5       | 7        | 2       | 1       | 0       | 1       | -4       | 1       | 58      | 1       | 2      | 5       | 1       | -1        | 2        | 0       |
| 2      | 0       | 2        | 4        | 2       | 7        | 2       | 0       | -1      | 3       | 6        | 21      | 12      | 7       | 8      | 21      | 47      | 7         | 2        | 1       |

| 10      | 12      | 16       | 75       | 57       | 6       | -2      | -2      | -2      | -3       | -11              | -1      | -1      | -1      | -1      | 1       | 4       | 23               | 11      | -1       |
|---------|---------|----------|----------|----------|---------|---------|---------|---------|----------|------------------|---------|---------|---------|---------|---------|---------|------------------|---------|----------|
| 10      | 10      | 0        | 14       | 15       | 7       | 10      | 5       | 4       | 2        | -1               | 5       | 6       | 4       | 4       | 3       | 4       | 6                | 10      | 3        |
| 6       | 3       | 1        | 24       | 22       | 7       | -2      | 1       | 0       | 17       | 0                | 0       | 3       | 2       | 1       | 0       | 4       | -7               | 0       | 2        |
| 4       | 4       | -1       | 1        | 2        | 7       | 5       | 4       | 2       | 14       | -8               | 5       | 4       | 3       | 3       | 3       | 2       | 7                | -3      | 1        |
| 7       | 8       | 8        | 12       | 12       | 30      | 1       | 5       | 1       | 11       | 16               | -1      | 5       | 1       | 1       | 2       | -2      | 12               | 13      | 1        |
| 7       | 8       | 3        | 8        | 11       | 14      | 1       | 0       | 0       | 9        | 1                | -2      | -1      | -2      | -2      | 0       | -3      | 11               | 6       | 0        |
| 9       | 10      | -2       | 21       | 17       | 11      | 7       | 5       | 2       | 6        | 6                | 3       | 5       | 5       | 5       | 3       | 4       | 20               | 8       | 2        |
| 3       | 0       | 0        | 3        | 2        | 9       | 7       | 0       | 0       | -9       | -14              | 2       | 0       | 0       | 0       | -1      | 3       | -3               | 1       | -2       |
| 8       | 7       | 3        | 35       | 26       | 12      | 6       | 2       | 1       | -8       | -5               | 3       | 2       | 0       | -1      | 1       | 3       | 10               | 0       | 3        |
| 7       | 8<br>6  | -3<br>-1 | 14<br>11 | 12<br>9  | 10<br>5 | 12<br>1 | 6<br>2  | 2       | -2<br>-1 | -2<br>-7         | 6<br>2  | 13<br>7 | 16<br>2 | 18<br>3 | 32<br>0 | 38<br>1 | 13<br>7          | 13<br>4 | 0        |
| 6<br>1  | 2       | -1       | 46       | 30       | 4       | 7       | 3       | 0       | 3        | - <i>1</i><br>-2 | 3       | 30      | 4       | 4       | 5       | 1       | 2                | 2       | 2<br>1   |
| 2       | 4       | 2        | 5        | 6        | 4       | 6       | 2       | 0       | -1       | -5               | 0       | 0       | 0       | 1       | -1      | 2       | 0                | 1       | 1        |
| 26      | 21      | -2       | 78       | 70       | 10      | 9       | 5       | 2       | -9       | 2                | 5       | 22      | 13      | 11      | 14      | 5       | 9                | 12      | 24       |
| 3       | 3       | -4       | 5        | 6        | 5       | 9       | 3       | 1       | -3       | -9               | 3       | 3       | 3       | 3       | 2       | 5       | 1                | 4       | 5        |
| 6       | 6       | -2       | 10       | 8        | 13      | 9       | 7       | 4       | 3        | -12              | 6       | 9       | 5       | 5       | 2       | 8       | 4                | 6       | 4        |
| 4       | 5       | 2        | 6        | 4        | 8       | 5       | 3       | 2       | 0        | -4               | 2       | 16      | 2       | 2       | 1       | 5       | 2                | 5       | 3        |
| 4       | 3       | 3        | 6        | 8        | 4       | 6       | 3       | 1       | -1       | -6               | 4       | 49      | 3       | 4       | 6       | 2       | 6                | 6       | 3        |
| 12      | 6       | 13       | 71       | 65       | 26      | 5       | 3       | 2       | 0        | 3                | 1       | 7       | 18      | 3       | 6       | 3       | -4               | -6      | 15       |
| 5       | 7       | 0        | 15       | 10       | 11      | 1       | 3       | 1       | -2       | -5               | 2       | 1       | 1       | 2       | 1       | 3       | 9                | 10      | 0        |
| 8       | 7       | 1        | 10       | 9        | 8       | 7       | 4       | 1       | -5       | -1               | 5       | 4       | 6       | 5       | 5       | 3       | 9                | 2       | 1        |
| 4       | 6       | 0        | 5        | 7        | 13      | 4       | 2       | -1      | -1       | -4               | 0       | 0       | 3       | 3       | 2       | 1       | 1                | -3      | -3       |
| 8       | 7       | 2        | 12       | 11       | 5       | 3       | 1       | 0       | 4        | -6               | 3       | 73      | 5       | 9       | 10      | 1       | 6                | 2       | 3        |
| 5       | 6       | 11       | 8        | 8        | 8       | 7       | 4       | 2       | 3        | -20              | 4       | 27      | 4       | 5       | 7       | 4       | 8                | 6       | 1        |
| 6       | 5       | 2        | 4        | 4        | 4<br>7  | 4       | 1       | 0       | 1        | 0                | 2       | -1      | 0       | 2       | 1       | -1      | 4                | 2       | 2        |
| 4<br>-4 | 4<br>-5 | -1<br>1  | 18<br>2  | 14<br>-1 | -6      | 8<br>-1 | 4       | 2<br>-3 | -8<br>-2 | -7<br>-15        | 5<br>-2 | 42      | 5<br>-3 | 5       | 9<br>-1 | 4<br>0  | 5<br>-7          | 0<br>-2 | 2<br>-1  |
| 2       | 4       | -2       | 0        | 2        | 7       | 1       | -3<br>3 | 0       | 3        | -13<br>-2        | 3       | -6<br>2 | 3       | -2<br>3 | 3       | -1      | 1                | 1       | -1<br>-1 |
| 72      | 68      | 20       | 70       | 64       | ,<br>18 | 3       | 2       | 1       | -4       | -2<br>-2         | 6       | 3       | 1       | 2       | 1       | 2       | 9                | 5       | 24       |
| 10      | 9       | 0        | 15       | 16       | 12      | 6       | 5       | 3       | 1        | -8               | 4       | 8       | 5       | 5       | 5       | 3       | 9                | 10      | 2        |
| 2       | 2       | 2        | 8        | 6        | 3       | 1       | 0       | 0       | 9        | 3                | 1       | 4       | 3       | 1       | 2       | 2       | 17               | 0       | 1        |
| 4       | 5       | -3       | 5        | 7        | 8       | 4       | 4       | 1       | 1        | -7               | 4       | 10      | 5       | 6       | 4       | 3       | 2                | 2       | -1       |
| 23      | 22      | -1       | 14       | 14       | 20      | 2       | 4       | 2       | 6        | 12               | 3       | 2       | 1       | 2       | 1       | 5       | 8                | 18      | 1        |
| 4       | 3       | -2       | 21       | 18       | 64      | 2       | 0       | 0       | -13      | 0                | 2       | 9       | 1       | 2       | 0       | 1       | 2                | -3      | 3        |
| 4       | 4       | -3       | 3        | 3        | 6       | 3       | 2       | 1       | -1       | -6               | 3       | 2       | 3       | 3       | 2       | 0       | 6                | -1      | -2       |
| 24      | 15      | -4       | 49       | 35       | 4       | 6       | 4       | 1       | 3        | 7                | 2       | 4       | 2       | 3       | 2       | 2       | -6               | 4       | 4        |
| 3       | 4       | 10       | 6        | 6        | 34      | 6       | 3       | 0       | -1       | -4               | 4       | 9       | 2       | 2       | 2       | 2       | 26               | 6       | 3        |
| 8       | 9       | 2        | 10       | 8        | 16      | 11      | 6       | 3       | 2        | -4               | 5       | 4       | 5       | 5       | 2       | 5       | 3                | 5       | 3        |
| 7       | 5       | -3<br>-3 | 8        | 8        | 15<br>- | 6<br>7  | 5       | 2       | -3       | 2                | 3<br>4  | 5       | 5       | 5       | 3       | 3<br>4  | 2                | -1<br>4 | 4        |
| 6<br>4  | 5<br>3  | -s<br>1  | 6<br>6   | 7<br>5   | 5<br>7  | 6       | 5<br>1  | 3<br>0  | 1<br>8   | 6<br>-2          | 1       | 43<br>0 | 4<br>0  | 5<br>0  | 5<br>1  | 4       | -2<br>-7         | 1<br>-5 | 3<br>2   |
| 9       | 8       | 0        | 10       | 10       | 8       | 3       | 4       | 2       | 8        | 7                | 3       | 7       | 9       | 6       | 6       | 2       | - <i>1</i><br>-2 | 3       | 3        |
| 9       | 9       | 0        | 17       | 14       | 67      | 9       | 7       | 4       | -12      | 3                | 8       | 4       | 6       | 6       | 5       | 4       | 10               | 9       | 2        |
| 5       | 4       | -3       | 9        | 7        | 57      | 6       | 5       | 2       | 5        | -4               | 4       | 5       | 4       | 5       | 4       | 2       | 1                | -1      | 2        |
| 5       | 6       | 1        | 5        | 5        | 7       | 6       | 4       | 1       | -3       | -26              | 4       | 5       | 1       | 2       | -1      | 5       | 9                | 5       | 1        |
| 11      | 9       | -3       | 34       | 21       | 7       | 5       | 4       | 1       | 1        | 5                | 3       | 4       | 4       | 4       | 3       | 5       | 2                | 2       | 2        |
| 6       | 3       | -1       | 21       | 13       | 8       | 6       | 4       | 2       | -6       | -2               | 7       | 29      | 5       | 4       | 7       | 2       | -8               | -3      | 5        |
| 3       | 3       | 2        | 5        | 5        | 7       | 4       | 1       | 0       | -1       | -7               | 2       | 2       | 1       | 1       | -1      | 3       | 4                | 4       | 2        |
| 2       | 2       | -4       | 4        | 5        | 7       | 8       | 3       | 2       | -3       | -7               | 3       | 6       | 3       | 3       | 2       | 2       | 3                | 1       | 2        |
| -1      | 0       | 1        | 3        | 2        | 2       | -4      | -1      | -2      | -17      | 0                | -2      | 0       | -1      | -1      | -1      | 0       | 0                | 3       | -3       |
| 3       | 1       | 1        | -1       | -2       | 4       | 1       | -1      | -2      | -1       | 3                | -1      | -2      | -1      | -1      | 0       | 0       | -2               | 2       | -2       |
| 9       | 13      | 2        | 15       | 14       | 95      | 10      | 5       | 2       | 4        | -4               | 5       | 4       | 4       | 4       | 2       | 4       | 9                | 8       | 2        |
| 2       | 2       | -2<br>1  | 7<br>-1  | 6<br>-1  | 3<br>6  | 6       | 2<br>1  | -1<br>0 | -1<br>-5 | -6               | 2<br>2  | 60      | 2       | 3<br>2  | 4<br>1  | 1<br>3  | 3<br>3           | 2<br>2  | 0        |
| 4 2     | 3       | -1       | 7        | -1<br>5  | ь<br>14 | 2<br>7  | 3       | 1       | -5<br>-2 | 11<br>-3         | 3       | -3<br>5 | 2<br>3  | 3       | 2       | 3       | 3                | 3       | -3<br>3  |
| 7       | ა<br>6  | -1<br>-2 | ,<br>11  | 9        | 61      | 10      | ა<br>6  | 2       | 5        | -s<br>-5         | 3<br>4  | 5<br>7  | ა<br>5  | 5<br>5  | 4       | 95      | 5<br>5           | 3       | 3        |
| -1      | 1       | 3        | 54       | 38       | 1       | -1      | 0       | 0       | 0        | -3<br>-1         | 2       | 10      | 1       | 2       | 3       | 0       | 1                | 0       | 2        |
| 4       | 2       | 3        | 11       | 8        | 6       | 4       | 2       | 1       | 10       | 0                | 2       | 4       | 3       | 2       | 1       | 2       | 1                | 2       | 2        |
|         |         |          |          |          |         |         |         |         |          |                  |         |         |         |         |         |         |                  |         |          |

| 5      | 3       | 8        | 73       | 65       | 42      | 10     | 4      | 3      | -3  | -1      | 12     | 73     | 62     | 59     | 76     | 29     | 6       | 2       | 1      |
|--------|---------|----------|----------|----------|---------|--------|--------|--------|-----|---------|--------|--------|--------|--------|--------|--------|---------|---------|--------|
| 0      | -1      | 0        | 17       | 14       | 24      | 3      | 0      | -1     | -7  | 1       | 2      | 16     | 3      | 3      | 3      | 2      | 3       | -1      | 2      |
| 19     | 20      | 15       | 85       | 75       | 11      | 10     | 5      | 2      | 11  | -7      | 6      | 7      | 6      | 7      | 5      | 17     | 28      | 43      | 6      |
| 4      | 2       | -1       | 9        | 9        | 14      | 8      | 7      | 2      | -8  | -6      | 5      | 6      | 5      | 6      | 5      | 6      | 23      | 7       | 4      |
| 61     | 28      | 13       | 59       | 42       | 68      | 6      | 5      | 2      | 18  | -8      | 11     | 3      | 2      | 3      | 1      | 3      | 0       | 2       | 17     |
| 2      | 0       | 1        | 7        | 8        | 3       | 7      | 1      | 0      | 2   | -7      | 2      | 7      | 2      | 2      | 1      | 2      | 2       | 1       | 3      |
| 12     | 10      | 1        | 16       | 14       | 24      | 5      | 5      | 1      | 1   | -2      | 4      | 7      | 4      | 4      | 3      | 2      | 8       | 10      | 2      |
| 8      | 17      | 4        | 18       | 12       | 97      | -1     | -1     | -1     | 6   | 1       | -1     | 1      | 0      | 0      | -2     | 0      | -1      | -1      | 0      |
| 4      | 3       | 0        | 7        | 6        | 0       | -3     | -1     | -2     | 1   | -7      | 2      | -1     | 0      | 0      | 1      | -1     | -1      | 2       | 0      |
| 66     | 63      | 1        | 67       | 63       | 94      | 6      | 5      | 0      | 9   | 11      | 3      | 3      | -2     | -1     | 0      | 95     | 13      | 18      | 8      |
| 4      | 4       | -1       | 59       | 46       | 13      | 6      | 3      | 2      | -2  | 0       | 4      | 1      | 3      | 4      | 3      | 4      | 6       | 4       | 3      |
| 2      | 3       | 3        | 14       | 13       | 12      | 6      | 2      | -1     | -1  | -17     | 3      | 1      | -1     | -1     | -2     | 4      | 14      | 3       | 2      |
| 6      | 5       | 1        | 58       | 56       | 20      | 4      | 2      | 1      | -2  | -2      | 4      | 4      | 3      | 4      | 5      | 1      | 1       | -2      | 2      |
| 6      | 6       | 2        | 3        | 4        | 10      | 3      | 5      | 0      | 1   | -6      | 0      | 5      | 1      | 2      | 0      | 4      | -1      | 0       | 0      |
| 10     | 8       | -5       | 21       | 14       | 12      | 5      | 5      | 3      | 1   | 7       | 9      | 16     | 10     | 8      | 9      | 2      | 7       | 2       | 5      |
| 67     | 65      | 21       | 76       | 62       | 15      | 4      | 3      | 1      | 5   | 0       | 9      | 5      | 5      | 4      | 6      | 43     | 55      | 80      | 10     |
| 2      | 0       | 1        | 32       | 18       | 10      | 2      | 1      | 0      | 4   | 3       | 1      | 3      | 1      | 1      | 0      | 1      | -8      | -2      | 3      |
| 3      | 1       | -1       | 18       | 16       | 39      | 3      | 1      | 0      | -6  | -1      | 1      | -3     | 1      | 3      | 1      | 92     | 0       | 1       | -2     |
| 2      | 0       | 0        | 10       | 7        | 55      | -2     | 2      | 0      | -5  | -2      | 2      | 3      | 3      | 4      | 1      | 2      | 3       | -1      | 1      |
| 5      | 5       | 1        | 33       | 22       | 9       | 3      | 3      | -1     | -5  | -5      | 2      | 0      | 1      | 2      | 3      | 1      | 10      | 10      | 1      |
| 13     | 11      | 7        | 68       | 55       | 34      | 8      | 6      | 2      | 6   | -9      | 7      | 11     | 10     | 7      | 7      | 3      | 5       | 2       | 9      |
| 7      | 8       | 1        | 60       | 44       | 11      | 5      | 5      | 1      | 2   | -4      | 4      | 5      | 6      | 7      | 7      | 3      | 13      | 16      | 0      |
| 10     | 10      | 7        | 11       | 10       | 8       | 8      | 5      | 1      | -6  | -8<br>- | 6      | 2      | 2      | 3      | 2      | 5      | 10      | 1       | 4      |
| 5      | 5       | -2       | 52       | 36       | 12      | 6      | 5      | 2      | -4  | -5      | 13     | 68     | 20     | 20     | 29     | 4      | 4       | 2       | 1      |
| 11     | 8       | 0        | 6        | 5        | 50      | 6      | 3      | 2      | 5   | 3       | 3      | 4      | 2      | 3      | 3      | 2      | -3      | 5       | 1      |
| 0      | -27     | -2       | 6        | 4        | 3       | 4      | 1      | 1      | -14 | -9<br>- | 2      | 4      | 3      | 3      | 2      | 2      | 3       | -2      | 0      |
| 5      | 5       | -1       | 70       | 56       | 9       | 6      | 3      | 1      | -2  | -5<br>- | 3      | 7      | 3      | 3      | 3      | 2      | 7       | 1       | 6      |
| 4      | 5       | -3       | 6        | 8        | 9       | 8      | 4      | 3      | 0   | -7      | 4      | 10     | 5      | 6      | 5      | 5      | 5       | 3       | 0      |
| 9      | 7       | -1       | 76       | 65       | 48      | 9      | 5      | 3      | 0   | 4       | 5      | 12     | 7      | 11     | 7      | 5      | -3      | -4      | 5      |
| 19     | 18      | 0        | 10       | 7        | 91      | 5      | 4      | 4      | 0   | 11      | 7      | 3      | 2      | 4      | 4      | 4      | 22      | 13      | 5      |
| 7<br>7 | 5       | 4        | 2        | 0        | 1       | 4      | 2<br>7 | 1      | -1  | -1      | 2      | 2      | 3      | 4      | 5      | 25     | -6      | -3      | 0      |
| 40     | 4<br>37 | -2<br>36 | 32<br>92 | 26<br>82 | 10<br>4 | 6<br>6 | ,<br>5 | 2<br>2 | 2   | -6<br>8 | 6<br>6 | 8<br>4 | 5<br>4 | 5<br>5 | 4<br>4 | 5<br>8 | 9<br>60 | 4<br>46 | 2<br>8 |
| 10     | 8       | -3       | 59       | 42       | 12      | 8      | 5      | 2      | 9   | 9       | 2      | 8      | 4      | 5      | 4      | 3      | 3       | 3       | 7      |
| 4      | 5       | -3<br>-1 | 26       | 17       | 7       | 9      | 3      | 0      | -1  | 0       | 4      | 6      | 3      | 3      | 2      | 5      | 2       | 4       | 4      |
| 6      | 6       | -4       | 74       | 65       | 20      | 8      | 6      | 2      | 0   | -5      | 4      | 6      | 5      | 6      | 5      | 3      | 4       | 3       | 1      |
| 25     | 10      | 3        | 68       | 55       | 12      | 7      | 6      | 2      | 27  | 4       | 16     | 58     | 41     | 42     | 59     | 65     | 10      | 14      | 2      |
| 42     | 42      | 14       | 88       | 85       | 40      | 8      | 6      | 4      | 4   | 0       | 7      | 6      | 3      | 4      | 5      | 9      | 27      | 41      | 76     |
| 6      | 3       | 3        | 82       | 79       | 4       | 4      | -2     | 0      | 4   | -7      | 2      | 18     | 4      | 3      | 5      | 2      | 4       | 4       | 1      |
| 9      | 6       | -3       | 85       | 80       | 70      | 0      | 1      | -2     | 1   | -2      | 14     | -1     | 3      | 3      | 2      | 0      | -2      | -3      | 2      |
| 10     | 6       | 1        | 78       | 65       | 61      | 5      | 4      | 2      | 8   | 13      | 4      | 7      | 9      | 12     | 12     | 2      | -9      | -7      | 8      |
| 2      | 2       | -2       | 9        | 12       | 2       | 4      | 4      | 0      | 1   | -6      | 4      | 16     | 5      | 5      | 4      | 4      | 15      | 4       | 1      |
| 43     | 21      | -1       | 65       | 55       | 15      | 13     | 6      | 3      | 14  | -5      | 29     | 48     |        | 60     | 69     | 54     | 21      | 31      | 3      |
| 2      | 0       | 3        | 77       | 69       | 6       | 6      | 4      | 1      | 4   | 4       | 0      | 1      | -2     | -1     | 2      | -1     | 0       | -7      | 3      |
| 11     | 10      | 0        | 80       | 73       | 9       | 4      | 5      | 2      | 2   | -3      | 4      | 12     | 5      | 6      | 7      | 4      | 6       | 9       | 3      |
| 4      | 0       | 0        | 8        | 4        | 8       | 3      | 0      | 1      | -1  | 3       | 0      | 3      | 3      | 1      | 0      | 1      | -8      | -2      | 1      |
| 0      | -2      | -2       | 6        | 2        | 63      | -1     | -2     | -2     | -1  | -8      | 0      | -2     | 0      | 1      | 1      | 0      | -7      | -1      | 2      |
| 6      | 6       | 0        | 62       | 51       | 23      | 7      | 4      | 2      | 3   | 5       | 11     | 71     | 37     | 32     | 52     | 2      | -6      | -4      | 2      |
| 2      | 3       | 2        | 11       | 10       | 8       | 0      | 3      | 0      | 4   | -5      | 4      | 4      | -1     | 0      | -1     | 3      | 8       | 4       | 3      |
| 44     | 14      | 0        | 79       | 70       | 29      | 3      | 5      | 2      | 23  | -7      | 38     | 67     | 73     | 72     | 80     | 50     | 45      | 59      | 2      |
| 9      | 6       | 1        | 22       | 20       | 69      | 4      | 2      | 1      | -3  | 0       | 2      | 4      | 5      | 5      | 6      | 1      | -5      | -4      | 9      |
| 6      | 6       | 2        | 93       | 92       | 25      | 6      | 4      | 2      | 4   | -2      | 7      | 37     | 4      | 4      | 5      | 3      | 6       | 0       | 0      |
| 2      | 3       | -5       | 28       | 31       | 7       | 1      | 1      | 0      | -4  | 3       | 2      | -1     | 2      | 2      | 1      | -1     | -2      | 1       | -2     |
| 0      | 1       | 2        | 31       | 20       | 8       | 3      | 1      | -1     | -4  | -9      | 2      | 1      | 0      | 1      | 2      | 3      | 5       | 3       | 0      |
| 15     | 12      | 14       | 14       | 10       | 8       | 1      | 1      | 36     | 88  | 91      | 4      | 1      | 3      | 2      | 2      | 0      | 17      | -1      | 1      |
| 41     | 11      | -2       | 81       | 72       | 25      | 9      | 6      | 3      | 7   | -6      | 33     | 78     | 79     | 78     | 83     | 48     | 17      | 25      | 2      |
| 7      | 7       | 13       | 47       | 38       | 12      | 8      | 6      | 2      | -7  | -9      | 8      | 59     | 12     | 14     | 25     | 6      | 3       | 2       | 4      |
| 6      | 4       | 1        | 16       | 11       | 6       | 0      | 0      | 1      | 2   | 0       | 2      | 17     | 12     | 8      | 13     | 3      | -5      | 2       | 3      |

| 4  | 7  | -1 | 3  | 3  | 6  | 6  | 3  | -1 | 1  | -2 | 2  | 24 | 14 | 6  | 11 | 1  | 1 | 0  | -1 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|----|----|
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   | -7 |    |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |
|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   | 0  |    |
| 0  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |
| 18 | 14 | 4  | 46 | 31 | 18 | -1 | -2 | -2 | -5 | -4 | 8  | 0  | 0  | 0  | 2  | -1 | 3 | 2  | 5  |
| 75 | 74 | 74 | 77 | 77 | 16 | 7  | 6  | 3  | 5  | -3 | 43 | 15 | 11 | 10 | 14 | 5  | 7 | 19 | 65 |

| AGC     | AGC      | AGC      | AGC      | AGC     | AGC      | AGC     | AGC     | AGC       | AGC      | AGC     | AGC      | AGC      | AGC      | AGC     | AGC     | AGC      | AGC      | AGC      | AGC      |
|---------|----------|----------|----------|---------|----------|---------|---------|-----------|----------|---------|----------|----------|----------|---------|---------|----------|----------|----------|----------|
|         |          |          |          |         |          |         |         |           |          |         |          |          |          |         |         |          |          |          |          |
| MSK1    | 4 MSK2   | RSK1     | RSK2     | RSK4    | RSK3     | P70S6K1 | <Τ2     | ه<br>AKT1 | AKT3     | SGK1    | SGK3     | SGK2     | PKC-ŋ    | γ-DHC-γ | PKC-α   | РКС-β1   | РКС-β2   | ө-ЭМА    | o PKC-ı  |
| Š       | Š        | <u>8</u> | RS       | 7       | 3        | P7      | ا<br>ال | AA        | ¥        |         | )S       | 3        | <u>A</u> | 16      | 8       | <u>4</u> | <u>д</u> |          | <u>7</u> |
| 1       | 4        | 4<br>5   | 2<br>8   | 13      | 8        | 6<br>2  | 2       | 0         | -1<br>4  | 4<br>3  | 4<br>2   | 3<br>1   | 4<br>4   | 16<br>4 | 8<br>1  | 4<br>0   | 8<br>2   | 3<br>0   | -1       |
| 1       | 0        | 3        | 3        | 7       | 7        | 4       | 2 -2    | 0 -2      | 1        | 5       | 0        | 1        | -4       | 1       | 1       | 2        | 2<br>7   | -1       | 1        |
| 3<br>29 | 3<br>12  | 0<br>11  | 0<br>17  | 3<br>19 | 1<br>10  | 1<br>9  | 1<br>1  | 1<br>1    | 1<br>3   | 5<br>7  | 1<br>6   | 0<br>6   | -1<br>9  | 5<br>7  | 10<br>8 | 2<br>-1  | 7<br>2   | 0<br>6   | 4<br>3   |
| 48      | 34       | 26       | 21       | 7       | 14       | 21      | 1       | 1         | 4        | 7       | 10       | 17       | 14       | 3       | 2       | 0        | 2        | 3        | 1        |
| 8<br>11 | 17<br>16 | 23<br>12 | 25<br>8  | 8<br>14 | 13<br>16 | 25<br>5 | 1       | 91<br>1   | 90       | 2<br>6  | 47<br>1  | 2<br>3   | 96<br>2  | 45<br>1 | 18<br>1 | 61<br>2  | 37<br>2  | 72<br>7  | 11<br>0  |
| 3       | 2        | 0        | 0        | 1       | 1        | 0       | 2       | 1         | 1        | 2       | 1        | 3        | 2<br>-3  | 3       | 2       | 2<br>-2  | 1        | 1        | 2        |
| 82      | 69<br>1  | 69<br>8  | 65<br>8  | 36<br>9 | 53<br>3  | 42<br>4 | 4<br>-1 | 6<br>2    | 22<br>-1 | 18<br>2 | 34<br>-1 | 12<br>-1 | 39<br>5  | 3<br>10 | 2<br>15 | 2<br>2   | 2<br>8   | 28<br>6  | 1<br>-1  |
| 3 2     | 3        | 4        | 2        | 0       | 3<br>1   | 1       | 1       | -1        | 0        | 8       | 5        | -2       | 2        | 5       | 0       | 3        | 1        | 4        | 0        |
| 6       | 8        | 3        | 3        | 2       | 3<br>14  | 4       | 3       | 3         | 5        | 3<br>-1 | 1        | 2        | 1        | 7       | 3       | 6<br>0   | 7        | 7<br>-1  | 2<br>2   |
| 8       | 3<br>10  | 7<br>5   | 9<br>6   | 13<br>2 | 14<br>7  | 3<br>10 | 2<br>75 | 1<br>67   | 1<br>68  | 3       | -1<br>14 | -3<br>4  | -1<br>95 | 2<br>8  | 1<br>4  | 30       | 1<br>11  | -1<br>61 | 1        |
| 1       | 2        | 0        | 2        | 2       | 4        | 3       | 0       | -1        | 0        | 1       | -1       | 1        | -1       | -2      | 0       | 0        | 0        | -2       | 0        |
| 3<br>46 | 5<br>39  | 5<br>24  | 3<br>19  | 3<br>6  | 3<br>13  | 3<br>25 | 1       | 2<br>1    | 2<br>3   | 0<br>7  | 1<br>11  | 0<br>9   | 3<br>14  | 6<br>-2 | 3<br>1  | 0        | 0<br>1   | -1<br>5  | 4<br>0   |
| 9       | 4        | 0        | 1        | 2       | 3        | 3       | 2<br>2  | 0         | 5        | 7       | 5        | 5        | 6        | 5       | 11      | 5        | 5        | 8        | 1        |
| 8       | 8        | 17       | 23       | 42      | 22       | 7       | 3       | 0         | 4        | 4       | 4        | 3        | 5        | 6       | 5       | 4        | 12       | 15       | 3        |
| 1       | 3<br>6   | 3<br>3   | 5<br>4   | 3<br>5  | 3<br>5   | 2<br>3  | 0<br>-3 | -1<br>-5  | 1<br>-5  | -1<br>4 | 1<br>8   | -1<br>4  | -3<br>1  | 1<br>7  | 2<br>-1 | 2<br>-1  | 0<br>3   | -1<br>3  | 1<br>3   |
| 8       | 18       | 14       | 15       | 21      | 23       | 2       | 0       | -1        | 0        | 18      | 2        | 3        | -1       | 3       | 0       | 2        | 1        | 3        | 0        |
| 3 7     | 4        | 5<br>5   | 4        | 3       | 3        | 1       | 1       | 1         | 5<br>1   | 5<br>7  | 3        | 5        | 3        | 34      | 65<br>1 | 51<br>5  | 67<br>2  | 4        | 1        |
| 5       | 2<br>3   | 5<br>6   | 2<br>4   | 2<br>2  | 2<br>4   | 2<br>3  | 2<br>2  | 0         | 1        | 7<br>5  | 5<br>3   | 6<br>3   | 6<br>3   | 7<br>2  | 1<br>1  | 5<br>4   | 2        | 5<br>3   | -1       |
| -2      | 3        | 5        | 5        | 11      | 11       | 3       | 2       | 1         | 3        | 3       | 5        | 2        | 7        | 4       | 9       | 17       | 25       | 8        | 0        |
| 0       | 2<br>3   | 3<br>2   | 1<br>2   | 1<br>7  | 2<br>7   | 0       | 0<br>0  | 0         | 3<br>2   | 2<br>2  | 0<br>-1  | 1<br>-1  | 2<br>1   | 9       | 29<br>0 | 21<br>-1 | 34<br>0  | 0        | 1        |
| 11      | 10       | 14       | 14       | 16      | 10       | 5       | 1       | 1         | 2        | 4       | 4        | 4        | -2       | 6       | 3       | 5        | 4        | 4        | 4        |
| 79      | 1<br>77  | 1<br>71  | 1        | 6<br>14 | 2<br>61  | 2<br>93 | 1       | 0         | 3        | 0<br>35 | -1<br>74 | 3<br>59  | 3<br>95  | 5<br>55 | 5<br>34 | -6       | 5<br>42  | 1<br>67  | -1<br>65 |
| 78<br>4 | 2        | 1        | 55<br>1  | 3       | 3        | 2       | 8<br>-2 | 8<br>-3   | 8<br>-1  | 3       | 3        | 2        | 3        | 6<br>6  | 34      | 64<br>3  | 42<br>5  | 67<br>4  | 65<br>2  |
| -1      | 7        | 10       | 10       | 11      | 14       | 3       | -2      | -2        | 2        | 12      | -1       | 2        | -5       | 0       | 1       | -1       | -1       | -1       | -1       |
| 34      | 17<br>3  | 16<br>4  | 11<br>3  | 3<br>2  | 8<br>2   | 14<br>1 | 1<br>0  | 1         | 3<br>0   | 7<br>5  | 7<br>3   | 4<br>3   | 11<br>6  | 3<br>5  | 0       | 1<br>2   | 2        | 3<br>3   | 1<br>2   |
| 19      | 15       | 4        | 3        | 0       | 4        | 7       | 1       | 1         | 2        | 3       | 2        | 4        | 2        | 3       | 2       | -1       | 1        | 1        | 2        |
| 0       | 2        | 2        | 1        | 0       | 1        | 1       | 1       | -1        | -1<br>0  | 1       | 1        | 1        | 0        | -1<br>- | 1       | 2        | -1<br>4  | 2        | 0        |
| 8       | 5<br>-1  | 6<br>3   | 14<br>-1 | 6<br>3  | 5<br>1   | 5<br>-2 | 3<br>-1 | 0<br>-1   | 8<br>1   | -2      | 3<br>2   | 1<br>7   | 4<br>-1  | 5<br>2  | 3<br>10 | 2<br>20  | 4<br>16  | 4<br>0   | 3<br>0   |
| 9       | 9        | 33       | 56       | 59      | 63       | 4       | -2      | -2        | -2       | 3       | 0        | 3        | -5       | -1      | 0       | 1        | 1        | -1       | 0        |
| 1       | 2        | 1        | 1        | 1       | 2        | 1       | 0       | 0         | 0        | 0       | 0        | 1        | -1       | 1       | 2       | 0        | 1        | 3        | 4        |

| 81 74   | 5  | 4  | 3  | 1  | 1  | 3  | 1  | 2  | 1  | 2  | 3  | 4  | 4  | 0      | 4  | 2  | 2  | 1  | 1  | 3      |
|---|----|----|----|----|----|----|----|----|----|----|----|----|----|--------|----|----|----|----|----|--------|
| 8   |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 14  |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 1   |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 14  |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 12  |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    | -6 |    |    |        |
| 29  |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 1   |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 4         4         5         3         7         2         1         1         1         1         5         5         2         5         4         1         2         3         3         0         0         3         3         1         1         2         2         2         3         3         1         1         2         2         2         3         3         1         1         1         4         2         2         1         1         1         3         4         1         2         1         3         3         1         1         1         4         3         2         2         0         3         2         1         1         1         4         4         2         7         3         2         1         3         1         0         0         8         8         10         50         8         8         10         50         8         8         50         2         2         2         3         2         2         2         3         4         6         2         3         2         2         2         3         3         3         4 <th></th> <td></td> <td></td> <td>-2</td> <td>-1</td> <td></td> <td></td> <td></td> <td>-2</td> <td></td> <td>-2</td> <td></td> <td>-1</td> <td></td> <td></td> <td>0</td> <td></td> <td></td> <td>0</td> <td>4</td> |    |    |    | -2 | -1 |    |    |    | -2 |    | -2 |    | -1 |        |    | 0  |    |    | 0  | 4      |
| 0 4 2 1 1 2 3 2 2 1 1 1 3 3 4 1 1 4 3 3 3 1 1 1 1 1 3 3 4 1 1 4 3 3 3 1 1 1 1   |    |    |    |    | 7  | 2  | 1  | 1  | 1  | 1  |    | 5  | 2  |        |    | 1  | 2  |    |    | 0      |
| 3   | 0  |    |    |    |    |    | 2  | 2  | 1  | 1  | 3  | 4  |    |        |    | 3  |    |    |    | 3      |
| 81         79         68         53         15         64         90         8         8         10         50         8         80         10         8         62         88         22         0         1         1         2         3         2         3         2         1         3         1         0         4         2         7         3         2         0         3         2         3         3         4         3         2         1         3         5         3         4         6         3         2         2         2         3         3         4         3         2         1         1         5         3         4         4         7         6         1         1         1         5         4         5         2         2         2         1         1         1         5         2         2         2         2         1         1         1         3         1         2         2         2         2         2         1         1         1         3         3         4         2         1         2         2         2         4         2   | 3  | 4  |    | 2  |    | 4  |    |    | 1  | 1  |    | 1  | -2 | -2     |    |    | 0  | 1  | 3  |        |
| 84  | 77 | 71 | 88 | 79 | 37 | 74 | 78 | 11 | 18 | 26 | 18 | 66 | 18 | 94     | 35 | 58 | 74 | 61 | 39 | 40     |
| 6 7 3 2 2 3 2 1 3 1 0 0 4 2 7 3 4 4 2 1 2 2 3 3 3 1 4 4 5 3 5 5 3 4 6 6 3 2 2 2 2 3 3 3 4 1 4 3 2 1 1 2 1 1 1 1 1 5 4 5 2 0 7 8 4 4 5 4 4 3 3 2 2 1 2 2 1 1 1 1 1 1 1 5 4 5 2 0 7 8 4 4 5 4 4 3 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   | -1 | 2  | 0  | 0  | 1  | 1  | 1  | -4 | -3 | -2 | 2  | 0  | -3 | 2      | 1  | -2 | 0  | 1  | 1  | -2     |
| 14  | 81 | 79 | 68 | 53 | 15 | 64 | 90 | 8  | 8  | 10 | 50 | 84 | 62 | 88     | 28 | 8  | 54 | 22 | 32 | 45     |
| 144         8         11         12         13         10         21         1         1         1         54         5         20         7         8         4         5         4         4         3         5         3         1         1         1         2         3         1         1         5         1         3         6         14         4         3           2         4         8         14         21         20         1         0         -1         4         3         0         6         5         8         5         1           2         6         10         6         4         36         58         -3         0         -5         -1         -1         3         3         2         1         2         -1         1         3         3         1         2         2         2         1         1         1         5         3         4         2         12         2         -1           4         2         4         3         2         2         3         -1         1         3         3         5         4         2         1 </td <th>6</th> <td>7</td> <td>3</td> <td>2</td> <td>3</td> <td>2</td> <td>1</td> <td>3</td> <td>1</td> <td>0</td> <td>4</td> <td>2</td> <td>7</td> <td>3</td> <td>4</td> <td>2</td> <td>1</td> <td>2</td> <td>2</td> <td>3</td>   | 6  | 7  | 3  | 2  | 3  | 2  | 1  | 3  | 1  | 0  | 4  | 2  | 7  | 3      | 4  | 2  | 1  | 2  | 2  | 3      |
| 5         3         4         4         7         6         1         1         1         2         3         1         1         5         1         3         6         14         4         3         2         2         4         8         14         21         20         1         0         1         0         0         -1         4         3         0         6         5         8         5         1         1         1         1         1         3         1         2         -2         -1         2         -2         -1         1         2         -2         -1         1         1         1         1         1         1         1         1         1         1         1         1         3         0         1         1 <t< td=""><th>0</th><td>3</td><td></td><td></td><td></td><td>4</td><td></td><td>2</td><td>1</td><td>3</td><td>5</td><td></td><td>4</td><td></td><td></td><td></td><td></td><td>2</td><td>3</td><td>3</td></t<>           | 0  | 3  |    |    |    | 4  |    | 2  | 1  | 3  | 5  |    | 4  |        |    |    |    | 2  | 3  | 3      |
| 2   | 14 |    | 11 | 12 | 13 | 10 | 21 | 1  | 1  |    |    | 5  | 20 |        | 8  |    |    | 4  | 4  | 3      |
| 2 6 10 6 4 36 58 -3 0 -5 -1 -1 3 -1 2 -2 -1 2 2 -1 8 4 5 2 2 2 2 2 1 1 1 1 5 4 5 3 4 2 12 3 3 3 3 1 0 2 1 0 1 1 1 1 -1 1 3 0 3 5 4 2 12 2 0 2 -1 4 2 2 3 2 3 1 1 1 1 2 1 -2 -3 -4 2 3 2 3 2 3 0 -4 2 1 0 2 -1 4 2 4 3 2 2 2 3 1 1 1 1 1 3 0 3 5 5 4 2 1 1 3 3 1 1 1 2 1 -3 -1 1 2 0 2 -1 1 1 0 4 1 1 -2 -4 -1 1 0 -5 1 0 -2 9 2 2 2 2 1 3 3 2 1 1 1 3 3 5 5 2 5 4 1 2 2 3 3 1 1 1 1 5 6 8 27 32 29 37 6 2 1 1 1 0 4 1 1 -2 -4 -1 1 0 -5 1 0 -5 1 0 -2 1 5 8 2 7 32 29 37 6 2 1 1 1 0 3 3 1 5 5 2 5 4 1 2 2 3 3 1 1 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 3 2 2 3 1 5 0 -3 -1 1 2 1 2 1 2 -1 2 1 2 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |    |    | 4  |    |    |    | 1  | 1  | 1  |    | 3  |    | 1  |        | 1  | 3  |    |    |    | 3      |
| 8       4       5       2       2       2       1       1       1       5       4       5       3       4       2       12       3       3       3         3       3       1       0       2       1       0       1       1       1       -1       1       3       3       3       0       0       0       2       -1         4       2       4       3       2       2       3       1       1       1       3       0       3       3       0       0       2       -1         4       2       4       3       2       2       3       1       1       1       3       0       3       5       4       2       1       3       1       1       1       -2       -4       -1       -1       0       -5       1       0       -5       1       0       -5       1       0       -5       1       0       -5       1       0       -5       1       0       -5       1       0       -5       1       0       -5       1       0       -5       1       0       -1       1  |    | 4  |    | 14 | 21 |    |    |    | 1  |    | 0  | -1 | 4  |        |    |    |    |    |    |        |
| 3         3         1         0         2         1         0         1         3         2         3         1         1         1         3         0         3         5         4         2         1         3         1         1         1         3         0         3         5         4         2         1         3         1         1         0         2         1         1         3         3         5         2         5         4         1         2         2         2         1         0         -2         1         1         0         4         1         2         2         2         3         1         5         0         -3         -1         1         2         2         2         3         1         2         0         -2         3         1         2 <th>2</th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-3</td> <td>0</td> <td></td>           | 2  |    |    |    |    |    |    | -3 | 0  |    |    |    |    |        |    |    |    |    |    |        |
| 1       3       3       1       1       2       1       -2       -3       -4       2       3       2       3       0       -4       2       0       2       -1         4       2       4       2       4       2       1       3       5       4       2       1       3       1       1       1       3       3       5       4       2       1       3       1       1       1       3       3       5       2       5       4       1       1       2       2       3       1       1       1       3       3       5       2       5       4       4       1       2       2       3       1       1       1       2       2       1       1       1       2       3       1       1       1       2       2       3       1       1       1       2       3       1       1       1       2       2       3       1       1       1       1       2       2       3       1       1       1       2       2       3       1       1       2       4       2       0       -2   |    |    |    |    |    |    |    | 1  |    | 1  |    | 4  |    |        |    |    |    |    |    |        |
| 4       2       4       3       2       2       3       1       1       1       3       0       3       5       4       2       1       3       1       1       2       3       1       1       1       3       0       3       5       4       2       1       3       1       1       2       2       4       1       1       0       2       2       4       1       1       0       0       2       2       1       1       0       2       5       4       1       1       2       2       3       1       1       2       2       3       1       1       2       2       3       1       1       1       2       2       1       1       9       8       6       4       8       2       6       2       5       5       1       1       2       2       1       0       3       1       3       1       1       1        2       2       2       1       0       3       1       3       1       1       4       4       2       0       0       0       1       4       2  | 3  |    |    |    |    |    | 0  |    |    | 1  |    |    |    |        |    |    |    | 0  |    |        |
| -3         -1         1         2         0         2         -1         1         0         4         1         -2         -4         -1         -1         0         -5         1         0         -2         9         2         2         2         1         1         3         3         5         2         5         4         1         2         2         3         1         5         8         27         32         29         37         6         2         1         1         9         8         6         4         8         2         6         2         5         5         1         1         2         2         -1         0   |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 9   |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 5         8         27         32         29         37         6         2         1         1         9         8         6         4         8         2         6         2         5         1           -2         1         0         -1         -1         1         1         -3         -2         -1         0         3         2         3         1         2         1         2         1         2         2         -2         -1         0         -2         1         -3         0         0         6         1         -5         3         -1         0         1         4         2         0         -2         2         1         -3         0         0         6         1         -5         3         -1         0         1         4         2         2         4         2         5         1         4         4         2         4         2         5         1         4         2         2         4         2         5         1         1         2         2         4         2         2         4         2         0         -2         2         3  |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| -2  |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 2 0 0 0 0 0 0 0 1 0 0 1 0 3 2 3 1 2 1 2 1 2 1 2 1 2 0 0 2 6 17 21 15 16 20 11 2 0 2 23 9 13 4 5 2 4 2 5 1 4 4 5 4 1 2 2 2 2 1 0 8 4 23 4 7 2 1 3 3 3 2 9 13 11 9 11 14 9 1 10 2 2 29 8 11 6 3 2 2 2 5 5 5 2 6 9 6 6 5 5 5 3 3 1 2 2 4 3 1 2 6 2 2 2 4 3 4 0 1 1 3 3 3 2 2 1 3 1 2 1 3 1 2 6 2 2 2 1 3 1 2 2 3 3 1 2 2 3 3 1 2 2 3 3 1 2 2 3 3 1 2 2 3 3 1 2 2 3 3 1 2 2 3 3 1 2 3 3 3 3   |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| -3  -2  -1  0  -2  1  -3  0  0  6  1  -5  3  -1  0  1  4  2  0  -2  6  17  21  15  16  20  11  2  0  2  23  9  13  4  5  2  4  2  5  1  4  4  4  5  4  1  2  2  2  1  0  8  4  23  4  7  2  1  3  3  2  2  1  1  1  1  1  1  1  1  1  1  1  |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 6 17 21 15 16 20 11 2 0 2 23 9 13 4 5 2 4 2 5 1 4 4 5 4 1 2 2 2 2 1 0 8 4 23 4 7 2 1 3 3 3 2 9 13 11 9 11 14 9 1 0 2 2 9 8 11 6 3 2 2 5 5 2 6 9 6 6 5 5 3 3 1 2 4 3 1 2 6 2 2 2 4 3 4 0 1 3 3 2 2 0 0 0 0 18 2 4 0 0 0 3 1 -1 1 1 1 1 7 1 2 2 1 3 3 4 1 5 0 0 1 2 2 3 2 6 0 1 2 4 3 2 0 1 6 0 3 2 3 2 0 1 2 3 2 6 0 1 2 4 3 2 0 1 6 0 3 2 3 2 0 1 2 3 2 6 0 1 2 4 3 2 0 1 6 0 3 2 3 2 0 1 2 3 1 6 3 4 9 6 2 0 -1 2 9 3 3 0 3 0 3 0 0 1 1 2 3 1 6 3 4 9 6 2 0 -1 2 9 3 3 0 0 3 0 0 1 1 -1 1 7 4 6 6 6 4 3 2 0 2 1 4 5 6 3 8 5 1 3 1 4 1 11 7 4 6 6 6 4 3 2 0 2 1 2 7 6 2 10 6 6 7 2 4 1 2 0 1 1 2 2 1 0 2 0 0 3 1 2 1 3 2 1 1 1 1 1 1 10 57 28 27 38 42 12 4 1 1 19 6 10 4 3 3 1 2 1 3 2 1 1 4 3 16 12 13 5 3 1 1 2 1 2 1 1 3 3 1 2 1 1 3 2 1 1 4 3 4 0 -1 1 1 1 1 1 1 0 1 0 1 0 1 -1 2 1 2 1 2 2 4 1 1 1 2 0 1 4 3 16 12 13 5 3 1 1 2 6 6 4 3 3 2 2 1 1 1 3 2 1 1 1 1 1 1 2 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 4       4       5       4       1       2       2       2       1       0       8       4       23       4       7       2       1       3       3       2         9       13       11       9       11       14       9       1       0       2       29       8       11       6       3       2       2       5       5       2         6       9       6       6       5       5       3       3       1       2       4       3       1       2       6       2       2       4       3       4         7       1       2       2       1       3       1       2       4       0       0       3       1       -1       2       2       1       4       3       1       0       1       1       2       2       3       3       2       2   |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 9 13 11 9 11 14 9 1 0 2 29 8 11 6 3 2 2 5 5 2 6 9 6 6 5 5 3 3 3 1 2 4 3 1 2 6 2 2 4 3 4 3 4 0 1 3 3 2 2 2 1 3 1 2 1 3 3 3 4 1 5 0 0 1 2 2 3 3 2 6 0 1 2 4 3 2 0 1 6 0 3 2 3 2 3 2 0 1 2 3 3 1 6 3 3 4 9 6 2 0 1 2 4 5 6 2 10 6 6 6 7 2 4 1 1 7 4 6 6 6 4 3 2 2 1 1 2 7 4 6 5 5 1 3 1 4 1 1 1 1 1 1 7 4 6 6 6 4 3 3 2 2 1 1 2 7 4 6 6 5 5 1 3 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 6  9  6  6  5  5  3  3  1  2  4  3  1  2  6  2  2  4  3  4  3  4  0  1  3  3  2  2  0  0  0  0  -18  2  4  0  0  3  1  -1  1  1  1  1  1  1  1  1  1  1  1  |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 0   |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 7       1       2       2       1       3       1       2       1       3       3       4       1       5       0       0       1       2       2       3         2       6       0       1       2       4       3       2       0       -1       6       0       3       2       3       2       0       1       2       3         1       6       3       4       9       6       2       0       -1       2       9       3       3       0       0       0       1       1       -1         1       3       3       2       1       3       2       2       1       4       5       6       3       8       5       1       3       1       4       1         11       7       4       6       6       4       3       2       0       2       4       7       6       2       10       6       6       7       2       4         1       2       0       1       1       1       1       1       1       1       1       1       1       1  |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 2 6 0 1 2 4 3 2 0 1 6 0 3 2 3 2 0 1 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 1       6       3       4       9       6       2       0       -1       2       9       3       3       0       3       0       0       1       1       -1         1       3       3       2       1       3       2       2       1       4       5       6       3       8       5       1       3       1       4       1         11       7       4       6       6       4       3       2       0       2       4       7       6       2       10       6       6       7       2       4         1       2       0       1       1       2       2       -1       0       2       0       0       -3       -1       2       1       3       2       -1       -1         1       0       5       4       3       3       2       2       1       2       7       4       6       5       5       1       3       1       5       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1  | 7  |    |    | 4  |    |    |    | 2  |    |    |    |    |    | o<br>o |    | 0  | 1  | 4  | 2  | 3      |
| 1       3       3       2       1       3       2       2       1       4       5       6       3       8       5       1       3       1       4       1         11       7       4       6       6       4       3       2       0       2       4       7       6       2       10       6       6       7       2       4         1       2       0       1       1       2       2       -1       0       2       0       0       -3       -1       2       1       3       2       -1       -1       -1         -1       6       5       4       3       3       2       2       1       2       7       4       6       5       5       1       3       1       5       1         10       57       28       27       38       42       12       4       1       1       19       6       10       4       3       3       1       2       4       4         3       4       0       -1       1       1       0       1       0       1       1       <  | 4  |    |    | 1  |    |    |    | 0  |    | 1  |    |    |    | 0      |    | 0  | 0  | 1  | 4  | ى<br>1 |
| 11       7       4       6       6       4       3       2       0       2       4       7       6       2       10       6       6       7       2       4         1       2       0       1       1       2       2       -1       0       2       0       0       -3       -1       2       1       3       2       -1       -1         -1       6       5       4       3       3       2       2       1       2       7       4       6       5       5       1       3       1       5       1         10       57       28       27       38       42       12       4       1       1       19       6       10       4       3       3       1       2       4       4         3       4       0       -1       1       1       1       1       1       1       1       1       1       1       1       2       1       1       1       1       2       1       1       1       2       2       4       1       -1       1       2       1       1 <td< td=""><th>1</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td><td></td></td<>  | 1  |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    | 1  |        |
| 1       2       0       1       1       2       2       -1       0       2       0       0       -3       -1       2       1       3       2       -1       -1         -1       6       5       4       3       3       2       2       1       2       7       4       6       5       5       1       3       1       5       1         10       57       28       27       38       42       12       4       1       1       19       6       10       4       3       3       1       2       4       4         3       4       0       -1       1       1       1       2       1       2       1       1       3       -1       -1       1       -2       -1       -1       4         -2       1       3       9       11       11       1       0       1       0       1       -1       2       1       2       2       4       1       -1         4       3       16       12       13       5       3       1       1       2       6       4       3 <th>11</th> <td></td>  | 11 |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| -1       6       5       4       3       3       2       2       1       2       7       4       6       5       5       1       3       1       5       1         10       57       28       27       38       42       12       4       1       1       19       6       10       4       3       3       1       2       4       4         3       4       0       -1       1       1       1       2       1       2       1       1       3       -1       -1       1       1       -2       -1       -1       4         -2       1       3       9       11       11       1       0       1       0       1       -1       2       1       2       2       4       1       -1         4       3       16       12       13       5       3       1       1       2       6       4       3       4       5       2       3       2       3       1         -3       -2       1       -1       -1       -3       0       -1       -6       0       -3       -   |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 10       57       28       27       38       42       12       4       1       1       19       6       10       4       3       3       1       2       4       4         3       4       0       -1       1       1       1       2       1       2       1       1       3       -1       -1       1       -2       -1       -1       4         -2       1       3       9       11       11       1       1       0       1       0       1       -1       2       1       2       2       4       1       -1         4       3       16       12       13       5       3       1       1       2       6       4       3       4       5       2       3       2       3       1         -3       -2       1       -1       -1       -3       0       -1       -6       0       -3       -4       1       0       1       1       2       0       -1         4       3       2       2       1       1       0       0       -2       5       3       0 <td< td=""><th></th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>   |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 3       4       0       -1       1       1       1       2       1       2       1       2       1       3       -1       -1       1       -2       -1       -1       4         -2       1       3       9       11       11       1       1       0       1       0       1       -1       2       1       2       2       4       1       -1       -1       4       3       16       12       13       5       3       1       1       2       6       4       3       4       5       2       3       2       3       1       1       2       6       4       3       4       5       2       3       2       3       1       1       2       6       4       3       4       5       2       3       2       3       1       1       2       6       4       3       4       5       2       3       2       3       1  |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| -2       1       3       9       11       11       1       1       0       1       -1       2       1       2       2       2       4       1       -1         4       3       16       12       13       5       3       1       1       2       6       4       3       4       5       2       3       2       3       1         -3       -2       1       -1       -1       1       1       -2       6       4       3       4       5       2       3       2       3       1         4       3       2       2       1       1       0       1       1       2       1       4       4       3       1       -1       1       2       0       -1       -1       1       2       0       -1       1       1       2       0       -1       1       1       2       0       -1          |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 4       3       16       12       13       5       3       1       1       2       6       4       3       4       5       2       3       2       3       1         -3       -2       1       -1       -1       1       1       -3       0       -1       -6       0       -3       -4       1       0       1       1       2       0       -1         4       3       2       2       1       1       0       1       1       1       2       1       4       4       3       1       -1       1       2       0         1       1       1       1       1       1       0       0       2       5       3       0       -1       5       1       2       2       1       -1         0       1       -1       0       0       2       0       1       0       -1       3       3       -2       1       1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       1       -1       1  |    |    |    |    |    |    |    |    |    | 1  |    |    |    |        |    |    |    |    |    |        |
| -3       -2       1       -1       -1       1       -3       0       -1       -6       0       -3       -4       1       0       1       1       2       0       -1         4       3       2       2       1       1       0       1       1       1       2       1       4       4       3       1       -1       1       2       0         1       1       1       1       1       1       0       0       2       5       3       0       -1       5       1       2       2       1       -1         0       1       -1       0       2       2       0       1       0       -1       3       3       -2       1       1       1       -1       1       -1       1       -1       2       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       1       -1<   |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 4       3       2       2       1       1       0       1       1       1       2       1       4       4       3       1       -1       1       2       0         1       1       1       1       1       0       0       2       5       3       0       -1       5       1       2       2       1       -1         0       1       -1       0       2       2       0       1       0       -1       3       3       -2       1       1       1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       -1       1       1       -1       -1       1       1       -1       -1       1       1       -1       -1       1       -1       1       -1       1       1       -1       -1       1       1       -1       1       1       -1       1       1       -1 <th></th> <td></td> <td>2</td> <td></td> <td></td>   |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    | 2  |    |        |
| 1       1       1       1       1       1       0       0       2       5       3       0       -1       5       1       2       2       1       -1         0       1       -1       0       2       2       0       1       0       -1       3       3       -2       1       1       1       1       -1       1       -1       1       -1       2         0       4       7       6       2       3       3       3       1       2       5       7       7       5       5       -5       2       1       5       1       2         1       2       -1       -1       0       1       1       2       -1       0       0       2       0       1       -1       1       1       1       -1       1       1       1       -1       1 <th></th> <td></td>  |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 0       1       -1       0       2       2       0       1       0       -1       3       3       -2       1       1       1       -1       1       -1       1       -1       1       1       -1       1       1       -1       1       1       -1       1       1       -1       1 <td< td=""><th></th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>5</td><td></td><td></td><td>-1</td><td>5</td><td></td><td></td><td></td><td></td><td></td></td<>   |    |    |    |    |    |    |    |    |    |    | 5  |    |    | -1     | 5  |    |    |    |    |        |
| 0       4       7       6       2       3       3       1       2       5       7       7       5       5       -5       2       1       5       1         1       2       -1       -1       0       0       1       1       2       -1       0       0       2       0       1       -1       1         4       4       20       10       12       3       3       3       1       4       1       0       1       1       4       1       3       3       5       -1         3       3       1       0       1       2       4       1       1       -1       1       0       -2       5       4       0       2       1       0       2         -4       4       2       3       3       5       4       2       0       6       4       5       4       6       7       5       9       7       5       3         2       4       0       1       1       1       4       0       -1       1       1       7       4       0       2  |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    | -1 | 1  |    |        |
| 1       2       -1       -1       0       2       1       1       0       1       1       2       -1       0       0       2       0       1       -1       1         4       4       20       10       12       3       3       1       4       1       0       1       1       4       1       3       3       5       -1         3       3       1       0       1       2       4       1       1       -1       1       0       -2       5       4       0       2       1       0       2         -4       4       2       3       3       5       4       2       0       6       4       5       4       6       7       5       9       7       5       3         2       4       0       1       1       3       3       2       0       1       1       4       0       -1       1       1       7       4       0       2   | _  |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    | 5  |        |
| 4       4       20       10       12       3       3       3       1       4       1       0       1       1       4       1       3       3       5       -1         3       3       1       0       1       1       1       1       1       1       1       4       1       3       3       5       -1         -4       4       2       3       3       5       4       2       0       6       4       5       4       6       7       5       9       7       5       3         2       4       0       1       1       3       3       2       0       1       1       4       0       -1       1       1       7       4       0       2  | 1  |    |    |    |    |    |    |    |    | 1  |    |    |    |        |    |    | 0  |    | -1 |        |
| 3     3     1     0     1     2     4     1     1     -1     1     0     -2     5     4     0     2     1     0     2       -4     4     2     3     3     5     4     2     0     6     4     5     4     6     7     5     9     7     5     3       2     4     0     1     1     3     3     2     0     1     1     4     0     -1     1     1     7     4     0     2   | 4  |    |    |    |    |    |    |    |    | 4  |    |    |    |        |    |    |    |    |    |        |
| -4     4     2     3     3     5     4     2     0     6     4     5     4     6     7     5     9     7     5     3       2     4     0     1     1     3     3     2     0     1     1     4     0     -1     1     1     7     4     0     2   |    |    |    |    |    |    |    |    |    | -1 |    |    |    |        |    |    |    |    |    |        |
| 2 4 0 1 1 3 3 2 0 1 1 4 0 -1 1 1 7 4 0 2  |    |    |    |    |    |    |    |    |    |    |    |    |    |        |    |    |    |    |    |        |
| 4 6 26 14 20 7 4 2 1 2 3 4 1 2 20 11 1 7 5 2  | 2  | 4  |    |    |    | 3  |    |    |    |    | 1  |    | 0  | -1     | 1  | 1  |    | 4  |    |        |
|   | 4  | 6  | 26 | 14 | 20 | 7  | 4  | 2  | 1  | 2  | 3  | 4  | 1  | 2      | 20 | 11 | 1  | 7  | 5  | 2      |

| 6        | 4       | 5       | 4       | 1       | 3      | 2      | 2      | 1      | 2      | 5      | 4       | 1       | 6       | 5       | 2       | 5        | 3       | 5       | 1      |
|----------|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|----------|---------|---------|--------|
| -3       | 0       | 0       | 2       | 2       | 0      | -1     | -1     | -1     | 2      | 0      | -3      | 1       | -1      | 9       | 3       | -2       | 2       | -2      | -1     |
| -1       | -2      | 1       | -2      | 0       | 0      | -1     | -1     | -2     | 0      | 0      | 1       | 3       | 0       | 2       | 0       | 2        | 3       | -1      | 0      |
| 79       | 63      | 88      | 81      | 36      | 91     | 70     | 15     | 16     | 20     | 12     | 28      | 17      | 88      | 42      | 41      | 64       | 38      | 59      | 27     |
| 1        | 3       | 2<br>-3 | 3<br>-1 | 2       | 13     | 23     | -1     | -1     | 0      | 1<br>1 | 2<br>-1 | 1       | 1<br>-1 | 1       | 10<br>1 | 2<br>-1  | 0       | -1      | 1      |
| -1<br>0  | 0<br>3  | 1       | 1       | 2       | 0<br>2 | 0<br>2 | 0<br>2 | 0<br>0 | 1<br>4 | 1      | 2       | -4<br>2 | 4       | 0<br>6  | 1       | 1        | 0<br>2  | -2<br>4 | 0<br>2 |
| -2       | -1      | 0       | 2       | -1      | -1     | -2     | 0      | -1     | 0      | -1     | 0       | 5       | -3      | 1       | 0       | -6       | 0       | -1      | -1     |
| 8        | 2       | 3       | 3       | 2       | 2      | 1      | 2      | 1      | 50     | 3      | 5       | 1       | 5       | 2       | 1       | -4       | 1       | 2       | 2      |
| -1       | 5       | 3       | 1       | 0       | 2      | 1      | -3     | -4     | -2     | 4      | 2       | 4       | 6       | 4       | -1      | 3        | 4       | 2       | 2      |
| -1       | 2       | 0       | -2      | -1      | 0      | 0      | -3     | -3     | -1     | 1      | 3       | -1      | 1       | 0       | -3      | -2       | 1       | 1       | 1      |
| 1        | 3       | 4       | 3       | 1       | 4      | 3      | 2      | 1      | 2      | 2      | 2       | 2       | 4       | 3       | 1       | 0        | 1       | 2       | 2      |
| -1       | 0       | 0       | 0       | 0       | 2      | -1     | 1      | 1      | 2      | 1      | 4       | -1      | 4       | 0       | 1       | 2        | 1       | 1       | 0      |
| -3       | 2<br>6  | 2<br>7  | 4<br>5  | 2<br>3  | 3<br>5 | 3<br>4 | 2<br>2 | 0<br>1 | 3<br>2 | 2<br>4 | 2<br>3  | 3<br>3  | 5<br>5  | 0<br>-9 | 2<br>2  | 0<br>1   | 3       | 5<br>4  | 3      |
| 0        | 3       | 3       | ວ<br>1  | 5       | 3      | 1      | -2     | -2     | -1     | 0      | ა<br>1  | 3<br>4  | 2       | 0       | -3      | -1       | 3<br>1  | 0       | 2<br>1 |
| 18       | 21      | 13      | 15      | 7       | 11     | 33     | 92     | 90     | 92     | 3      | 58      | 13      | 97      | 45      | 32      | 67       | 59      | 83      | 3      |
| 2        | 3       | 4       | 3       | 1       | 1      | 2      | 1      | 0      | 1      | 4      | 6       | 8       | 3       | 2       | -1      | 3        | 1       | 3       | 0      |
| -2       | 1       | 1       | 1       | -1      | 1      | 0      | 0      | 0      | -10    | 1      | -1      | -2      | 2       | 2       | 1       | 1        | 0       | 0       | -1     |
| 3        | 6       | 1       | 2       | 1       | 1      | 1      | 55     | 55     | 79     | 1      | 1       | -1      | 67      | 8       | 7       | 14       | 7       | 8       | 1      |
| 5        | 7       | 4       | 1       | 3       | 2      | 4      | 2      | 1      | 2      | 2      | 4       | 9       | 7       | 2       | 13      | 3        | 5       | 5       | 1      |
| -2       | 2       | 1       | 2       | 1       | 2      | 2      | 2      | 1      | 4      | 1      | 2       | 3       | 6       | 7       | 5       | 4        | 6       | 3       | 2      |
| 3        | 10      | 5       | 6       | 10      | 8      | 4      | 2      | -3     | 1      | 6      | 1       | 2       | -1<br>4 | -1      | 1       | -1<br>0  | 1       | 0       | 2      |
| -2<br>3  | 0<br>2  | 0<br>6  | -2<br>0 | -1<br>1 | 1<br>3 | 7<br>3 | 4      | 2      | 4<br>6 | 0<br>3 | 2<br>5  | 2<br>5  | 1<br>4  | 2<br>4  | -1<br>3 | 8<br>4   | 6<br>5  | 2<br>3  | 2<br>4 |
| -5       | 6       | 4       | 3       | 2       | 5      | 3      | 2      | 0      | 2      | 4      | 3       | 2       | 7       | 0       | 1       | 3        | 3       | 4       | 3      |
| 4        | 6       | 3       | 4       | 3       | 4      | 6      | 4      | 4      | 12     | 1      | 2       | 2       | 5       | 11      | 8       | 15       | 10      | 8       | 2      |
| 5        | 4       | 6       | 3       | 2       | 4      | 2      | 1      | 1      | 2      | 7      | 4       | 6       | 3       | 6       | 7       | 6        | 8       | 5       | 1      |
| -1       | 2       | 1       | 3       | -1      | 0      | 0      | 0      | 0      | 2      | 1      | 1       | 2       | 0       | 1       | 0       | 0        | 1       | -1      | -1     |
| 1        | 0       | 4       | 1       | -1      | 2      | 1      | 3      | 1      | 3      | 3      | 2       | 3       | 6       | 3       | 1       | -3       | 3       | 3       | 3      |
| 1        | 2       | 41      | 23      | 23      | 12     | 3      | 1      | 1      | 2      | -1     | 0       | 1       | 1       | 9       | 5       | 0        | 1       | 0       | 1      |
| 4        | 6       | 2<br>3  | 3<br>2  | 3<br>3  | 3<br>2 | 4<br>2 | 2<br>1 | 2<br>1 | 3<br>1 | 3<br>8 | 3<br>5  | 5<br>3  | 5<br>9  | 5<br>4  | 2<br>0  | 4<br>1   | 4<br>1  | 4       | 1      |
| 2        | 3<br>2  | 0       | -2      | ა<br>1  | 2      | 0      | 1      | 1      | 1      | o<br>2 | 2       | -1      | 2       | 4       | 2       | -1       | 0       | 4<br>0  | 1<br>4 |
| 4        | 3       | 2       | 0       | 3       | 3      | 5      | 3      | 1      | 3      | 4      | 2       | 0       | 5       | 4       | 2       | 0        | 3       | 2       | 1      |
| -7       | 1       | 0       | 0       | 0       | 1      | 1      | 0      | -1     | 1      | 1      | -1      | 1       | 2       | 2       | 0       | 0        | 0       | 0       | 1      |
| 8        | 4       | 0       | 1       | 1       | 2      | 2      | 3      | 2      | 2      | 3      | 3       | 2       | 4       | 2       | 2       | 1        | 2       | 2       | 3      |
| 3        | 4       | 4       | 4       | 2       | 2      | 0      | -1     | -2     | -1     | 3      | 0       | -2      | -1      | 3       | 4       | 3        | 1       | 2       | -1     |
| 7        | 1       | 5       | 0       | 3       | 2      | 0      | 0      | 0      | -1     | 3      | 1       | 2       | 1       | 4       | 2       | 2        | 1       | 1       | -1     |
| 5        | 5       | 4       | 2<br>6  | 2       | 3      | 2      | 2      | 1      | 1      | 4      | 5<br>9  | 3       | 1       | 4       | 1       | 2        | 1       | 3       | 1      |
| 10<br>-8 | 5<br>0  | 8<br>-1 | 0       | 0<br>0  | 0<br>2 | 2<br>2 | 1<br>1 | 0      | 0<br>5 | 7<br>1 | 0       | 9<br>1  | 5<br>4  | 2<br>1  | 1<br>2  | 9<br>8   | 4<br>5  | 6<br>2  | 1<br>2 |
| 7        | 5       | 3       | 0       | 3       | 3      | 4      | 2      | 3      | 5      | 5      | 6       | 5       | 4       | 0       | 2       | 4        | 4       | 4       | 1      |
| 16       | 19      | 20      | 19      | 8       | 8      | 15     | 89     | 88     | 86     | 11     | 67      | 8       | 98      | 40      | 13      | 64       | 38      | 65      | 13     |
| 2        | 2       | 1       | 1       | 2       | 4      | 1      | 0      | 0      | 1      | 0      | 1       | 1       | 0       | 1       | 2       | 3        | 4       | 0       | 0      |
| 51       | 52      | 68      | 73      | 15      | 49     | 45     | 13     | 11     | 10     | 5      | 40      | 8       | 73      | 4       | 4       | 48       | 12      | 39      | 17     |
| 2        | 0       | 3       | 2       | 1       | 0      | 0      | -1     | -1     | -3     | 3      | 1       | -4      | -2      | 4       | 1       | 3        | 3       | 1       | 1      |
| 3        | 3       | 0       | -1      | 3       | 1      | 2      | 3      | 1      | 2      | -1     | 0       | 6       | -2      | 3       | 1       | -2       | 1       | 1       | 3      |
| 2<br>12  | 3<br>5  | 0<br>3  | 0<br>2  | 3<br>3  | 3<br>4 | 2<br>5 | 2<br>2 | 1<br>2 | 1<br>5 | 3<br>2 | 3<br>2  | -5<br>3 | 3<br>6  | 3<br>5  | 0<br>4  | -1<br>11 | 1<br>12 | 1<br>4  | 2<br>2 |
| 9        | ວ<br>15 | 8       | 7       | 3<br>11 | 8      | 5<br>7 | 2      | 1      | ა<br>2 | 13     | 8       | ა<br>8  | 4       | ა<br>7  | 2       | 5        | 4       | 8       | 1      |
| 2        | 3       | 1       | 1       | 2       | 5      | 7      | 2      | 1      | 1      | 4      | 1       | 2       | 1       | 3       | 1       | 0        | 1       | 0       | 3      |
| 4        | 3       | 4       | 2       | 4       | 4      | 3      | 2      | 1      | 3      | 2      | 2       | -6      | 7       | 4       | 3       | 3        | 4       | 6       | 2      |
| 2        | 5       | 2       | 2       | 4       | 4      | 2      | 0      | 0      | 1      | 10     | -2      | 0       | -1      | 1       | 5       | 3        | 1       | -1      | 1      |
| 2        | 0       | 0       | -2      | 0       | 3      | 8      | -1     | 1      | 1      | 5      | 0       | 1       | 1       | 5       | 0       | 0        | 0       | 0       | 0      |
| 5        | 2       | 6       | 3       | 3       | 4      | 2      | 2      | 1      | 2      | 5      | 5       | 2       | 1       | 7       | 3       | 5        | 6       | 5       | 2      |
| 7        | 2<br>2  | 3<br>3  | 3       | 1       | -1     | 1      | 4      | 0<br>2 | 1      | 3<br>3 | 2<br>3  | 3       | 4<br>2  | 4       | 2       | 6<br>5   | 5<br>1  | 3       | 3      |
| 4        | 2       | 3       | T       | 1       |        | 0      | 0      |        | 0      | 3      | 3       | 2       |         | 3       | 0       | 5        | 1       | 3       | 1      |

| 77      | 75<br>75 | 79      | 76      | 41      | 91      | 89      | 2       | 5       | 2       | 16       | 65       | 54       | 91      | 15      | 17      | 75       | 31      | 40       | 16       |
|---------|----------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|---------|---------|---------|----------|---------|----------|----------|
| 82      | 75<br>-2 | 84<br>0 | 79<br>0 | 39<br>2 | 91      | 89<br>1 | 5<br>-2 | 8       | 6<br>3  | 12<br>-2 | 62<br>-2 | 50<br>-1 | 89<br>0 | 16<br>1 | 16<br>1 | 68<br>1  | 31<br>3 | 39<br>-1 | 15<br>-1 |
| -2      | 1        | 2       | 1       | 1       | 2       | 5       | 1       | 0       | -1      | 2        | 4        | -1       | 2       | 2       | 1       | 1        | -1      | 1        | -2       |
| -3      | 3        | 5       | 5       | 4       | 2       | 9       | 0       | -1      | -1      | 14       | 5        | 11       | 3       | 5       | 1       | 6        | 4       | 3        | 12       |
| 0       | 2        | 3       | 3       | 1       | 2       | 1       | 2       | 1       | 2       | 1        | 2        | 3        | 2       | -2      | 1       | -1       | 1       | 1        | 1        |
| 1       | 4        | 5       | 5       | 2       | 1       | 1       | -5      | -3      | -3      | 4        | 4        | 2        | 1       | 3       | -3      | 6        | 2       | 4        | -1       |
| 8<br>8  | 4<br>2   | 1<br>2  | 1<br>2  | 4<br>1  | 2<br>3  | 3<br>1  | 1<br>1  | 1<br>0  | -1<br>3 | 15<br>2  | -2<br>4  | 3<br>0   | 0<br>1  | 0<br>3  | 0<br>1  | -1<br>0  | 2<br>1  | 0        | 3<br>1   |
| 2       | 3        | 1       | 1       | 1       | 4       | 2       | -2      | -4      | -2      | 2        | 4        | 1        | 6       | 4       | -1      | 2        | 4       | 3        | 2        |
| 3       | 2        | 2       | 1       | 1       | 2       | 1       | 2       | 1       | 2       | 2        | 2        | -1       | 5       | 3       | 4       | 0        | 3       | 3        | 1        |
| 11      | 14       | 8       | 10      | 13      | 13      | 9       | 2       | 1       | 2       | 15       | 6        | 8        | 5       | 8       | 4       | 3        | 4       | 6        | 2        |
| 8       | 2        | 2       | 1       | 1       | 2       | 2       | 2       | 1       | 2       | 4        | 0        | 1        | 5       | 7       | 2       | 2        | 2       | 2        | 0        |
| 7<br>-2 | 4<br>-1  | 4       | 1       | -1      | 5<br>1  | 1<br>-1 | 1<br>0  | 1<br>0  | -1<br>2 | 2<br>1   | 0        | 6<br>-3  | 2<br>-1 | 4<br>1  | 5<br>0  | -1<br>-5 | 3<br>1  | 0<br>0   | 3 -1     |
| 5       | 4        | 2       | 2       | 2       | 4       | 2       | 2       | 1       | -1      | 1        | 1        | -3<br>-1 | 2       | 0       | 0       | 0        | 1       | 0        | 1        |
| 10      | 5        | 5       | 4       | 3       | 5       | 5       | 2       | 0       | 3       | 3        | 6        | 1        | 6       | 2       | 2       | 1        | 2       | 5        | 1        |
| -4      | 4        | 1       | 2       | 1       | 1       | 1       | 1       | -1      | 0       | 1        | 2        | -2       | 3       | 1       | 1       | 3        | 0       | 0        | 0        |
| 0       | 3        | 4       | 3       | 5       | 7       | 7       | -2      | -3      | -1      | 10       | 6        | 3        | 1       | 4       | -2      | 0        | 1       | 3        | 1        |
| 5       | 3        | 4       | 1       | 2<br>-1 | 3       | 3       | 3       | 2       | 3       | 4        | 6<br>1   | 7<br>-1  | 3       | 6       | 2       | 2        | 3       | 3        | 4        |
| 1       | 0<br>1   | 1<br>1  | 1<br>1  | 0       | 1<br>1  | 0<br>-1 | 1<br>0  | 0<br>0  | 3<br>1  | 2<br>1   | -1       | -1<br>-1 | 1<br>1  | 2<br>0  | 1<br>0  | -1<br>0  | 2<br>0  | 0<br>-1  | 0<br>-2  |
| -3      | 5        | 4       | 2       | 3       | 4       | 5       | 2       | 1       | 4       | 4        | 4        | 3        | 5       | 6       | 4       | 9        | 6       | 3        | 4        |
| 2       | 3        | 6       | 4       | 4       | 5       | 3       | -2      | -3      | -1      | 6        | 4        | 4        | 5       | 8       | 0       | 5        | 7       | 5        | 1        |
| -1      | 2        | 1       | 1       | 3       | 4       | 6       | -3      | -3      | -4      | 10       | 3        | 4        | 3       | 3       | -1      | 7        | 13      | 1        | 1        |
| 3       | 4        | 0       | -1      | 0       | 0       | 4       | -3      | -1      | 1       | 1        | 3        | 3        | 5       | 2       | -2      | 5        | 4       | 3        | 2        |
| 1<br>5  | 4<br>4   | 5<br>4  | 2<br>3  | 2<br>3  | 3<br>3  | 2<br>6  | -3<br>2 | -2<br>1 | 0<br>4  | 0<br>5   | 2<br>1   | 0<br>5   | 5<br>10 | 1<br>6  | -2<br>3 | 0<br>8   | 1<br>7  | 2<br>4   | 1<br>0   |
| 21      | 11       | 21      | 10      | 3       | 14      | 28      | 3       | 0       | 2       | 5        | 10       | 8        | 27      | 6       | 1       | 16       | 4       | 7        | 2        |
| 9       | 3        | 9       | 5       | 3       | 3       | 4       | 2       | 0       | 1       | 6        | 7        | 4        | 7       | 7       | 1       | 5        | 2       | 6        | 1        |
| 3       | 2        | 4       | 1       | 1       | 2       | 1       | 1       | 1       | 3       | 6        | 4        | 4        | 3       | 4       | 6       | 2        | 3       | 4        | 1        |
| 4       | 3        | 4       | 2       | 1       | 3       | 0       | 1       | 0       | 1       | 5        | 4        | 5        | 6       | 6       | 3       | 3        | 3       | 4        | 0        |
| 5<br>4  | 3<br>4   | 3<br>1  | 1<br>2  | 1       | 2<br>3  | 1<br>1  | 2<br>2  | 1<br>2  | 1<br>2  | 3<br>2   | 1<br>6   | 2<br>7   | 3<br>4  | 5<br>3  | 2<br>5  | 1<br>5   | 1<br>4  | 3<br>2   | 1<br>2   |
| 11      | 6        | 7       | 6       | 4       | 4       | 3       | 3       | 2       | 3       | 7        | 7        | 8        | 6       | 2       | 2       | 6        | 4       | 9        | 0        |
| 3       | 2        | 1       | 1       | 1       | 3       | 1       | -1      | 0       | 0       | 0        | 0        | 1        | 1       | -1      | 1       | 2        | 1       | -2       | 0        |
| -4      | -2       | 2       | 5       | -1      | 0       | -3      | -3      | -2      | 1       | -1       | 2        | -1       | -4      | 0       | 0       | 0        | -1      | 0        | -1       |
| 6       | 2        | 4       | 2       | 1       | 1       | 2       | 1       | 0       | -1      | 5        | 3        | -2       | 3       | 1       | 1       | 2        | 2       | 2        | 0        |
| 3       | 2<br>5   | 2<br>4  | 2<br>2  | 0<br>2  | 2       | 1<br>4  | 2<br>-3 | -3      | 2<br>-2 | 2<br>2   | 3        | 5<br>2   | 1<br>0  | 2<br>5  | 1<br>-2 | 2<br>1   | 2       | 1<br>0   | 0 2      |
| 6       | 4        | 1       | 1       | 2       | 2       | 3       | 1       | 2       | 6       | 3        | 4        | 3        | 5       | 2       | 1       | 2        | 4       | 3        | 2        |
| 5       | 19       | 12      | 12      | 22      | 24      | 9       | 2       | 1       | 2       | 14       | 4        | 6        | 2       | 6       | 5       | 0        | 2       | 4        | 2        |
| -4      | 3        | -2      | 0       | 1       | 0       | 2       | 1       | 3       | 1       | 2        | -1       | 2        | 0       | 4       | 2       | 0        | 1       | -1       | 2        |
| 6       | 6        | 4       | 3       | 2       | 1       | 2       | 1       | 1       | 4       | 3        | 6        | 3        | 4       | 2       | 3       | 38       | 11      | 2        | 4        |
| 8 2     | 3<br>3   | 2<br>2  | 2<br>2  | 2<br>2  | 4<br>1  | 1<br>0  | 1<br>1  | 1<br>1  | 2<br>-1 | 2<br>1   | 1<br>-1  | -1<br>1  | 4<br>-1 | 2<br>-1 | 1<br>0  | -2<br>2  | 1<br>4  | 1<br>-1  | 0        |
| 0       | 3        | 2       | 1       | 2       | 3       | 0       | 1       | 2       | 1       | 3        | 2        | 3        | 3       | 0       | 1       | 0        | 0       | 1        | 1        |
| -2      | 6        | 2       | 1       | 3       | 4       | 5       | 2       | 3       | 7       | 4        | 3        | 5        | 6       | 3       | 2       | 6        | 5       | 4        | 2        |
| 1       | 0        | 1       | 1       | -1      | 1       | 0       | 1       | 0       | 2       | 2        | 1        | 1        | 2       | 3       | 1       | 1        | 3       | 1        | 2        |
| 63      | 40       | 58      | 36      | 10      | 68      | 70      | 2       | 2       | 4       | 5        | 24       | 9        | 68      | 5       | 6       | 46       | 7       | 6        | 7        |
| 25<br>1 | 20<br>4  | 41<br>0 | 9<br>0  | 5<br>1  | 39<br>2 | 66<br>1 | 2<br>2  | 1<br>0  | 1<br>2  | 1<br>1   | -1<br>2  | 2<br>1   | 0<br>2  | 0 2     | 0<br>-1 | -1<br>0  | 0<br>0  | -1<br>0  | 3        |
| -1      | 4        | 3       | 4       | 2       | 3       | 2       | 2       | 1       | 3       | 7        | 5        | 4        | 6       | 5       | 2       | 1        | 2       | 4        | 1        |
| 4       | 4        | 7       | 3       | 3       | 3       | 3       | 2       | 1       | 2       | 4        | 4        | 4        | 7       | 5       | 3       | 4        | 3       | 4        | 2        |
| 0       | 3        | -2      | 0       | 0       | 2       | 4       | -1      | -4      | -3      | 5        | 1        | 1        | 2       | 3       | -2      | 1        | 3       | 0        | 1        |
| 2       | 5        | 2       | 2       | 4       | 4       | 5       | 1       | 1       | 1       | 2        | 2        | 1        | 2       | 3       | 1       | 1        | 2       | 3        | 2        |
| -2      | 4        | 2<br>7  | 3       | 1       | 2       | 0       | 1       | 0       | 0       | 5<br>1   | 1        | -3       | -3      | 1       | 3       | 3        | 5       | 1        | 0        |
| 4       | 2        | 1       | 3       | 4       | 1       | 1       | 2       | 2       | 1       | 1        | -2       | 2        | 2       | 15      | 11      | 1        | 5       | 7        | 1        |

| 0 4     | 0 4     | 4 5     | 2 2     | 3       | 1 3     | 1 3     | -1<br>2  | -1<br>1  | 0        | 1 11    | 0 8     | 2 7      | -2<br>7 | 2 5     | 2       | 1 4      | 2 3     | 0 5     |
|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|---------|---------|----------|---------|---------|---------|----------|---------|---------|
| 4<br>3  | 2       | 6<br>0  | 4<br>1  | 4<br>1  | 4<br>0  | 3<br>1  | 0<br>2   | 0<br>1   | 1<br>1   | 3<br>3  | -1<br>1 | -2<br>-2 | 1<br>-1 | 5<br>4  | 2<br>2  | 0<br>2   | 2<br>3  | 2<br>1  |
| 4<br>10 | 6<br>5  | 3<br>5  | 5<br>4  | 1       | 1<br>0  | 2<br>1  | 0        | 1<br>0   | -1<br>0  | 10<br>5 | 13<br>4 | 11<br>-1 | 7<br>4  | 5<br>2  | 1<br>1  | 12<br>9  | 6<br>2  | 5<br>4  |
| 4<br>-7 | 4<br>2  | 5<br>3  | 3<br>2  | 2<br>0  | 3<br>3  | 4<br>2  | 2<br>0   | 0<br>-1  | 1<br>-1  | 6<br>2  | 4<br>2  | 1<br>0   | 3<br>-2 | 3<br>1  | 1       | 1<br>-3  | 0<br>0  | 4<br>0  |
| 0       | 3       | 1       | 3       | 3       | 4       | 2       | -3       | -4       | -2       | 3       | 1       | 1        | 3       | 2       | -2      | 1        | 3       | 2       |
| 3<br>2  | 4<br>2  | 12<br>4 | 7<br>3  | 8<br>1  | 5<br>3  | 3<br>2  | -1<br>1  | -3<br>0  | -1<br>1  | 7<br>4  | 6<br>4  | 4<br>1   | 7<br>4  | 7<br>5  | -2<br>1 | 4<br>2   | 3<br>1  | 6<br>1  |
| 0<br>-1 | -1<br>0 | 0       | 0<br>2  | 1<br>0  | 1<br>0  | -1<br>0 | 1<br>0   | 0<br>0   | 3<br>4   | 2<br>1  | 1<br>1  | -1<br>6  | 0<br>-5 | 2       | 1<br>-1 | -1<br>-2 | 5<br>0  | 1       |
| 15      | 19      | 18      | 15      | 22      | 26      | 8       | 2        | 1        | 0        | 27      | 5       | 11       | 4       | 3       | 3       | 2        | 3       | 2       |
| -1<br>2 | 3<br>5  | 1<br>2  | 1<br>2  | 1<br>3  | 2<br>3  | 2<br>5  | 2<br>2   | 1<br>0   | 2<br>3   | 2<br>1  | 2<br>7  | 0<br>3   | 3<br>7  | 2<br>1  | 1<br>1  | -1<br>1  | 1<br>2  | 2<br>4  |
| 1       | 3       | 2       | 1       | 2       | 3       | 3       | 1        | 0        | 0        | 4       | 3       | -3       | 1       | 4       | 2       | 3        | 3       | 2       |
| 2       | 4<br>5  | 2<br>8  | 2<br>6  | 1<br>6  | 2<br>7  | 2<br>10 | 1<br>-3  | 1<br>-1  | 0<br>-1  | 4<br>12 | 4<br>1  | 9<br>12  | 0       | 3<br>12 | 3<br>4  | 3<br>4   | 5<br>6  | 1<br>1  |
| 2<br>8  | 2<br>4  | 4<br>1  | 4<br>2  | 1<br>2  | 2<br>2  | 2<br>2  | 1<br>2   | 0<br>1   | 0<br>2   | 5<br>2  | 3<br>3  | 1        | 2       | -1<br>4 | 0<br>2  | 3        | 1<br>2  | 3<br>1  |
| -1      | 0       | 1       | 2       | -1      | 1       | 0       | 1        | 0        | 5        | 0       | 2       | 1        | 3<br>0  | 3       | 1       | 1        | 0       | 1       |
| 2<br>7  | 4<br>3  | 5<br>5  | 3<br>3  | 3<br>4  | 5<br>2  | 1<br>1  | 1<br>1   | 0<br>2   | 2<br>4   | 6<br>6  | 3<br>3  | 7<br>7   | 5<br>7  | 9<br>7  | 11<br>5 | 7<br>7   | 12<br>7 | 4<br>3  |
| -1      | 2       | 2       | 4       | 1       | 2       | 0       | 1        | 0        | 3        | 0       | 4       | 2        | 3       | 1       | 2       | 0        | 1       | 1       |
| -4      | 5<br>-2 | 3<br>0  | 2<br>2  | 4<br>1  | 4<br>0  | 3<br>-2 | -2<br>-3 | -2<br>-2 | -2<br>-1 | 5<br>0  | 3<br>-2 | 5<br>-7  | 5<br>-3 | 1<br>-3 | -1<br>0 | 9<br>-1  | -1      | 2<br>-1 |
| 0<br>4  | 3<br>4  | 2<br>12 | 2<br>15 | 1<br>21 | 3<br>26 | 1<br>3  | 1<br>1   | 1<br>0   | 2<br>2   | 3<br>5  | 2<br>-2 | 3<br>-1  | 3<br>2  | 1<br>3  | 1<br>2  | 2<br>1   | 1<br>2  | 1<br>1  |
| 4       | 4       | 7       | 4       | 2       | 3       | 2       | 2        | 1        | 1        | 8       | 7       | 9        | 5<br>-1 | 5       | 1       | 5        | 1       | 5       |
| 2<br>-2 | -1<br>1 | -1<br>1 | -1<br>1 | 0<br>0  | 0<br>2  | 1<br>2  | 1<br>2   | 0<br>1   | 0<br>4   | 2<br>2  | 0<br>4  | 3<br>2   | -1<br>4 | 2<br>3  | 5<br>2  | 2<br>2   | 3<br>4  | -1<br>3 |
| 45      | 28      | 30      | 17      | 4       | 28      | 56      | 1        | 2        | 1        | 9       | 16      | 13       | 24      | 0       | 1       | 40       | 5       | 6       |
| 0       | 1<br>1  | -2<br>2 | 0       | 0       | 1<br>2  | -1<br>1 | -2<br>2  | 0        | 1<br>-2  | 1<br>3  | 0<br>2  | -1<br>2  | 3<br>3  | -2<br>2 | 2<br>1  | 11<br>2  | 8<br>1  | 1<br>2  |
| 4<br>2  | 4<br>2  | 2<br>2  | 1<br>1  | 2<br>1  | 2<br>2  | 2<br>3  | 1<br>1   | 1<br>0   | 1<br>-2  | 3<br>6  | 0<br>3  | 4<br>3   | 3<br>4  | -3<br>0 | 5<br>2  | -1<br>2  | 0<br>2  | 0<br>2  |
| 4       | 5       | 4       | 1       | 2       | 3       | 4       | 4        | 0        | 3        | 4       | 4       | 3        | 4       | 1       | 1       | 2        | 3       | 3       |
| 3<br>4  | 4<br>4  | 4<br>1  | 2<br>0  | 2<br>3  | 2<br>4  | 2<br>3  | 2<br>3   | 1<br>2   | 3<br>1   | 3<br>1  | 4<br>3  | 9<br>1   | 2<br>2  | 2<br>2  | 1<br>2  | 2<br>0   | 1<br>1  | 2<br>1  |
| 6<br>4  | 2       | -2<br>4 | -1<br>3 | -1<br>1 | -1<br>3 | 1       | 0<br>1   | 0        | 1<br>1   | 1<br>6  | 1<br>4  | 3<br>5   | 0       | 0<br>3  | 1<br>5  | 3<br>2   | 2<br>0  | -1      |
| 6       | 5       | 7       | 7       | 5       | 5       | 3<br>5  | 2        | 1<br>1   | 4        | 8       | 6       | 4        | 6       | 7       | 3       | 3        | 4       | 2<br>5  |
| 6<br>2  | 1<br>4  | 3<br>3  | 4<br>3  | 3<br>2  | 3<br>4  | 2<br>2  | 4<br>-2  | 0<br>-2  | 4<br>-1  | 4<br>3  | 2<br>6  | 1<br>6   | 4<br>8  | 1<br>4  | 2<br>-2 | 0<br>1   | 2       | 1<br>4  |
| 6       | 3       | 1       | 1       | 3       | 4       | 3       | 4        | 2        | 1        | 3       | 0       | 4        | 1       | 4       | 2       | 0        | 2       | 0       |
| 5<br>2  | 6<br>2  | 2<br>2  | 1<br>3  | 2<br>1  | 2       | 3<br>1  | 0<br>1   | 1<br>1   | 0<br>0   | 1<br>3  | 2<br>2  | 6<br>1   | 0<br>2  | 1<br>1  | 3<br>0  | 6<br>2   | 8<br>1  | 1       |
| 3<br>11 | 3<br>4  | 1<br>8  | 1<br>5  | 1       | 3<br>7  | 0<br>8  | 2        | 0<br>-2  | 3<br>1   | 3<br>-1 | 2       | -3<br>3  | 3<br>11 | 1<br>3  | 0       | 1<br>13  | 1<br>2  | 0       |
| -2      | 0       | 1       | 2       | 0       | 1       | -1      | -1       | -1       | 0        | 1       | -3      | -5       | 1       | 0       | 1       | 1        | 0       | -1      |
| 5<br>8  | 10<br>7 | 10<br>5 | 10<br>6 | 2<br>1  | 4<br>1  | 3<br>1  | 2<br>1   | 2<br>0   | 5<br>0   | 5<br>3  | 4<br>3  | 4<br>3   | 8<br>2  | 8<br>3  | 7<br>2  | 14<br>5  | 10<br>5 | 5<br>4  |
| -2      | 2       | 1       | 2       | 0       | 2       | 0       | 2        | 1        | -4       | 2       | -1      | -2       | 3       | 4       | 2       | 2        | 2       | 3       |
| 6<br>10 | 6<br>5  | 3<br>3  | 2<br>3  | 2<br>5  | 3<br>5  | 4<br>4  | 1<br>4   | 1<br>1   | 1<br>4   | 2<br>2  | 1<br>2  | 0<br>4   | 1<br>3  | -1<br>4 | 1<br>3  | 2<br>1   | 1<br>3  | 0<br>3  |
| 2       | 3       | 1       | 0       | 0       | 2       | 0       | 0        | 0        | 0        | 1<br>2  | -2      | 4        | 0       | 1<br>3  | 1       | 4        | 1       | 0       |

| 2       | 4       | 5        | 1        | 5        | 4        | 3        | 1       | 1       | 2       | 3       | 1       | 1        | 6        | 8       | 15      | 13      | 20      | 4       | 3       |
|---------|---------|----------|----------|----------|----------|----------|---------|---------|---------|---------|---------|----------|----------|---------|---------|---------|---------|---------|---------|
| 3       | 3       | 1        | -1       | 0        | 2        | 1        | 0       | 0       | 1       | 0       | -1      | -10      | 4        | 0       | 2       | 28      | 11      | 0       | 0       |
| 12      | 6       | 7        | 4        | 7        | 7        | 3        | 1       | 1       | 3       | 5       | 4       | 12       | 4        | 1       | 2       | -1      | 2       | 2       | 1       |
| 5       | 3       | 4        | 3        | 4        | 3        | 5        | 3       | 1       | 3       | 3       | 4       | 7        | 4        | 4       | 2       | 3       | 4       | 4       | 3       |
| 3       | 14      | 3        | 3        | 5        | 4        | 6        | 1       | -1      | 2       | 3       | 2       | 7        | 2        | 3       | 1       | 2       | 2       | 1       | 0       |
| 4<br>6  | 4<br>5  | 3<br>8   | 2<br>7   | 0        | 2        | 0<br>3   | 0<br>1  | 0<br>2  | 1<br>2  | 3<br>9  | 3<br>6  | 3<br>8   | 0<br>7   | 3<br>6  | 1<br>2  | 1<br>5  | 2<br>3  | 0<br>8  | 1<br>1  |
| -6      | 0       | -1       | 0        | 2<br>1   | -1       | 0        | 0       | 0       | 1       | 0       | 1       | 0        | 1        | 0       | 1       | 13      | 5       | -1      | -1      |
| -2      | 0       | 0        | 2        | 1        | 1        | -1       | 0       | -1      | 2       | 1       | 1       | 1        | 1        | 0       | 0       | 0       | 1       | -1      | -1      |
| 5       | 8       | 13       | 12       | 9        | 9        | 4        | -3      | -2      | -3      | 9       | 7       | 11       | 4        | 6       | -3      | 9       | 5       | 6       | 0       |
| 1       | 3       | 1        | 2        | 2        | 3        | 2        | 2       | 0       | 3       | 1       | 0       | 0        | 4        | 2       | 2       | 2       | 4       | 2       | 3       |
| 0       | 4       | 1        | 3        | 2        | 2        | 1        | -1      | -3      | -4      | 4       | 4       | 6        | 5        | 3       | -2      | 1       | 3       | 2       | 2       |
| 1       | 4       | 5        | -1       | 3        | 2        | 0        | 1       | 1<br>-1 | 1       | 1<br>-2 | 1       | 1        | 1        | 2<br>1  | 1       | -2      | 1       | 0       | 2       |
| 2 4     | 3<br>6  | 0<br>8   | 2<br>6   | 0<br>10  | 2<br>5   | 2<br>4   | 0<br>3  | 1       | 2<br>2  | 3       | 1<br>2  | 2<br>9   | 2<br>3   | 2       | -1<br>6 | 1<br>-1 | 2<br>2  | 0<br>2  | -1<br>4 |
| 5       | 5       | 12       | 6        | 12       | 9        | 3        | 1       | 1       | 1       | 5       | 2       | 3        | 8        | 6       | 3       | 1       | 3       | 8       | 0       |
| 8       | 3       | 1        | 1        | 1        | 1        | 2        | 1       | 1       | 1       | 0       | 1       | 0        | 1        | 4       | 0       | -1      | 1       | 0       | 0       |
| -1      | 0       | 0        | -1       | 2        | 1        | -1       | 3       | 0       | -2      | 1       | 0       | 0        | 1        | 4       | 0       | 1       | 2       | 1       | -1      |
| 0       | 0       | -1       | 1        | 3        | 0        | -1       | 0       | 0       | 2       | 2       | 0       | 1        | 2        | 4       | 1       | 4       | 7       | 3       | 1       |
| 3       | 3       | 3        | 3        | 1        | 2        | 0        | 0       | 1       | 0       | 6       | 4       | 4        | 2        | 3       | -1      | 2       | 0       | 3       | 0       |
| 4       | 4       | 7        | 4        | 4        | 5        | 7        | 0       | -1<br>1 | 0       | 16      | 7       | 12       | 2        | 8       | 8<br>1  | 8       | 10      | 6       | 13      |
| 2 3     | 3<br>9  | 5<br>5   | 3<br>6   | 1<br>4   | 3<br>5   | 2<br>3   | 2<br>-2 | 1<br>-4 | 2<br>-2 | 6<br>4  | 4<br>2  | 1<br>7   | 7<br>2   | 2<br>3  | -1      | 3<br>-2 | 1<br>3  | 5<br>3  | 1<br>4  |
| 8       | 2       | 2        | 1        | 3        | 3        | 1        | 1       | 0       | 2       | 2       | 1       | 2        | 5        | 7       | 11      | 18      | 24      | 3       | 4       |
| 6       | 3       | 5        | 1        | 3        | 20       | 36       | 1       | 1       | 2       | 4       | 2       | 4        | 5        | 4       | 2       | 3       | 5       | 2       | 1       |
| 38      | 20      | 35       | 16       | 1        | 27       | 50       | 2       | 0       | 1       | 3       | 8       | 10       | 21       | -3      | 3       | 20      | 2       | 1       | 1       |
| 14      | 8       | 10       | 9        | 5        | 7        | 3        | 2       | 1       | 1       | 4       | 9       | 6        | 7        | 6       | 2       | 7       | 4       | 5       | 4       |
| -1      | 2       | 1        | 2        | 1        | 3        | 2        | 4       | 0       | 2       | 2       | 4       | 4        | 5        | 4       | 3       | 3       | 3       | 4       | 3       |
| 3       | 3       | 1        | -1       | 1        | 3        | 2        | 2       | 1       | 2       | 1       | 2       | 0        | 4        | 4       | 1       | 0       | 2       | 2       | 5       |
| 16<br>5 | 24<br>2 | 61<br>0  | 34<br>-1 | 17<br>1  | 34<br>0  | 68<br>0  | 3<br>1  | 2<br>1  | 3<br>1  | 9<br>1  | 4<br>-1 | 4<br>2   | 6<br>0   | 6<br>5  | 2<br>2  | 6<br>1  | 4<br>1  | 5<br>-1 | 1<br>3  |
| 1       | 3       | -1       | 1        | 3        | 3        | 2        | 3       | 0       | 3       | 2       | 6       | 4        | 8        | 4       | 4       |         | 2       | 4       | 5       |
| 3       | 3       | 3        | -1       | 6        | 4        | 2        | 3       | 3       | 2       | 3       | 2       | 6        | 1        | 6       | 2       | 2<br>-1 | 1       | 3       | 3       |
| 5       | 5       | 6        | 4        | 4        | 4        | 4        | 2       | 1       | 1       | 13      | 3       | 10       | 2        | 2       | 2       | 2       | 2       | 3       | 1       |
| 72      | 40      | 45       | 23       | 6        | 41       | 67       | 2       | 0       | 1       | 6       | 14      | 11       | 29       | 3       | 3       | 36      | 6       | 3       | 4       |
| 6       | 2       | 2        | 0        | 3        | 3        | 1        | 2       | -1      | 3       | 5       | 4       | 2        | 3        | 2       | 2       | 4       | 3       | 2       | 4       |
| 7       | 7<br>45 | 65<br>82 | 57       | 55<br>88 | 44<br>92 | 5<br>84  | 4       | 3       | 5<br>3  | 1<br>64 | 0       | -4<br>59 | 3<br>19  | 16      | 7       | 5<br>0  | 6       | 5<br>21 | 0       |
| 48      | 45<br>4 | 82       | 80<br>4  | 2        | 1        | 0        | 1       | 4<br>0  | ა<br>1  | 2       | 40<br>2 | 0        | -1       | 12<br>2 | 29<br>0 | 9<br>1  | 13<br>0 | 1       | 0       |
| -1      | 5       | 0        | 0        | -1       | 2        | 2        | 1       | 1       | 3       | 1       | 2       | 5        | -1       | 3       | 1       | 1       | 1       | 1       | -1      |
| 8       | 5       | 6        | 6        | 7        | 8        | 21       | -3      | -5      | -1      | 48      | 4       | 40       | 1        | 4       | 9       | 7       | 18      | 1       | 10      |
| 6       | 7       | 4        | 3        | 0        | 4        | 3        | 2       | 0       | 2       | 4       | 8       | 5        | 2        | 5       | 2       | 6       | 3       | 2       | 4       |
| 6       | 5       | 55       | 39       | 39       | 19       | 6        | 2       | 1       | 6       | 6       | 3       | 1        | 5        | 10      | 6       | -1      | 4       | 3       | 1       |
| 1       | 3       | -1       | 1        | 0        | -1<br>4  | 1        | 0       | 0       | 1       | 3       | 4       | -1       | -2<br>-  | 4       | 2       | 4       | 4       | 0       | 5       |
| -5      | 5<br>1  | 6<br>0   | 4        | 2<br>0   | 4        | 4<br>1   | 2<br>1  | 2<br>1  | 2<br>1  | 7<br>1  | 7<br>2  | 6<br>2   | 5<br>-1  | 2<br>1  | 2<br>1  | 4<br>0  | 2       | 5<br>0  | 1<br>0  |
| 11      | 7       | 34       | 16       | 6        | 38       | 70       | -2      | -2      | 0       | 1       | -1      | 3        | -1<br>-2 | -2      | 0       | 0       | 0       | -1      | 0       |
| 4       | 4       | 5        | 1        | 5        | 2        | 3        | 2       | 1       | 1       | 2       | 2       | 4        | 2        | 2       | 11      | 6       | 12      | 1       | 4       |
| 8       | 9       | 6        | 6        | 2        | 3        | 3        | -2      | -3      | 0       | 4       | 5       | 4        | 8        | 4       | -2      | 16      | 4       | 5       | 1       |
| 9       | 12      | 70       | 67       | 63       | 54       | 7        | 2       | 0       | 3       | 14      | 4       | 5        | 10       | 30      | 17      | 5       | 6       | 9       | 1       |
| 24      | 20      | 47       | 22       | 10       | 51       | 77       | 0       | 1       | 2       | 3       | 2       | 2        | 1        | 4       | 1       | 1       | 2       | -1      | 3       |
| 1<br>-2 | 3<br>0  | 6<br>1   | 3<br>2   | 3<br>-1  | 3<br>0   | 1<br>-1  | 2<br>4  | 1<br>2  | 5<br>3  | 2<br>-1 | 1<br>0  | 5<br>-1  | 7<br>2   | 3<br>3  | 3<br>3  | 1<br>1  | 2<br>2  | 2<br>2  | 2       |
| 0       | 1       | 0        | 1        | 2        | 2        | -1<br>-1 | 0       | 0       | 2       | 1       | 0       | 1        | 3        | ა<br>1  | 0       | 0       | 0       | 0       | 0<br>-2 |
| 9       | 20      | 21       | 27       | 17       | 13       | 36       | 91      | 85      | 87      | 3       | 60      | 10       | 97       | 45      | 9       | 36      | 23      | 53      | 1       |
| 5       | 7       | 72       | 40       | 54       | 38       | 4        | 2       | 0       | 2       | 5       | 0       | 6        | 1        | 22      | 16      | 3       | 5       | 5       | 3       |
| -5      | 4       | 2        | 1        | 3        | 4        | 3        | 2       | 1       | 4       | 4       | 4       | 0        | 4        | 5       | 11      | 4       | 5       | 4       | 1       |
| 8       | 2       | 1        | 1        | 1        | 0        | 2        | 0       | 0       | 1       | 4       | 1       | 2        | 8        | 4       | 4       | 1       | 1       | 2       | -1      |

| 1  | 2  | 1  | 3  | 0  | 2  | 1  | 0  | 1  | 1  | 1  | 4  | 1  | 2  | -1 | 3  | 2   | 2  | 1  | 1  |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|----|----|----|
| 10 | 4  | 7  | 7  | 11 | 12 | 9  | 0  | 0  | 0  | 19 | 2  | 18 | 2  | 8  | 4  | 4   | 6  | 1  | 20 |
| 20 | 21 | 34 | 26 | 10 | 53 | 74 | 2  | 1  | 3  | 4  | 3  | 5  | 7  | 2  | 2  | 13  | 2  | 3  | 3  |
| -2 | -1 | 2  | 0  | 4  | 1  | -1 | -2 | -1 | -2 | 2  | -3 | 0  | 0  | 9  | 22 | 18  | 28 | 0  | 0  |
| 85 | 83 | 86 | 81 | 31 | 93 | 91 | 22 | 37 | 32 | 13 | 42 | 41 | 88 | 49 | 38 | 65  | 34 | 55 | 5  |
| 12 | 51 | 31 | 36 | 60 | 66 | 14 | 2  | 1  | 3  | 48 | 10 | 18 | 7  | 6  | 3  | -12 | 3  | 7  | 3  |

| AGC   | AGC   | AGC  | AGC  | AGC   | AGC   | AGC   | AGC   | S-T-PK  | S-T-PK  | S-T-PK  | CAMK                                      | CAMK  | CAMK  | CAMK                                       | CAMK   | CAMK  | CAMK                                       | CAMK                                       | CAMK   |
|---|---|--|--|---|---|---|---|---|---|---|---|---|---|--|--|---|--|--|--|
| w ∞ PRKG2                                     | PRKG1   | 2 PRKX   | PKA  | ROCK1   | ROCK2   | MRCK-β                                      | ™RCK-α                                      | AURORA-B  | AURORA-C  | AURORA-A  | СНЕК2                                     | DCAMKL2                                     | 0 × 0 CAMK4                                   | CAMK1D                                     | PHKG1  | PHKG2                                       | CAMK2D                                     | CAMK2A                                     | PRAK   |
| 1<br>3<br>40<br>53<br>76<br>7<br>3            | 4<br>3<br>1<br>4<br>18<br>53<br>76<br>5<br>6  | 1<br>1<br>0<br>47<br>75<br>85<br>1<br>3        | 0<br>2<br>0<br>14<br>27<br>46<br>81<br>4<br>3  | 6<br>0<br>2<br>7<br>90<br>90<br>12<br>10<br>3 | 14<br>1<br>4<br>12<br>84<br>84<br>10<br>20<br>2 | 0<br>1<br>2<br>37<br>38<br>20<br>1          | 3<br>4<br>0<br>17<br>23<br>24<br>3<br>0     | 43<br>8<br>50<br>24<br>46<br>22<br>1<br>45<br>7 | 85<br>12<br>72<br>80<br>78<br>33<br>1<br>66<br>2<br>7 | 73<br>6<br>76<br>67<br>88<br>71<br>1<br>93      | 13<br>5<br>1<br>9<br>6<br>4<br>1<br>9     | 0<br>1<br>2<br>3<br>1<br>-2<br>3            | 5<br>1<br>0<br>-1<br>-1<br>2                  | 4<br>2<br>0<br>6<br>3<br>0<br>1<br>1<br>1  | 10<br>4<br>21<br>5<br>1<br>1<br>2<br>27<br>3 | 6<br>4<br>-2<br>1<br>-2<br>1<br>2<br>8<br>0 | 6<br>3<br>6<br>4<br>4<br>3<br>0<br>11<br>6 | 3<br>0<br>4<br>3<br>1<br>-2<br>6<br>3      | 1<br>1<br>0<br>-2<br>-1<br>1<br>0<br>2         |
| 60<br>8<br>1<br>11<br>3<br>71<br>4<br>5<br>35 | 68<br>5<br>3<br>11<br>2<br>45<br>0<br>4<br>50 | 80<br>9<br>3<br>12<br>0<br>66<br>-2<br>1<br>59 | 71<br>11<br>2<br>14<br>0<br>49<br>1<br>2<br>43 | 84<br>8<br>1<br>4<br>1<br>5<br>3<br>4         | 86<br>13<br>7<br>4<br>-1<br>6<br>3<br>3         | 66<br>4<br>0<br>5<br>2<br>2<br>1<br>2<br>35 | 65<br>2<br>2<br>8<br>0<br>7<br>1<br>1<br>20 | 10<br>74<br>2<br>8<br>16<br>5<br>7<br>1         | 7<br>100<br>6<br>11<br>30<br>4<br>24<br>9<br>28       | 17<br>97<br>12<br>8<br>44<br>5<br>28<br>5<br>70 | 7<br>9<br>3<br>6<br>12<br>6<br>1<br>1     | 2<br>0<br>0<br>1<br>0<br>-1<br>0<br>-1<br>0 | 0<br>2<br>-3<br>4<br>4<br>3<br>2<br>0<br>2    | 2<br>4<br>-2<br>4<br>3<br>2<br>2<br>2<br>1 | 7<br>13<br>13<br>1<br>6<br>4<br>11<br>3<br>2 | 4<br>-2<br>6<br>4<br>0<br>4<br>0<br>1       | 4<br>4<br>3<br>7<br>4<br>8<br>3<br>5<br>4  | 1<br>-1<br>2<br>7<br>4<br>4<br>2<br>5<br>3 | 3<br>-1<br>3<br>1<br>-2<br>1<br>-2<br>-1<br>-1 |
| 4<br>8<br>0<br>4<br>8<br>6<br>3<br>3          | 4<br>7<br>2<br>5<br>4<br>3<br>6<br>2          | 4<br>-4<br>0<br>1<br>5<br>2<br>5<br>3          | 12<br>-1<br>1<br>-1<br>3<br>17<br>4<br>2       | 2<br>7<br>0<br>2<br>5<br>0<br>1<br>2          | 5<br>10<br>0<br>2<br>10<br>3<br>6<br>7          | 1<br>1<br>4<br>0<br>3<br>2<br>-1<br>0       | 3<br>9<br>4<br>0<br>0<br>11<br>3<br>3       | 6<br>5<br>5<br>54<br>48<br>4<br>5<br>6          | -1<br>3<br>0<br>82<br>86<br>-3<br>-6<br>0             | 6<br>6<br>4<br>72<br>38<br>6<br>3<br>15         | 15<br>6<br>4<br>7<br>14<br>3<br>8<br>4    | 1<br>5<br>0<br>-2<br>2<br>-4<br>1           | 2<br>-2<br>3<br>4<br>0<br>-1<br>1<br>-5<br>-5 | 1<br>6<br>18<br>3<br>-1<br>2<br>-1         | 10<br>10<br>29<br>7<br>30<br>5<br>9          | 7<br>10<br>1<br>3<br>20<br>3<br>10<br>6     | 3<br>38<br>10<br>5<br>3<br>2<br>3<br>3     | 6<br>13<br>1<br>4<br>-2<br>2<br>3<br>1     | 3<br>2<br>-1<br>1<br>1<br>1<br>4<br>2          |
| 5<br>2<br>-1<br>5<br>0<br>66<br>2<br>3        | 4<br>2<br>0<br>5<br>0<br>77<br>3<br>-1        | 3<br>2<br>0<br>3<br>0<br>63<br>1<br>1          | 2<br>30<br>1<br>4<br>1<br>66<br>4<br>0         | 1<br>2<br>2<br>7<br>0<br>94<br>4<br>1         | 4<br>2<br>7<br>2<br>90<br>3<br>2                | 7<br>3<br>0<br>5<br>1<br>59<br>0            | 17<br>5<br>-1<br>5<br>1<br>42<br>0<br>-1    | 5<br>4<br>8<br>74<br>49<br>8<br>16<br>43        | -1<br>-3<br>8<br>94<br>85<br>4<br>14<br>61            | 8<br>3<br>21<br>77<br>65<br>43<br>38<br>48      | -2<br>-1<br>1<br>43<br>2<br>13<br>2<br>10 | 3<br>4<br>0<br>0<br>0<br>3<br>1             | -1<br>0<br>0<br>2<br>1<br>2<br>-2<br>-1       | 2<br>0<br>1<br>6<br>3<br>2<br>1<br>0       | 8<br>2<br>12<br>76<br>3<br>6<br>5<br>32      | 5<br>-2<br>-1<br>11<br>1<br>2<br>2<br>5     | 15<br>0<br>4<br>63<br>2<br>4<br>4<br>5     | 6<br>-1<br>1<br>30<br>1<br>2<br>1<br>-2    | 1<br>0<br>0<br>0<br>-1<br>1<br>0               |
| 13<br>1<br>31<br>1<br>6<br>0<br>0             | 20<br>2<br>42<br>3<br>8<br>0<br>-1<br>3       | 53<br>4<br>24<br>1<br>3<br>-1<br>-1            | 30<br>4<br>21<br>0<br>7<br>48<br>-1            | 74<br>8<br>73<br>0<br>3<br>1<br>2             | 75<br>18<br>75<br>4<br>4<br>-2<br>3<br>1        | 30<br>1<br>5<br>-3<br>1<br>1<br>0           | 12<br>3<br>1<br>1<br>3<br>-1<br>0           | 18<br>77<br>17<br>5<br>4<br>4<br>19<br>3        | 27<br>104<br>21<br>-6<br>6<br>-2<br>22<br>0           | 63<br>94<br>51<br>12<br>27<br>22<br>37<br>15    | 2<br>7<br>2<br>2<br>5<br>-2<br>4<br>0     | 0<br>1<br>4<br>-6<br>1<br>6<br>-2<br>-4     | 0<br>-5<br>1<br>-3<br>1<br>0<br>1<br>2        | 0<br>0<br>1<br>-1<br>3<br>-1<br>1          | 4<br>6<br>2<br>2<br>25<br>1<br>16<br>9       | 2<br>7<br>0<br>3<br>8<br>-6<br>-4<br>-1     | 1<br>4<br>4<br>1<br>11<br>2<br>2<br>12     | 0<br>1<br>2<br>2<br>5<br>-3<br>-5<br>4     | 1<br>3<br>0<br>1<br>2<br>0<br>-1<br>0          |

| 84   | 9 5    | 2  | 28 | 2  | 1  | 1  | 6  | 15 | 10 | 13 | -1 | 2  | 4  | 4  | 3  | 0  | 5  | 7  |
|--|--------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 10   |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 5         7         4         3         1         5         2         1         4         -1         111         2         0         0         3         8         8         7         5           3         2         3         4         4         4         1         -3         11         13         9         -4         1         -9         0         13         2         6         4         6         5         0         83         77         89         90         24         23         22         34         2         3         1         8         3         7         9         3         4         8         6         6         6         4         2         16         6         6         4         2         16         -1         3         2         4         3         3         4         2         1         -5         0         5         10         -1         8         4         1         -4         -6         1         -1         4         -7         3         3         4         4         -7         3         3         1         -1         -1         -1         <   |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 3 3 1 2 2 1 1 1 1 1 1 1 0 9 5 29 1 1 3 2 6 6 4 4 6 6 3 3 2 3 4 4 4 1 1 -3 11 13 9 -4 1 1 -9 0 13 6 5 0 6 6 5 0 8 377 89 90 24 23 22 34 2 3 1 8 3 7 9 3 3 4 8 6 6 6 5 4 3 3 33 45 23 16 4 6 6 6 4 2 16 -1 3 2 4 3 -1 0 -1 -2 1 -2 0 0 3 -4 5 -2 0 1 1 4 1 -3 0 1 -3 3 3 4 8 6 6 6 5 4 3 3 33 45 23 16 4 6 6 6 4 2 16 -1 3 2 2 4 3 3 -1 0 -1 -2 1 5 0 5 1 5 10 -1 8 4 1 -4 0 4 1 -6 7 3 3 3 4 4 2 1 5 0 0 5 10 -1 8 4 1 1 -2 0 1 1 -2 1 1 1 -2 1 1 1 1   |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 3         2         3         4         4         4         1         -3         11         13         9         -4         1         -9         0         13         6         5         0         83         77         89         90         24         23         22         34         2         3         1         8         3         7         9         3         4         8         6           6         5         4         3         33         45         23         16         4         6         6         4         2         16         -1         -3         2         0         1         4         1         -6         1         -3         -1         -6         1         -1         8         4         1         -4         0         4         7         3         3         4         4         4         0         6         20         24         2         -1         69         95         79         12         1         -1         1         7         7         7         0         2         4         1         3         3         2         0         -1         4  |        |    |    |    |    |    |    |    |    |    | 1  |    |    |    |    |    |    |    |
| 6  | 5 0    | 6  |    |    | -9 | 1  | -4 |    |    |    | -3 | 1  | 4  | 4  |    | 3  | 2  |    |
| -1 0 -1 -2 1 -2 0 0 3 -4 5 -2 0 1 4 1 -6 1 -3 2 3 4 2 1 5 0 5 10 -1 8 4 1 -4 0 4 7 3 3 4 4 4 3 1 3 5 2 -2 9 9 9 9 6 -1 1 2 5 2 4 4 4 4 4 0 6 20 24 2 -1 69 95 79 12 1 -1 -1 1 5 2 5 2 5 5 74 70 64 78 92 90 67 70 2 6 5 5 5 2 1 1 1 7 7 7 7 0 2 4 1 -3 56 71 87 86 63 53 18 44 79 8 1 1 2 2 -1 1 1 1 1 1 1 1 1 1 6 5 2 5 5 5 5 1 1 3 3 3 2 0 -1 18 12 17 5 1 0 1 7 7 4 5 5 5 2 5 5 15 1 4 6 6 14 2 2 42 66 55 24 1 -1 5 17 9 11 5 5 5 2 -2 5 5 5 15 4 6 6 14 2 2 42 66 55 24 1 -1 5 17 9 11 5 5 5 2 -2 5 5 15 1 4 6 6 14 2 2 42 66 55 24 1 -1 5 17 9 11 5 5 5 2 -2 2 2 0 -2 2 2 4 6 13 11 2 -1 1 5 17 9 11 5 5 5 2 -2 2 2 0 -2 2 2 4 6 13 11 2 -1 1 5 17 9 11 5 5 5 2 -2 2 2 1 1 1 1 1 1 1 1 2 5 5 2 5 5 1 2 1 1 1 1   |        | 4  |    | 9  |    | 3  | 8  |    |    |    | 34 | 22 | 23 | 24 |    |    | 77 | 83 |
| 2 3 4 2 1 5 0 5 10 -1 8 4 1 1 -4 0 4 7 3 3 3 4 4 4 0 6 6 20 24 2 -1 69 95 79 12 1 -1 1 5 2 5 2 4 4 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7   | 4 3    | 2  |    | -1 | 16 | 2  | 4  | 6  | 6  | 4  | 16 | 23 | 45 | 33 | 3  | 4  | 5  | 6  |
| 4  | 1 -3 - | -6 | 1  | 4  | 1  | 0  | -2 | 5  | -4 | 3  | 0  | 0  | -2 | 1  | -2 | -1 | 0  | -1 |
| 4         4         0         6         20         24         2         -1         69         95         79         12         1         -1         1         5         2         5         5           74         70         64         78         92         90         67         70         2         6         5         5         2         1         1         7         7         7         0           2         4         1         -3         0         1         -1         4         -3         -10         -1         0         -3         1         1         -1         1         1         3           6         5         1         3         3         2         0         -1         18         12         17         5         1         0         1         7         4         5         5           2         2         5         2         3         -4         1         -1         20         30         30         5         2         -2         -1         14         5         7         2           55         1         2         2         4   | 3 3    | 7  | 4  | 0  | -4 | 1  | 4  | 8  | -1 | 10 | 5  | 0  | 5  | 1  | 2  | 4  | 3  | 2  |
| 74         70         64         78         92         90         67         70         2         6         5         5         2         1         1         7         7         7         0           2         4         1         -3         0         1         -1         4         -3         -10         -1         0         -3         1         1         -1         1         1         3           61         73         56         71         87         86         63         53         18         44         79         8         1         1         2         2         -1         17         6         6           6         5         1         3         2         0         -1         18         12         17         5         1         17         9         11         5           2         2         2         3         -4         1         -1         20         30         30         5         2         -2         -1         11         5         5         2         -2         -1         11         5         6         6         6         11   | 4 4    | 2  | 5  | 2  | 1  | -1 | 6  | 9  | 9  | 9  | -2 | 2  | 5  | 3  | 1  | 3  | 4  | 4  |
| 2  | 5 5    | 2  | 5  | 1  | -1 | 1  | 12 | 79 | 95 | 69 | -1 | 2  | 24 | 20 | 6  | 0  | 4  | 4  |
| 61 73 56 71 87 86 63 53 18 44 79 8 1 1 2 2 2 -1 17 6 6 6 5 1 3 3 2 0 -1 18 12 17 5 1 0 1 7 4 5 5 2 2 5 2 3 -4 1 -1 20 30 30 5 5 2 -2 -1 14 5 7 2 5 5 15 4 6 6 14 2 2 42 66 55 24 1 -1 5 17 9 11 5 5 3 4 3 5 4 4 0 8 7 12 2 1 1 4 2 1 12 5 5 2 -2 2 0 -2 2 4 6 13 11 2 -1 5 6 6 6 -1 12 6 4 4 5 0 27 31 3 -1 39 82 15 4 -5 5 3 8 -1 4 2 1 12 6 4 4 5 0 27 31 3 -1 39 82 15 4 -5 5 3 8 -1 4 2 1 12 6 1 4 1 1 1 1 0 1 0 1 0 7 12 6 2 1 1 1 4 2 3 1 2 4 1 1 3 2 2 1 1 1 4 2 3 1 2 4 1 1 3 3 2 0 2 6 6 -1 2 9 38 13 6 6 -16 -2 -2 11 4 2 3 1 2 4 1 1 3 2 2 3 1 4 4 1 1 1 1 4 1 0 15 3 13 0 0 1 1 2 3 1 1 4 4 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1  | 7 0    | 7  |    | 1  | 1  |    | 5  |    |    |    | 70 | 67 | 90 | 92 |    | 64 | 70 | 74 |
| 6  |        |    |    |    | 1  | -3 |    |    |    |    |    |    |    |    |    |    |    |    |
| 2         2         5         2         3         -4         1         -1         20         30         30         5         2         -2         -1         14         5         7         2           55         15         4         6         6         14         2         2         42         66         55         24         1         -1         5         17         9         11         5           5         3         4         3         5         4         4         0         8         7         12         2         1         1         4         2         1         12         6           4         4         5         0         27         31         3         -1         39         82         15         4         -5         5         3         8         -1         4         2           12         6         1         4         1         4         0         1         6         -1         12         4         2         -1         1         4         2         4           12         3         -1         1         1         0  |        | -1 |    |    |    | 1  |    |    |    |    |    |    |    |    |    |    |    | 61 |
| 55         15         4         6         6         14         2         2         42         66         55         24         1         -1         5         17         9         11         5           5         3         4         3         5         4         4         0         8         7         12         2         1         1         4         2         1         12         5         6         6         -1         12         5         6         6         -1         12         6         4         4         5         0         27         31         3         -1         39         82         15         4         -5         5         3         8         -1         4         2         1         14         2         3         -1         1         2         9         38         13         6         -16         -2         -2         11         4         2         4         4         1         1         1         0         1         0         1         1         3         1         2         4         1         4         4         1         1         1   |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 5         3         4         3         5         4         4         0         8         7         12         2         1         1         4         2         1         12         5           5         2         -2         2         0         -2         2         4         6         13         11         2         -1         5         6         6         -1         12         6         4         -5         5         5         3         8         -1         4         2         -1         2         6         -1         12         4         2         -1         2         8         5         1         2         2         3         -1         1         1         0         1         0         7         12         6         2         1         14         2         3         1         2         4         4         1         1         1         0         1         2         3         1         4         4         2         3         1         4         4         2         3         3         1         0         1         2         3         1         2  |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 5         2         -2         2         0         -2         2         4         6         13         11         2         -1         5         6         6         -1         12         6           4         4         5         0         27         31         3         -1         39         82         15         4         -5         5         3         8         -1         4         2           12         6         1         4         1         4         0         1         6         -1         12         4         2         -1         2         8         5         1         2           2         3         -1         1         1         0         1         0         7         12         6         2         1         14         2         3         1         2         4           1         3         2         0         2         6         -1         2         9         38         13         6         -16         -2         -2         11         4         4         4         4         4         14         1         0         0         <   |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 4       4       5       0       27       31       3       -1       39       82       15       4       -5       5       3       8       -1       4       2         12       6       1       4       1       4       0       1       6       -1       12       4       2       -1       2       8       5       1       2         2       3       -1       1       1       0       1       0       7       12       6       2       1       14       2       3       1       2       4         1       3       2       0       2       6       -1       2       9       38       13       6       -16       -2       -2       11       4       2       3         4       4       1       1       1       4       1       0       15       3       13       0       0       1   |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 12       6       1       4       1       4       0       1       6       -1       12       4       2       -1       2       8       5       1       2         2       3       -1       1       1       0       1       0       7       12       6       2       1       14       2       3       1       2       4         1       3       2       0       2       6       -1       2       9       38       13       6       -16       -2       -2       11       4       2       3         4       4       1       1       1       4       1       0       15       3       13       0       0       1       2       3       1       4       4         0       1       0       0       -1       -1       -1       -1       1       1       1       0       1       0       3       1       4       4       4       2       2       1       1       0       1       0       1       0       1       0       1       0       1       0       1       0       1       <   |        |    |    |    |    |    |    |    | _  |    |    |    |    |    |    |    |    |    |
| 2 3 -1 1 1 1 0 1 0 7 12 6 2 1 14 2 3 1 2 4 1 3 2 0 2 6 -1 2 9 38 13 6 -16 -2 -2 11 4 2 3 4 4 4 1 1 1 1 4 1 0 15 3 13 0 0 1 2 3 1 4 4 4 0 1 0 1 0 0 -1 -1 -1 -1 -3 7 7 7 8 0 -1 1 1 1 1 1 1 0 1 0 0 1 0 3 5 4 3 2 5 1 2 -2 -2 3 8 1 0 1 1 1 1 1 1 1 1 0 1 0 1 0 3 5 4 3 2 8 0 4 14 11 1 36 10 -1 -3 -1 12 7 5 2 1 1 1 3 -2 2 1 1 -1 -3 4 2 -2 3 3 -2 -2 -1 3 5 3 -2 2 2 1 1 1 4 -2 2 1 2 2 1 0 5 5 2 2 2 1 -1 0 4 0 1 1 4 5 3 3 3 1 5 4 3 2 9 1 3 84 104 98 17 4 -4 0 8 7 0 3 14 7 7 0 3 1 4 5 7 4 2 7 1 4 28 45 36 15 -2 -3 1 34 19 7 4 5 5 2 2 2 2 2 1 1 0 5 5 2 2 4 2 0 3 1 2 6 3 1 0 0 0 1 2 2 2 2 1 1 0 5 5 2 2 4 2 0 3 1 3 1 34 19 7 4 5 5 2 2 1 2 2 2 2 1 1 1 0 2 5 2 4 2 0 3 1 2 2 6 3 1 0 0 1 2 2 2 1 1 1 0 2 5 2 4 2 0 3 1 2 2 6 3 1 0 0 1 2 2 2 1 1 1 0 2 5 2 4 2 0 3 1 2 2 6 3 1 0 0 1 2 2 2 1 1 1 0 2 5 2 4 2 0 3 1 2 2 6 3 1 0 0 1 2 2 2 1 2 3 2 5 10 1 2 2 1 43 56 6 2 2 1 2 3 0 3 12 4 6 6 7 5 6 2 3 3 4 2 4 7 93 90 10 0 2 3 8 3 3 4 2 6 2 2 5 1 1 1 0 0 4 1 1 0 0 0 0 5 2 2 2 1 1 1 0 0 4 1 1 1 0 6 6 6 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 1       3       2       0       2       6       -1       2       9       38       13       6       -16       -2       -2       11       4       2       3         4       4       1       1       1       4       1       0       15       3       13       0       0       1       2       3       1       4       4         0       1       0       0       -1       -1       -1       -1       -3       7       7       8       0       -1       1       1       1       0  |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 4       4       1       1       1       4       1       0       15       3       13       0       0       1       2       3       1       4       4         0       1       0       0       -1       -1       -1       -1       -3       7       7       8       0       -1       1       1       1       0       1       0         3       5       4       3       2       5       1       2       -2       -2       3       8       1       0       1       4       5       3       3         6       6       7       3       2       8       0       4       14       11       36       10       -1       -3       -1       12       7       5       2         1       1       3       -2       2       1       -1       -3       4       2       -2       3       -2       -2       -1       12       7       5       2         1       1       4       -2       2       1       0       5       5       2       2       1       -1       0       4       0 <td></td>                        |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0       1       0       0       -1       -1       -1       -3       7       7       8       0       -1       1       1       1       0       0       0       0       0 <td></td> |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 3       5       4       3       2       5       1       2       -2       -2       3       8       1       0       1       4       5       3       3         6       6       7       3       2       8       0       4       14       11       36       10       -1       -3       -1       12       7       5       2         1       1       3       -2       2       1       -1       -3       4       2       -2       3       -2       -2       -1       3       5       3       -2         2       3       1       0       2       2       1       0       5       5       2       2       1       -1       0       4       0       1       -1         11       4       -2       21       -2       0       -3       0       2       7       0       -2       -1       2       2       5       -1       2       0         14       6       8       4       4       14       -1       2       45       82       52       23       0       -1       1       43   |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 6 6 7 3 2 8 0 4 14 11 36 10 -1 -3 -1 12 7 5 2 1 1 3 -2 2 1 -1 -3 4 2 -2 3 -2 -2 -1 3 5 3 -2 2 3 1 0 2 2 1 0 5 5 5 2 2 1 -1 0 4 0 1 -1 11 4 -2 21 -2 0 -3 0 2 7 0 -2 -1 2 2 5 -1 2 0 14 6 8 4 4 14 -1 2 45 82 52 23 0 -1 1 43 21 14 7 3 4 4 3 2 9 1 3 84 104 98 17 4 -4 0 8 7 0 3 14 5 7 4 2 7 1 4 28 45 36 15 -2 -3 1 34 19 7 4 5 5 2 3 2 5 1 0 1 0 -5 2 4 2 0 3 1 2 6 3 1 0 0 1 2 2 2 2 -1 -2 3 3 3 3 8 2 -1 4 6 5 2 -2 6 5 0 1 2 2 2 -1 -2 3 57 88 93 7 1 2 2 7 4 7 6 22 12 3 2 5 1 0 1 -2 21 43 56 6 2 -1 2 30 3 12 4 3 6 3 3 2 6 -2 -1 4 -5 4 4 -1 1 0 6 6 6 4 4 6 7 5 6 2 3 4 2 11 1 3 6 6 6 27 1 1 0 0 5 2 -2 1 1 6 6 8 4 2 11 1 3 6 6 6 27 1 1 -3 0 14 8 5 4 17 8 3 5 2 4 2 0 81 93 71 21 1 -1 3 41 10 13 8   |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 1       1       3       -2       2       1       -1       -3       4       2       -2       3       -2       -2       -1       3       5       3       -2         2       3       1       0       2       2       1       0       5       5       5       2       2       1       -1       0       4       0       1       -1         11       4       -2       21       -2       0       -3       0       2       7       0       -2       -1       2       2       5       -1       2       0         14       6       8       4       4       14       -1       2       45       82       52       23       0       -1       1       43       21       14       7         3       4       4       3       2       9       1       3       84       104       98       17       4       -4       0       8       7       0       3         14       5       7       4       2       7       1       4       28       45       36       15       -2       -3       1  |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | _  |
| 2 3 1 0 2 2 1 0 5 5 2 2 1 -1 0 4 0 1 -1 11 4 -2 21 -2 0 -3 0 2 7 0 -2 -1 2 2 5 -1 2 0 14 6 8 4 4 14 -1 2 45 82 52 23 0 -1 1 43 21 14 7 3 4 4 3 2 9 1 3 84 104 98 17 4 -4 0 8 7 0 3 14 5 7 4 2 7 1 4 28 45 36 15 -2 -3 1 34 19 7 4 5 5 2 3 2 5 1 0 19 20 17 7 0 -1 1 13 6 6 5 1 -1 1 2 1 1 0 -5 2 4 2 0 3 1 2 6 3 1 0 0 1 2 2 2 2 2 -1 -2 3 3 3 3 8 2 -1 4 6 5 2 -2 6 5 0 1 2 2 -1 -3 57 88 93 7 1 2 2 7 4 7 6 22 12 3 2 5 1 0 1 -2 21 43 56 6 2 -1 2 30 3 12 4 3 6 3 3 2 6 -2 -1 4 -5 4 4 -1 1 0 6 6 4 4 6 7 5 6 2 3 4 2 47 93 90 10 0 2 3 8 3 4 2 6 2 2 5 1 -1 2 1 0 4 1 0 0 0 0 5 2 -2 1 1 6 6 8 4 2 11 1 3 6 6 6 27 1 1 -3 0 14 8 5 4 17 8 3 5 2 4 2 0 81 93 71 21 1 -1 3 41 10 13 8  |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 11       4       -2       21       -2       0       -3       0       2       7       0       -2       -1       2       2       5       -1       2       0         14       6       8       4       4       14       -1       2       45       82       52       23       0       -1       1       43       21       14       7         3       4       4       3       2       9       1       3       84       104       98       17       4       -4       0       8       7       0       3         14       5       7       4       2       7       1       4       28       45       36       15       -2       -3       1       34       19       7       4         5       5       2       3       2       5       1       0       19       20       17       7       0       -1       1       13       6       6       5         1       -1       1       2       1       1       0       -5       2       4       2       0       3       1       2       6   |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | -  |
| 14       6       8       4       4       14       -1       2       45       82       52       23       0       -1       1       43       21       14       7         3       4       4       3       2       9       1       3       84       104       98       17       4       -4       0       8       7       0       3         14       5       7       4       2       7       1       4       28       45       36       15       -2       -3       1       34       19       7       4         5       5       2       3       2       5       1       0       19       20       17       7       0       -1       1       13       6       6       5         1       -1       1       2       1       1       0       -5       2       4       2       0       3       1       2       6       3       1       0         0       1       2       2       2       2       -1       -2       3       3       8       2       -1       4       6       5       <  |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 3       4       4       3       2       9       1       3       84       104       98       17       4       -4       0       8       7       0       3         14       5       7       4       2       7       1       4       28       45       36       15       -2       -3       1       34       19       7       4         5       5       2       3       2       5       1       0       19       20       17       7       0       -1       1       13       6       6       5         1       -1       1       2       1       1       0       -5       2       4       2       0       3       1       2       6       3       1       0         0       1       2       2       2       2       -1       -2       3       3       8       2       -1       4       6       5       2       -2       2         6       5       0       1       2       2       -1       -3       57       88       93       7       1       2       2       7       4<  |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 14       5       7       4       2       7       1       4       28       45       36       15       -2       -3       1       34       19       7       4         5       5       2       3       2       5       1       0       19       20       17       7       0       -1       1       13       6       6       5         1       -1       1       2       1       1       0       -5       2       4       2       0       3       1       2       6       3       1       0         0       1       2       2       2       2       -1       -2       3       3       3       8       2       -1       4       6       5       2       -2         6       5       0       1       2       2       -1       -3       57       88       93       7       1       2       2       7       4       7       6         22       12       3       2       5       10       1       -2       21       43       56       6       2       -1       2       30 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>_</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>                         |        |    |    |    |    |    |    |    |    | _  |    |    |    |    |    |    |    |    |
| 5       5       2       3       2       5       1       0       19       20       17       7       0       -1       1       13       6       6       5         1       -1       1       2       1       1       0       -5       2       4       2       0       3       1       2       6       3       1       0         0       1       2       2       2       -1       -2       3       3       3       8       2       -1       4       6       5       2       -2         6       5       0       1       2       2       -1       -3       57       88       93       7       1       2       2       7       4       7       6         22       12       3       2       5       10       1       -2       21       43       56       6       2       -1       2       30       3       12       4         3       6       3       3       2       6       -2       -1       4       -5       4       4       -1       1       0       6       6       4 </td <td></td> <td>1</td> <td></td> <td></td> <td></td> <td>7</td> <td></td> <td></td>               |        |    |    |    |    |    |    |    |    |    |    | 1  |    |    |    | 7  |    |    |
| 0       1       2       2       2       2       -1       -2       3       3       3       8       2       -1       4       6       5       2       -2         6       5       0       1       2       2       -1       -3       57       88       93       7       1       2       2       7       4       7       6         22       12       3       2       5       10       1       -2       21       43       56       6       2       -1       2       30       3       12       4         3       6       3       3       2       6       -2       -1       4       -5       4       4       -1       1       0       6       6       4       4         6       7       5       6       2       3       4       2       47       93       90       10       0       2       3       8       3       4       2         6       2       2       5       1       -1       2       1       0       4       1       0       0       0       5       2       -2 <td>6 5</td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0</td> <td>1</td> <td>5</td> <td></td> <td>3</td> <td>2</td> <td>5</td> <td>5</td>            | 6 5    |    |    | 1  |    |    |    |    |    |    | 0  | 1  | 5  |    | 3  | 2  | 5  | 5  |
| 6       5       0       1       2       2       -1       -3       57       88       93       7       1       2       2       7       4       7       6         22       12       3       2       5       10       1       -2       21       43       56       6       2       -1       2       30       3       12       4         3       6       3       3       2       6       -2       -1       4       -5       4       4       -1       1       0       6       6       4       4         6       7       5       6       2       3       4       2       47       93       90       10       0       2       3       8       3       4       2         6       2       2       5       1       -1       2       1       0       4       1       0       0       0       5       2       -2       1       1         6       6       8       4       2       11       1       3       6       6       27       1       1       -3       0       14       8 <td>1 0</td> <td>3</td> <td>6</td> <td>2</td> <td>1</td> <td>3</td> <td>0</td> <td>2</td> <td>4</td> <td>2</td> <td>-5</td> <td>0</td> <td>1</td> <td>1</td> <td>2</td> <td>1</td> <td>-1</td> <td>1</td> | 1 0    | 3  | 6  | 2  | 1  | 3  | 0  | 2  | 4  | 2  | -5 | 0  | 1  | 1  | 2  | 1  | -1 | 1  |
| 22     12     3     2     5     10     1     -2     21     43     56     6     2     -1     2     30     3     12     4       3     6     3     3     2     6     -2     -1     4     -5     4     4     -1     1     0     6     6     4     4       6     7     5     6     2     3     4     2     47     93     90     10     0     2     3     8     3     4     2       6     2     2     5     1     -1     2     1     0     4     1     0     0     0     5     2     -2     1     1       6     6     8     4     2     11     1     3     6     6     27     1     1     -3     0     14     8     5     4       17     8     3     5     2     4     2     0     81     93     71     21     1     -1     3     41     10     13     8   | 2 -2   | 5  | 6  | 4  | -1 | 2  | 8  |    | 3  | 3  | -2 | -1 | 2  | 2  | 2  | 2  | 1  | 0  |
| 3     6     3     3     2     6     -2     -1     4     -5     4     4     -1     1     0     6     6     4     4       6     7     5     6     2     3     4     2     47     93     90     10     0     2     3     8     3     4     2       6     2     2     5     1     -1     2     1     0     4     1     0     0     0     5     2     -2     1     1       6     6     8     4     2     11     1     3     6     6     27     1     1     -3     0     14     8     5     4       17     8     3     5     2     4     2     0     81     93     71     21     1     -1     3     41     10     13     8   | 7 6    | 4  | 7  | 2  | _  | 1  | 7  |    | 88 |    | -5 | -1 | 2  | 2  | 1  | 0  | 5  | 6  |
| 6 7 5 6 2 3 4 2 47 93 90 10 0 2 3 8 3 4 2 6 2 2 5 1 -1 2 1 0 4 1 0 0 0 5 2 -2 1 1 6 6 8 4 2 11 1 3 6 6 27 1 1 -3 0 14 8 5 4 17 8 3 5 2 4 2 0 81 93 71 21 1 -1 3 41 10 13 8   | 12 4   |    | 30 | 2  |    |    |    | 56 | 43 | 21 |    |    |    |    |    |    | 12 | 22 |
| 6 2 2 5 1 -1 2 1 0 4 1 0 0 0 5 2 -2 1 1 6 6 8 4 2 11 1 3 6 6 27 1 1 -3 0 14 8 5 4 17 8 3 5 2 4 2 0 81 93 71 21 1 -1 3 41 10 13 8   |        |    |    | 0  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 6 6 8 4 2 11 1 3 6 6 27 1 1 -3 0 14 8 5 4 17 8 3 5 2 4 2 0 81 93 71 21 1 -1 3 41 10 13 8   |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 17 8 3 5 2 4 2 0 <mark>81 93 71</mark> 21 1 <b>-1</b> 3 41 10 13 8   |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|  |        |    |    |    |    |    |    |    |    | _  |    |    |    |    |    |    |    |    |
|  |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|  |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 3 2 3 5 0 0 0 0 3 6 8 1 2 1 0 4 3 1 -1   |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 4       6       3       2       2       6       0       1       5       0       6       26       2       -2       4       40       20       6       4         0       0       -1       2       0       0       -3       -5       1       1       1       0       -1       -1       -2       4       1       0       -2   |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|  |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 3  4  6  4  3  4  3  2  6  -2  15  2  6  1  1  -7  1  5  3  3  2  2  1  0  1  1  3  22  10  9  14  -8  0  1  5  3  2  2  |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|  | 4 2    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 5 7 6 3 2 8 0 1 10 6 8 2 1 -4 0 8 10 3 3   |        |    | 8  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|  |        |    |    |    |    |    |    |    |    |    |    |    |    | 2  |    |    |    |    |
| 6 10 2 3 0 3 2 5 2 3 0 30 1 7 7 10 6 7 8   |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|  |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 5 7 2 35 4 5 4 5 5 1 5 -2 2 1 2 7 5 7 3  |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|  |        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 6 7 1 3 9 9 2 3 9 4 7 12 3 6 13 27 4 8 6   |        | 4  |    |    | 6  |    |    |    |    |    | 3  |    |    | 9  |    |    | 7  | 6  |

| 5      | 6       | 6       | 4       | 1       | 9       | 1       | 3       | 0       | -4       | 10       | 4       | 0       | -2      | -1      | 8             | 7        | 3       | 3       | 3       |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|---------|---------|---------|---------|---------------|----------|---------|---------|---------|
| 2      | 0       | 0       | 0       | 2       | 2       | 0       | -3      | 12      | 17       | 1        | 3       | 0       | -2      | 3       | 3             | -2       | -1      | 0       | -1      |
| 1      | 0       | 0       | 6       | 1       | -1      | 0       | -1      | 5       | -2       | -2       | -3      | -2      | -1      | 1       | 4             | -5       | 0       | -3      | 0       |
| 60     | 27      | 29      | 56      | 91      | 93      | 84      | 91      | 12      | 19       | 9        | 6       | 2       | 4       | 5       | 16            | 5        | 15      | 7       | 2       |
| 2      | 2<br>0  | 0<br>-1 | 1<br>2  | 2<br>-1 | 1<br>-4 | 2<br>2  | -2<br>1 | 31<br>6 | 50<br>10 | 7<br>4   | 0<br>-1 | -8<br>5 | 2<br>2  | 3<br>2  | 2<br>2        | -1<br>-3 | 2<br>3  | 1<br>2  | 0<br>-1 |
| 3      | 4       | 2       | 1       | 4       | 4       | 1       | 0       | 6       | 4        | 4        | 5       | 2       | 1       | 1       | 3             | 2        | 6       | 1       | 1       |
| 0      | -1      | -1      | 1       | -2      | -1      | -2      | -7      | 11      | 28       | 3        | 1       | -2      | 0       | 1       | 7             | -1       | 1       | -2      | -1      |
| -1     | 2       | 3       | 2       | 3       | 4       | -1      | -2      | 7       | 8        | 4        | 9       | 5       | -2      | -1      | 6             | 5        | 2       | -2      | 1       |
| 4      | 1       | 3       | 9       | 6       | 5       | 0       | -3      | 2       | 5        | 0        | 3       | -1      | -2      | -1      | 11            | 5        | 4       | 0       | 2       |
| 1      | 3       | 2       | -3      | 1       | 0       | 0       | -2      | 1       | 1        | 0        | 2       | -3      | 0       | -1      | 5             | 2        | 2       | -2      | 1       |
| 3      | 2       | 1       | 2       | 2       | 2       | 1       | -3      | 10      | 8        | 8        | 13      | 1       | 0       | 1       | 5             | 4        | 2       | -1      | 1       |
| 1<br>7 | 1       | 1<br>1  | 2       | 0       | -1      | -2<br>2 | -3<br>5 | 5<br>5  | 1        | 3<br>5   | 1       | 0       | -1<br>0 | -2<br>1 | 2             | 3        | 0       | -4      | 1       |
| 6      | 5<br>7  | ا<br>5  | 5<br>3  | 3<br>4  | 4<br>5  | 2       | 5<br>6  | 5<br>7  | 5<br>5   | 5<br>12  | 5<br>2  | 2<br>3  | 0<br>5  | 1<br>3  | 5<br>10       | 5<br>6   | 8<br>12 | 2<br>6  | 1<br>2  |
| 2      | 4       | -1      | -3      | 1       | -1      | 1       | 1       | -1      | 5        | -1       | 8       | -4      | 5       | 3       | 3             | 0        | 3       | 4       | -1      |
| 79     | 71      | 87      | 82      | 25      | 51      | 27      | 36      | 5       | 2        | 3        | 11      | 2       | 4       | 5       | -1            | 5        | 9       | 6       | 2       |
| 2      | 3       | 3       | 1       | 0       | 5       | 0       | 3       | 7       | -4       | 4        | 3       | 6       | -3      | -1      | 6             | 5        | 0       | 1       | 3       |
| -1     | 0       | 0       | 2       | 2       | 1       | -1      | -3      | 4       | 7        | 20       | 0       | 0       | 1       | 0       | 4             | 1        | 0       | -1      | 0       |
| 38     | 11      | 42      | 45      | 1       | 2       | 5       | 0       | 4       | 23       | 3        | 0       | -1      | 2       | 2       | 3             | -2       | 2       | 0       | -1      |
| 8      | 14      | 4       | 3       | 3       | 8       | -1      | 2       | 29      | 57       | 34       | 5       | 1       | -1      | 3       | 9             | 8        | 6       | 4       | 3       |
| 4      | 2       | 3       | 21      | 4       | 3       | 1<br>1  | 1       | 7       | 4        | 4        | 5       | 1       | 3       | 3       | 7             | 3        | 8       | 5       | 1       |
| 3      | 3<br>1  | 0<br>2  | 1<br>44 | 5<br>2  | 8<br>0  | -1      | 1<br>-2 | 55<br>2 | 63<br>-1 | 57<br>-3 | 16<br>1 | -2      | -2      | 2<br>0  | 21<br>2       | 3<br>1   | 6<br>3  | 3<br>-2 | 1<br>1  |
| 4      | 4       | 3       | 7       | 3       | 4       | 0       | 0       | 6       | 4        | 6        | 2       | 4       | 1       | 1       | 7             | 7        | 5       | 3       | 2       |
| 5      | 3       | 2       | 7       | 6       | 8       | 1       | 0       | 7       | 9        | 4        | -3      | 1       | 0       | 0       | 10            | 6        | 4       | 0       | 2       |
| 8      | 10      | 4       | 75      | 3       | 4       | 5       | 12      | 3       | 4        | 3        | 6       | 2       | 5       | 4       | 3             | 5        | 7       | 6       | 2       |
| 6      | 5       | 5       | 5       | 4       | 9       | 0       | 3       | 5       | -3       | 9        | 6       | 0       | -6      | -1      | 6             | 7        | 4       | 4       | 4       |
| 1      | 1       | 1       | 2       | 0       | 0       | -1      | -2      | 5       | 6        | 4        | 5       | 0       | 0       | 12      | 5             | 2        | 0       | 0       | 0       |
| 3      | 2       | 2       | 1       | 3       | 4       | 1       | -2      | 7       | 28       | 7        | 9       | 2       | -3      | 1       | 7             | 5        | 6       | -1      | 1       |
| 2      | 4       | -2      | 0       | 11      | 8       | 2       | 3       | 6       | 12       | 14       | 76      | -11     | 40      | 17      | 43            | 9        | 14      | 9       | 2       |
| 8<br>2 | 9<br>2  | 4<br>3  | 4<br>1  | 3<br>1  | 5<br>5  | 2       | 5<br>4  | 3<br>8  | 1 -1     | 4<br>9   | 11<br>3 | 3<br>-4 | -1      | 3       | 3<br>5        | 5<br>5   | 8<br>4  | 6<br>2  | 2<br>3  |
| 3      | 3       | -1      | 1       | 3       | 2       | 1       | -1      | 5       | 13       | 14       | 4       | 1       | 0       | 2       | 2             | 0        | 4       | 5       | 0       |
| 5      | 6       | 3       | 3       | 3       | 3       | 0       | 3       | 10      | 16       | 15       | 3       | 4       | 4       | 3       | 11            | 6        | 6       | 3       | 2       |
| 1      | 2       | 1       | 1       | 2       | 2       | 1       | 2       | 6       | 8        | 2        | -6      | 3       | -1      | 0       | 7             | -2       | 2       | -2      | 1       |
| 4      | 4       | 1       | 2       | 2       | 2       | 2       | 1       | 14      | 16       | 15       | 9       | 2       | 1       | 2       | 5             | 2        | 5       | 2       | 1       |
| 4      | 3       | 5       | 6       | 6       | 1       | 4       | -1      | 34      | 11       | 26       | -3      | -3      | -4      | 1       | 3             | -6       | 0       | -4      | -2      |
| 1      | 1       | 1       | 2       | 2       | 2       | 0       | 0       | 5       | -4<br>-  | 14       | 3       | 3       | -2      | 0       | 12            | 2        | 8       | 6       | 0       |
| 5      | 8       | 8<br>6  | 6<br>3  | 4<br>2  | 5<br>9  | 3<br>3  | 2<br>7  | 5<br>7  | -7<br>-6 | 6<br>5   | 3<br>8  | 0       | 2<br>-4 | 1       | 8<br>7        | 4<br>9   | 7<br>-1 | 4<br>0  | 2<br>5  |
| 5      | 4<br>1  | о<br>1  | ა<br>45 | 3       | 9       | 3<br>1  | 2       | 2       | -6<br>-1 | 5<br>0   | -7      | 3<br>1  | 0       | 1       | <i>7</i><br>5 | -3       | 1       | -2      | 0       |
| 7      | 9       | 4       | 9       | 3       | 4       | 3       | 8       | 5       | 1        | 3        | 6       | 2       | 2       | 3       | 5             | 7        | 7       | 4       | 2       |
| 70     | 49      | 76      |         | 14      | 27      | 21      | 33      | 0       | -10      | 3        | 7       | -1      | -2      | 1       | 10            | 7        | 5       | 2       | 3       |
| 4      | 4       | -1      | 1       | 2       | 0       | 1       | -1      | 1       | 8        | 0        | 6       | 0       | 0       | 2       | 6             | 1        | 3       | 2       | -1      |
| 75     | 38      | 19      |         | 49      | 54      | 23      | 13      | 6       | -8       | 5        | 0       | -1      | -6      | 0       | 6             | 5        | -5      | -1      | 1       |
| 1      | 1       | 1       | 1       | 2       | 2       | 2       | 0       | 1       | 2        | 14       | -2      |         | -2      | -1      | 2             | -3       | -2      | -4      | 1       |
| 3      | 3       | 0       | 1       | 2       | 0       | 0       | 0       | 8       | 12       | 10       | 3       | 3       | 3       | 2       | 0             | 1        | 4       | 3       | 0       |
| 2<br>5 | 3<br>7  | 0<br>3  | 2<br>25 | 1       | -1      | 1       | -1<br>7 | 14      | 29       | 46<br>1  | 3<br>13 | 2<br>2  | 2<br>4  | 1<br>4  | 2<br>-5       | 1<br>6   | 5<br>10 | 3       | 0       |
| 18     | 7<br>19 | ა<br>15 | 25<br>9 | 2<br>5  | 4<br>15 | 2<br>2  | 4       | 4<br>11 | 1<br>15  | 1<br>55  | 13      | 0       | -4      | 0       | -5<br>29      | ь<br>11  | 10      | 9<br>5  | 2<br>6  |
| 3      | 4       | 0       | 1       | 2       | 1       | -1      | -3      | 55      | 55       | 32       | 5       | 1       | 11      | 3       | 5             | 1        | 11      | 5       | 0       |
| 5      | 6       | 2       | 2       | 2       | 3       | 0       | 0       | 6       | -4       | 13       | 4       | 1       | 0       | 1       | 6             | 5        | 7       | 5       | 2       |
| 4      | 3       | -1      | 2       | 2       | 2       | 2       | 2       | 51      | 82       | 75       | 2       | 5       | 1       | 2       | 29            | 2        | 8       | 5       | -1      |
| 1      | 2       | -1      | 2       | -1      | 0       | -1      | 0       | 8       | 6        | 8        | 0       | 0       | 2       | 0       | 0             | 0        | 3       | 4       | -1      |
| 4      | 4       | 2       | 3       | 1       | 4       | 0       | 1       | 9       | 4        | 7        | 25      | 0       | -4      | 0       | 23            | 8        | 4       | 3       | 2       |
| 2      | 2       | 3       | 18      | 5       | 4       | 0       | 2       | 2       | 3        | 1        | 8       | 2       | -1      | 0       | 8             | 5        | 3       | -1      | 1       |
| 3      | 2       | 3       | 3       | 2       | 6       | 0       | 2       | 7       | -4       | 12       | 2       | -3      | -4      | -1      | 2             | 6        | -1      | 2       | 2       |

| 69      | 56      | 26      | 36       | 78       | 78       | 43      | 40       | 2       | 0        | 0       | 3        | -4       | 1        | 1       | 3        | 2       | 4       | 5       | 4        |
|---------|---------|---------|----------|----------|----------|---------|----------|---------|----------|---------|----------|----------|----------|---------|----------|---------|---------|---------|----------|
| 66<br>1 | 51<br>0 | 24<br>0 | 36<br>2  | 79<br>0  | 81<br>0  | 41<br>0 | 36<br>-1 | 11<br>4 | 12<br>-3 | 11<br>0 | 6<br>-4  | 4<br>0   | 0<br>-1  | 1<br>2  | 8<br>5   | 1<br>-4 | 8<br>8  | 5<br>-1 | -1<br>-1 |
| 1       | 3       | 3       | 1        | 18       | 8        | 1       | 2        | 16      | 37       | 8       | -3       | 1        | -2       | 1       | 3        | 4       | 3       | 4       | 1        |
| 5       | 3       | 4       | 4        | 14       | 28       | 1       | 5        | 44      | 59       | 71      | 0        | 3        | -3       | 2       | 20       | 8       | 1       | 3       | 2        |
| 1       | 2       | 1       | 2        | 0        | 1        | -1      | 3        | 17      | 21       | 4       | 3        | 2        | -1       | 0       | 4        | 5       | 1       | 0       | 1        |
| 5       | 4       | 5       | 0        | 1        | 7        | 1       | 4        | 8       | -1       | 13      | 0        | 0        | -5       | 0       | 3        | 6       | -2      | 1       | 3        |
| 3       | 2       | -1      | 2        | 2        | 1        | 2       | -1       | 1       | 14       | 15      | 2        | 0        | 0        | 1       | 4        | 0       | 4       | 3       | 1        |
| 1       | 3       | 1       | 0        | 2        | 2        | 0       | 1        | 3       | 2        | 1       | 8        | 0        | 1        | 1       | 4        | 3       | 4       | 1       | 1        |
| 4<br>6  | 5<br>6  | 2<br>3  | -2<br>2  | 2<br>3   | 2<br>3   | 1<br>0  | 0        | 1<br>7  | 0<br>20  | 0<br>6  | 6<br>4   | -3<br>2  | -1<br>-1 | -1<br>1 | 5<br>7   | 3<br>6  | 5<br>5  | 4<br>2  | 1        |
| 28      | 19      | 7       | 3        | 9        | 25       | 5       | 8        | 18      | 23       | 50      | 19       | 3        | -1<br>-4 | 2       | 26       | 10      | 8       | 4       | 5        |
| 3       | 2       | 2       | 0        | 2        | 5        | 0       | 3        | 6       | -2       | 9       | 8        | 1        | -1       | 1       | 6        | 5       | 3       | 3       | 1        |
| 3       | 2       | -2      | 1        | 2        | 1        | 1       | -1       | 5       | 15       | 35      | 2        | 0        | 1        | 2       | 18       | 0       | 9       | 7       | 0        |
| -1      | 1       | 0       | 1        | -1       | 0        | -2      | -3       | 8       | 9        | 6       | 9        | 0        | -1       | 0       | 3        | 0       | 0       | 0       | 1        |
| 6       | 7       | 4       | 5        | 4        | 3        | 3       | -1       | 7       | 9        | 10      | 3        | 2        | 0        | 0       | 3        | 0       | 2       | 2       | -1       |
| 17      | 14      | 3       | 3        | 5        | 6        | 3       | 6        | 7       | 5        | 4       | 13       | 3        | 0        | 1       | 4        | 5       | 8       | 3       | 1        |
| 2<br>13 | 2<br>4  | 2<br>2  | 1<br>-2  | 3<br>38  | 4<br>58  | 1<br>7  | 0<br>8   | 6<br>2  | -2<br>12 | 6<br>33 | -3<br>6  | 6<br>-2  | 2<br>-1  | 2       | 6<br>28  | -1<br>4 | 1<br>16 | -1<br>4 | 0<br>3   |
| 3       | 4       | 3       | 7        | 30<br>4  | 6        | 0       | 0        | 12      | 10       | აა<br>6 | 3        | 3        | 0        | 2       | 20<br>9  | 8       | 4       | 2       | 2        |
| 3       | 2       | 1       | 0        | 4        | 6        | 1       | 0        | 8       | 6        | 2       | 3        | 1        | -2       | 0       | 5        | -1      | 1       | -1      | 0        |
| 0       | 1       | 0       | 1        | 0        | 2        | 1       | 1        | 31      | 46       | 10      | 0        | 3        | 3        | 1       | 2        | 0       | 1       | 0       | 0        |
| 3       | 2       | 2       | 38       | 5        | 8        | 3       | 9        | 8       | 11       | 3       | -3       | 2        | 0        | 1       | 6        | 6       | 3       | 13      | 2        |
| 9       | 7       | 4       | 0        | 3        | 7        | 1       | 7        | 2       | -6       | 0       | 8        | -4       | -2       | 0       | 19       | 7       | 6       | 3       | 3        |
| 2       | 2       | 2       | -1       | 1        | 2        | 0       | 0        | 42      | 12       | 28      | 0        | -3       | 0        | 1       | 3        | 2       | 4       | 1       | 0        |
| 5       | 6<br>5  | 5       | 15<br>-1 | 2<br>2   | 2<br>2   | 2       | 6        | -1      | -2       | -3      | 6        | 0<br>-1  | 1        | 1       | 4        | 5<br>5  | 6       | 5<br>5  | 3        |
| 5<br>6  | 5<br>6  | 2<br>3  | 7        | 2        | 6        | 1<br>1  | 2<br>3   | 2<br>8  | 1<br>-2  | 0<br>5  | 10<br>2  | 0        | 3<br>0   | 2<br>1  | 9<br>4   | 5<br>5  | 9<br>3  | 3       | 1        |
| 41      | 15      | 7       | 6        | 9        | 19       | 1       | 3        | 8       | -3       | 4       | 5        | 1        | -3       | 0       | 7        | 13      | 4       | 4       | 4        |
| 5       | 6       | 6       | 4        | 2        | 8        | 1       | 6        | 6       | -2       | 5       | 13       | 1        | -4       | 1       | 11       | 10      | 3       | 2       | 4        |
| 3       | 5       | 3       | 2        | 1        | 4        | 0       | 3        | 11      | -2       | 9       | 4        | 1        | -1       | 0       | 10       | 6       | 6       | 5       | 2        |
| 2       | 2       | 3       | 3        | 2        | 7        | 1       | 2        | 9       | -3       | 12      | 4        | -1       | -4       | 0       | 3        | 7       | 4       | 3       | 3        |
| 6       | 4       | 2       | 2        | 2        | 6        | 1       | 0        | 8       | -13      | 9       | 4        | -1       | -2       | 0       | 4        | 5       | 3       | 2       | 2        |
| 4       | 4       | 4       | 6        | 2<br>3   | 3        | 4       | 0        | 2<br>4  | 6        | 1       | 1        | 2        | -2<br>-4 | -1      | 3<br>15  | 2<br>9  | -1<br>0 | -2      | 0        |
| 7       | 6<br>2  | 9<br>-2 | 6<br>1   | ა<br>1   | 9        | 2<br>1  | 5<br>1   | 6       | 0<br>14  | 9<br>8  | 12<br>2  | 1        | 1        | 0<br>2  | 15<br>-3 | -1      | 8<br>3  | 3<br>2  | 3<br>-2  |
| 0       | 2       | -1      | 0        | 6        | 16       | 6       | 1        | 0       | 1        | -2      | -4       | -2       | -2       | 0       | 1        | -6      | 2       | -3      | -1       |
| 3       | 3       | 2       | 1        | 3        | 6        | 0       | 3        | 6       | -1       | 9       | 1        |          | 0        | 1       | 5        | 4       | 4       | 3       | 1        |
| 3       | 3       | 2       | 3        | 1        | 1        | 0       | 1        | 6       | 6        | 6       | 2        | -1       | 0        | 0       | 5        | 5       | 1       | -1      | 1        |
| 3       | 4       | 0       | -3       | 2        | 4        | 1       | 1        | 7       | 0        | 6       | 1        | -2       | 2        | 1       | 3        | 0       | 4       | 4       | -1       |
| 6       | 6       | 3       | 10       | 2        | 3        | 2       | 6        | 5       | 2        | 3       | 8        | 2        | 0        | 1       | 3        | 4       | 5       | 5       | 2        |
| 51      | 70<br>4 | 12      | 7        | 8<br>1   | 12       | 2       | 2<br>1   | 27<br>5 | 32<br>15 | 41<br>8 | 18       | 1<br>-1  | 0<br>3   | 4       | 59       | 24      | 33      | 11      | 3 -1     |
| 2 4     | 4<br>5  | 1<br>4  | 4<br>16  | 1<br>5   | 0<br>3   | 2<br>5  | 4        | 5<br>5  | 15<br>2  | 9       | -2<br>0  | -1<br>-3 | 2        | 4<br>2  | 2<br>2   | 2<br>-1 | 3<br>3  | 5<br>0  | 0        |
| 1       | 2       | 2       | 0        | 6        | 7        | -1      | 1        | 15      | 24       | 8       | 36       | 1        | 0        | 1       | 8        | 2       | 4       | 0       | 1        |
| 3       | 6       | 2       | 3        | 4        | 4        | 1       | 1        | 20      | 36       | 26      | 1        | 7        | -1       | 1       | 4        | 1       | 1       | 1       | -1       |
| 0       | 1       | 0       | 2        | 2        | 3        | 1       | 2        | 10      | 12       | 4       | 2        | 1        | -2       | 0       | 2        | 4       | 2       | 0       | 1        |
| 6       | 7       | 4       | 43       | 4        | 4        | 2       | 6        | 4       | 0        | 3       | 0        | 2        | 3        | 3       | 6        | 6       | 7       | 4       | 3        |
| 3       | 1       | 1       | 8        | 2        | 1        | 0       | -1       | 5       | 2        | 3       | 3        | 2        | -1       | 0       | 3        | 0       | 1       | -1      | 0        |
| 71      | 31<br>2 | 6<br>-4 | 19<br>1  | 37<br>41 | 43<br>72 | 11<br>2 | 11<br>-2 | 6<br>45 | 11<br>80 | 8<br>46 | 2<br>2   | -4<br>1  | 2<br>4   | 2<br>4  | 3<br>3   | 1<br>-2 | 5<br>2  | 5<br>2  | -1<br>1  |
| 2       | 4       | -4<br>0 | 1        | 2        | -1       | 1       | -2<br>0  | 45<br>7 | 14       | 8       | 2        | -1       | 0        | 1       | ა<br>1   | 0       | 4       | 3       | 0        |
| 4       | 5       | 6       | 2        | 1        | 7        | 1       | 3        | 9       | -2       | 9       | 4        | -1       | -2       | 2       | 11       | 9       | 3       | 4       | 4        |
| 4       | 5       | 3       | 4        | 2        | 6        | 1       | 4        | 8       | 0        | 11      | 4        | 1        | 0        | 1       | 8        | 6       | 5       | 5       | 2        |
| 3       | 3       |         | -1       | 3        | 1        | 3       | -1       | 5       | 24       | 0       | 1        | -1       | 5        | 4       | 1        | -1      | 7       | 8       | -1       |
| 6       | 6       | 2       | 3        | 2        | 4        | 1       | 4        | 3       | 4        | 10      | 9        | 2        | 5        | 3       | 4        | 5       | 9       | 7       | 2        |
| 3       | 3       | 3       | 4        | 2        | 2        | 2       | -1<br>-1 | 0       | -2       | 5       | -4<br>24 | -8       | -1<br>24 | 2       | 2        | -1      | 0       | -2<br>4 | 1        |
| 3       | 4       | 7       | 9        | 9        | 7        | 2       | -1       | 6       | -2       | 6       | 34       | -11      | 31       | 23      | 24       | 0       | 17      | 4       | 0        |

| 1       | 1      | 0        | -1     | 0      | 2      | 1        | -2       | 6       | 9        | 29      | 1      | -1       | -3       | 9        | 5      | -3      | -1      | -3      | 0        |
|---------|--------|----------|--------|--------|--------|----------|----------|---------|----------|---------|--------|----------|----------|----------|--------|---------|---------|---------|----------|
| 3       | 5      | 5        | 2      | 2      | 6      | -1       | 2        | 3       | -5       | 8       | 5      | 4        | -3       | 0        | 6      | 7       | 6       | 4       | 4        |
| 3       | 4      | 0        | 2      | 0      | 3      | 0        | 2        | 5       | -3       | 11      | -1     | 5        | 0        | 1        | 1      | 1       | 1       | 3       | -1       |
| 3       | 4      | 1        | 2      | 2      | 2      | 2        | 0        | 8       | 14       | 4       | 1      | -10      | 4        | 3        | -1     | 2       | 2       | 5       | -1       |
| 5       | 5      | 9        | 7      | 3      | 8      | 5        | 5        | 11      | 12       | 29      | 5      | 3        | -4       | -1       | 9      | 7       | -3      | -2      | 5        |
| 7       | 3      | 5        | 5      | 1      | 7      | 3        | 4        | 2       | -6       | 3       | 4      | 8        | -7       | 0        | 4      | 7       | -3      | 1       | 2        |
| 3       | 4      | 5        | 4      | 1      | 6      | 1        | 2        | 13      | 3        | 19      | 4      | 0        | -3       | 1        | 5      | 7       | 3       | 3       | 3        |
| 1       | 2      | 1        | 1      | 4      | 6      | 1        | -1       | 10      | 8        | 1       | -4     | 3        | 1        | 1        | 6      | -2      | 2       | -2      | 0        |
| 4       | 3      | 2        | -2     | 2      | 3      | 0        | -1       | 8       | 2        | 17      | 2      | 2        | 1        | 2        | 9      | 2       | 16      | 3       | 1        |
| 8       | 35     | 6        | 1      | 2<br>1 | 8<br>4 | -1<br>-1 | 3        | 3       | -7<br>2  | -2<br>6 | 52     | -4<br>12 | -1<br>4  | 11       | 62     | 21<br>4 | 7<br>2  | 4       | 5<br>1   |
| -1      | 2      | 2<br>0   | 2      | 0      | 1      | 1        | 3<br>1   | 5<br>0  | -3<br>5  | 6<br>1  | 4<br>0 | -12<br>1 | -1<br>-3 | 0<br>0   | 6<br>3 | 0       | -1      | 1<br>-2 | -1       |
| 0       | 1      | -1       | 0      | -2     | -1     | 0        | -2       | 4       | 4        | 1       | 0      | 0        | 1        | 2        | 3      | 0       | 2       | 0       | -1       |
| 7       | 5      | 2        | 2      | 4      | 5      | 2        | 0        | 40      | 77       | 48      | 33     | 2        | 3        | 4        | 33     | 13      | 16      | 8       | 2        |
| 3       | 3      | 2        | 1      | 4      | 4      | 0        | 2        | 3       | 4        | 4       | 6      | 0        | 2        | 2        | 4      | 2       | 5       | 1       | 1        |
| 5       | 8      | 2        | 2      | 5      | 6      | 3        | 5        | 9       | 9        | 5       | 11     | 1        | 3        | 2        | 4      | 5       | 7       | 3       | 2        |
| 3       | 4      | 1        | 2      | 2      | 3      | 2        | 2        | 17      | 25       | 15      | 4      | 2        | 2        | 2        | 3      | 4       | 4       | 3       | 1        |
| 3       | 4      | 2        | 3      | 0      | 4      | 1        | 2        | 4       | -3       | 4       | 2      | -8       | 0        | 0        | 5      | 4       | 2       | 3       | 1        |
| 4       | 2      | 1        | 2      | 3      | 9      | 2        | 3        | 57      | 88       | 94      | -1     | -4       | -1       | 3        | 11     | 2       | 12      | 5       | -1       |
| 2       | 1      | 3        | 1      | 0      | 6      | 0        | 3        | 3       | -4       | 7       | 3      |          | -4       | -1       | 6      | 5       | 0       | 0       | 2        |
| 4       | 4      | 1        | 2      | 4      | 2      | 2        | 0        | 9       | 15       | 7       | 8      | 0        | 2        | 2        | 7      | 2       | 5       | 4       | 0        |
| 0       | 1      | -1       | 1      | -1     | 0      | -2       | -2       | 10      | 13       | 8       | 2      | 4        | -1       | 1        | 6      | 4       | 0       | -2      | 0        |
| 31      | 9<br>5 | 2<br>5   | 8<br>9 | 1<br>3 | 6<br>5 | 1<br>1   | 1<br>2   | 7<br>5  | -3       | 8<br>9  | 9<br>5 | 2        | 1        | 1<br>-1  | 6<br>5 | 3<br>5  | 5<br>2  | 3<br>2  | 2<br>4   |
| 4 2     | 0      | 1        | 3      | 0      | 1      | 1        | 1        | 4       | 5        | 2       | 0      | 1        | -1       | -1<br>-1 | 5      | 4       | 1       | -1      | 1        |
| 3       | 4      | 2        | 0      | 5      | 5      | 3        | 3        | 3       | 14       | 1       | 3      | -4       | 0        | 0        | 4      | 2       | 4       | 4       | 0        |
| -1      | -3     | -2       | -1     | 0      | -2     | 0        | -2       | 2       | 1        | -3      | -2     | -1       | -3       | 1        | 1      | -7      | -1      | -4      | -1       |
| 1       | 1      | 2        | 3      | 3      | 2      | 1        | 0        | 1       | 2        | 0       | 1      | 0        | 0        | 1        | 2      | 4       | 1       | -1      | 1        |
| 9       | 2      | 3        | 2      | 6      | 13     | 3        | 4        | 30      | 48       | 51      | 11     | 6        | 0        | 4        | 49     | 14      | 15      | 4       | 0        |
| 4       | 4      | 5        | 3      | 1      | 7      | 0        | 2        | 6       | -2       | 9       | 5      | 0        | -5       | 0        | 6      | 8       | 2       | 4       | 4        |
| 2       | 7      | 0        | 4      | 0      | 0      | 0        | -1       | 9       | 4        | 13      | 0      | 4        | 0        | 2        | 1      | 1       | 1       | 0       | -1       |
| 3       | 3      | 3        | 4      | 3      | 3      | 0        | -1       | 4       | 2        | 4       | 4      | 2        | 7        | 5        | 5      | 4       | 4       | 1       | 2        |
| 43      | 6      | 3        | 9      | 11     | 23     | 3        | 6        | 8       | -6       | 9       | 4      | 1        | -3       | 0        | 6      | 10      | 3       | 2       | 4        |
| 3       | 2      | -3<br>1  | 19     | 1      | 0      | 1        | 2        | 3<br>8  | 10       | 3       | 1<br>1 | 0        | 2<br>-1  | 12       | 2<br>6 | -2      | 3<br>-1 | -1      | -1       |
| -1<br>3 | 0      | 2        | 1<br>3 | 0<br>2 | 2      | 0<br>3   | -2       | o<br>7  | 10<br>12 | 3<br>9  | 3      | 3<br>2   | 1        | 0<br>2   | 3      | 3<br>3  | 4       | 3       | 0        |
| 2       | 2      | 1        | 1      | 7      | 7      | 0        | 1        | ,<br>21 | 43       | 7       | 2      | 4        | 2        | 0        | 5      | 2       | 4       | 2       | 1        |
| 6       | 4      | 3        | 3      | 4      | 5      | 0        | -1       | 9       | 6        | 5       | 3      | 2        | 2        | 1        | 9      | 7       | 4       | 0       | 2        |
| 4       | 6      | 0        | 2      | 2      | 1      | 2        | 0        | 18      | 19       | 16      | 5      | 0        | 30       | 2        | 10     | 2       | 4       | 4       | 0        |
| 3       | 3      | 1        | 2      | 2      | 1      | 1        | 0        | 12      | 13       | 11      | 4      | 3        | 0        | 0        | -6     | 2       | 5       | 5       | 0        |
| 3       | 3      | 1        | 2      | 3      | -1     | 4        | -1       | 5       | 16       | 2       | 5      | 9        | 4        | 6        | 2      | -2      | 3       | 6       | -2       |
| 6       | 4      | 2        | 3      | 2      | 5      | 0        | 0        | 11      | 7        | 12      | 5      | 1        | -2       | 0        | 5      | 5       | 2       | 2       | 2        |
| 5       | 8      | 6        | 3      | 1      | 8      | 0        | 2        | 53      | 40       | 12      | 26     | 0        | 1        | 0        | 12     | 10      | 5       | 4       | 4        |
| 1       | 2      | 1        | 6      | 2      | 2      | -1       | -3       | 46      | 26       | 7       | 29     | -1       | 2        | 3        | 6      | 3       | 3       | 5       | 1        |
| 4       | 5      | 5        | 1      | 2      | 6      | 0        | 1        | -2      | -9       | -4      | 2      | -8       | 0        | 0        | 6      | 5       | 3       | 3       | 3        |
| 3       | 3<br>5 | -1<br>-1 | 2<br>1 | 2      | 0<br>3 | 1<br>2   | -2<br>-2 | 8<br>9  | 23<br>2  | 20<br>8 | 7<br>3 | 1<br>2   | 0        | 2        | 5<br>6 | 0<br>-1 | 3<br>7  | 4<br>4  | -2<br>-1 |
| 4 3     | 2      | 2        | 3      | ა<br>2 | 3      | 2        | -2<br>0  | 9<br>1  | -5       | 0       | ა<br>1 | 6        | 2        | 0        | 3      | 1       | 1       | 0       | 0        |
| 4       | 4      | -1       | 1      | 1      | 0      | 1        | 1        | 6       | 7        | 8       | 3      | 4        | 1        | 3        | 3      | 2       | 1       | 2       | 0        |
| 9       | 4      | 1        | 1      | 22     | 31     | 3        | 5        | 5       | -2       | 3       | -3     | 4        | 0        | -1       | -1     | -4      | -1      | -4      | 0        |
| -1      | 0      | -1       | 1      | 1      | 1      | 0        | -1       | 0       | 1        | -3      | -3     | 1        | 1        | 0        | 2      | -3      | 2       | 0       | -1       |
| 6       | 9      | 12       | 30     | 11     | 12     | 2        | 2        | 16      | 13       | 18      | 0      | -2       | 1        | 2        | 6      | 5       | 3       | 4       | 3        |
| 3       | 3      | 4        | 5      | 6      | 5      | 5        | 0        | 2       | -3       | 2       | 1      | 3        | -1       | 0        | 3      | 0       | 1       | 0       | 0        |
| 2       | 4      | 6        | 7      | 1      | 2      | 1        | -1       | -2      | 2        | 0       | -1     | 0        | 0        | 10       | 2      | 1       | 0       | -2      | 1        |
| 3       | 4      | 1        | 2      | 2      | 4      | 2        | 1        | 8       | 28       | 13      | 18     | 0        | 0        | 1        | 5      | 2       | 3       | 2       | 0        |
| 6       | 6      | 6        | 4      | 3      | 4      | 0        | 5        | 10      | 9        | 4       | 11     | -1       | 3        | 2        | 6      | 6       | 8       | 3       | 1        |
| 2       | 2      | 0        | 2      | 2      | 2      | 2        | 0        | 6       | 0        | 4       | 1      | 0        | 2        | 0        | 1      | -1<br>1 | 2       | 0       | 0        |
| 1       | 1      | 1        | 1      | 0      | 2      | 1        | 1        | 8       | 5        | 12      | 6      | 0        | 2        | 2        | 3      | 1       | 2       | 1       | 0        |

| 3       | 4        | 0        | 7       | 2        | 2        | 1       | 20       | 12       | 23       | 34       | 6       | 0        | 2       | 9       | 7       | 1        | 6              | 4        | 0        |
|---------|----------|----------|---------|----------|----------|---------|----------|----------|----------|----------|---------|----------|---------|---------|---------|----------|----------------|----------|----------|
| 4       | 2        | -2       | 4       | 2        | 1        | 1       | 0        | 7        | 5        | 10       | 1       | 5        | 1       | 0       | 3       | -1       | 2              | 2        | -1       |
| 6       | 6        | 2        | 1       | 2        | 4        | 0       | 5        | 8        | 15       | 80       | 21      | 1        | 5       | 3       | 7       | 4        | 10             | 6        | 2        |
| 4       | 6        | 2        | 3       | 2        | 6        | 1       | 1        | 27       | 40       | 12       | 10      | 1        | -2      | 1       | 13      | 5        | 4              | 4        | 2        |
| 2       | 3        | 1        | 5       | 19       | 52       | 4       | 8        | 73       | 95       | 86       | 39      | 1        | 1       | 2       | 2       | 3        | 3              | 3        | 1        |
| 3       | 3        | 6        | 5       | 4        | 4        | 4       | 1        | 7        | -1       | 10       | 1       | -2       | 1       | 0       | 3       | 0        | 1              | 0        | 1        |
| 5       | 4        | 8        | 3       | 1        | 6        | 0       | 4        | 14       | 6        | 29       | 8       | 1        | -5      | 2       | 10      | 10       | 7              | 4        | 4        |
| 0       | 1<br>0   | 1<br>1   | 22<br>1 | -1<br>-1 | -1<br>-1 | 1       | 2<br>2   | 6<br>4   | 3<br>5   | 4<br>0   | -6<br>1 | 6<br>-1  | 1<br>-1 | 1       | 0<br>5  | -1<br>-1 | 0<br>-1        | -1<br>-1 | 0        |
| 7       | 7        | -4       | -2      | 3        | 11       | 1       | 8        | 20       | 10       | 13       | 6       | 0        | -4      | 0       | 6       | 10       | 3              | 2        | 5        |
| 6       | 5        | 2        | 1       | 2        | 2        | 0       | -3       | 7        | 8        | 18       | 3       | 1        | 2       | 1       | 6       | 2        | 25             | 3        | 0        |
| 2       | 4        | 4        | -1      | 2        | 2        | 1       | -1       | 13       | -2       | 8        | 4       | -11      | 1       | 1       | 4       | 2        | 3              | 1        | 1        |
| 3       | 3        | -2       | 2       | 2        | 1        | 1       | 1        | 12       | 20       | 25       | 3       | -1       | 1       | 2       | 2       | 0        | 3              | 2        | 0        |
| 2       | 2        | -1       | 1       | -1       | 2        | 1       | 3        | 6        | 6        | 2        | 5       | 0        | 1       | 2       | 3       | 2        | 4              | 2        | 0        |
| 12      | 7        | -1       | 1       | 5        | 11       | 1       | -1       | 47       | 75       | 22       | 7       | -3       | 2       | 3       | 30      | 12       | 10             | 7        | 0        |
| 6       | 4        | 3        | 5       | 7        | 12       | 2       | 1        | 13       | 37       | 67       | 13      | 7        | 0       | 0       | 9       | 3        | 11             | 8        | 8        |
| 4       | 4<br>-1  | 4<br>1   | 4<br>1  | 4<br>0   | 3<br>1   | 4<br>1  | 0<br>-1  | 8<br>1   | 7<br>4   | 11<br>2  | 6<br>-1 | 0        | 3       | 2<br>0  | 3<br>3  | 0        | 2<br>-1        | 1        | -1<br>-1 |
| -1      | -1<br>-3 | 0        | 2       | 1        | 2        | 0       | -1<br>-2 | 17       | 47       | 63       | 0       | -1       | 0       | 0       | 3<br>6  | 1        | 0              | -2       | -1<br>-1 |
| 1       | 2        | 4        | 1       | -1       | 4        | 0       | 3        | 6        | 9        | 9        | 2       | 2        | -3      | -1      | 8       | 5        | 2              | 1        | 3        |
| 6       |          | 3        | 4       | 10       | 19       | 1       | 4        | 43       | 61       | 74       | 5       | 2        | -2      | 2       | 18      | 7        | 13             | 7        | 3        |
| 3       | 5        | 5        | 3       | 2        | 8        | -2      | 2        | 5        | -5       | 5        | 6       | -2       | -5      | -1      | 9       | 8        | 4              | 2        | 4        |
| 7       | 6        | 3        | -1      | 8        | 8        | 3       | -1       | 7        | 7        | 5        | 5       | 0        | 2       | 2       | 11      | 6        | 7              | 6        | 2        |
| 4       | 5        | 1        | 2       | 2        | 5        | 2       | 3        | 0        | 7        | 3        | 11      | 1        | 0       | 2       | 7       | 2        | 4              | 4        | 1        |
| 2       | 4        | 1        | 1       | 6        | 9        | 0       | 1        | 14       | 41       | 12       | 4       | 0        | -1      | 2       | 7       | 5        | 5              | 3        | 1        |
| 21<br>6 | 7<br>7   | 0<br>4   | 4<br>5  | 11<br>10 | 17<br>10 | 3<br>6  | 1<br>1   | 5        | 5<br>7   | 11<br>13 | -1<br>7 | 5<br>1   | 2<br>1  | 2<br>1  | 2<br>6  | -2<br>2  | 4<br>4         | 2<br>6   | -2<br>5  |
| 3       | 2        | 2        | 5<br>6  | 4        | 4        | 0       | -3       | 6<br>5   | 4        | 5        | 4       | 3        | 6       | 1       | 7       | 5        | 5              | 0        | 1        |
| 4       | 2        | -2       | 1       | 4        | 0        | 0       | -2       | 44       | 61       | 18       | 6       | 2        | 0       | 1       | 9       | 3        | 7              | 5        | 0        |
| 6       | 4        | 3        | 4       | 12       | 42       | 2       | 7        | 46       | 76       | 49       | 4       | 6        | 13      | 12      | 17      | 10       | 21             | 17       | 4        |
| 3       | 3        | -1       | 1       | 1        | -1       | 1       | -1       | 3        | 8        | 3        | 7       | -1       | 4       | 3       | 3       | 0        | 3              | 4        | -2       |
| 5       | 8        | 3        | 6       | 7        | 9        | 2       | 0        | 5        | 5        | 7        | 0       | 1        | -1      | 1       | 4       | 5        | 5              | 4        | 2        |
| 5       | 11       | 0        | 1       | 5        | 7        | 1       | -1       | 16       | 32       | 88       | 9       | 1        | 0       | 4       | 9       | 0        | 8              | 6        | 0        |
| 4       | 5        | 3        | 3       | 3        | 9        | 1       | -1       | 25       | 54       | 67       | 4       | 2        | -1      | 1       | 18      | 7        | 8              | 5        | 2        |
| 39<br>3 | 15<br>3  | 7<br>1   | 7<br>2  | 52<br>1  | 67<br>1  | 14<br>0 | 10<br>-1 | 4<br>4   | 4<br>10  | 7<br>13  | 3<br>4  | 5<br>1   | 2<br>-1 | 1       | 0<br>7  | 2<br>5   | 5<br>4         | 2<br>2   | 1        |
| 25      | 55       | 5        | 7       | 23       | 29       | 16      | 20       | 2        | 3        | 5        | 79      | 8        | 29      | 53      | 78      | 65       | <del>7</del> 5 | 53       | 16       |
| 72      | 35       | 46       | 17      | 7        | 17       | 3       | 12       | 67       | 87       | 69       | 83      | 3        | -4      | 40      | 73      | 40       | 58             | 23       | 9        |
| 3       | 4        | 8        | 4       | 6        | 8        | 2       | -1       | 15       | 8        | 11       | -3      | -7       | -1      | 1       | 7       | 3        | 1              | -1       | 1        |
| -1      | 1        | 0        | 2       | 2        | 3        | -3      | -1       | 79       | 97       | 77       | 26      | 1        | 1       | 0       | 10      | 3        | 0              | -2       | -1       |
| 20      | 2        | 5        | 11      | 7        | 9        | 8       | 8        | 39       | 57       | 63       | 3       | 1        | 2       | 6       | 30      | 7        | 36             | 10       | 1        |
| 5       | 9        | 4        | 5       | 5        | 4        | 4       | -3       | 5        | 2        | 9        | 3       |          | 0       | 0       | 4       | 2        | 4              | 7        | 1        |
| 32      | 19<br>5  | 2<br>3   | 3<br>4  | 9<br>2   | 13<br>-1 | 4       | 10<br>-3 | 13<br>12 | 14<br>18 | 33<br>7  | 51<br>2 | 3<br>4   | 9       | 13<br>4 | 48<br>6 | 16<br>-3 | 21<br>0        | 8<br>1   | 6<br>-1  |
| 5<br>5  | 5<br>5   | ა<br>6   | 3       | 4        | 8        | 6<br>1  | 3        | 6        | -2       | 6        | 4       | 1        | -3      | -1      | 6       | -3<br>8  | 4              | 7        | 4        |
| 1       | 2        | 1        | 1       | -1       | 0        | 1       | 1        | 2        | -3       | 5        | -5      | 5        | 1       | 1       | -2      | 2        | 1              | 3        | 0        |
| 1       | 1        | 0        | -1      | 7        | 28       | -1      | 1        | 56       | 69       | 30       | -2      | -5       | 0       | 3       | 6       | -5       | 0              | -3       | -1       |
| 2       | 3        | 0        | 4       | 1        | 2        | 2       | 8        | 13       | 25       | 16       | 2       | 2        | 2       | 1       | 4       | 2        | 4              | 4        | 0        |
| 7       | 8        | 15       | 13      | 14       | 16       | 10      | 5        | 2        | -9       | 3        | 1       | -4       | 0       | 0       | 5       | 3        | 2              | 1        | 2        |
| 47      | 47       | 4        | 4       | 65       | 70       | 23      | 30       | 3        | -5       | 10       | 81      | 8        | 38      | 71      | 81      | 72       | 71             | 44       | 41       |
| 2       | 1        | -1<br>-1 | 1       | 10       | 40       | 1       | 0        | 70       | 92       | 65       | 3       | 4        | 6       | 5       | 5       | -1<br>-7 | 5              | 4        | -2       |
| 1       | 0        | 1<br>4   | 4<br>5  | 1<br>-1  | 3<br>16  | 1<br>-1 | 8<br>5   | 15<br>14 | 25<br>20 | 6<br>7   | 8<br>-1 | 1<br>-1  | 1<br>-1 | 1<br>5  | 5<br>5  | 7<br>1   | 3              | 1<br>-2  | 2<br>-1  |
| 1       | 1        | 2        | 5<br>1  | 0        | 0        | 1       | ວ<br>1   | 4        | -3       | 2        | 0       | -1<br>-6 | 3       | 5<br>1  | 2       | 0        | 2              | -2<br>0  | 0        |
| 73      | 63       | 79       | 79      | 37       | 46       | 49      | 48       | 7        | 0        | 12       | 1       | 2        | 3       | 3       | 5       | -3       | 2              | 0        | -1       |
| 26      | 33       | 1        | 2       | 68       | 71       | 13      | 18       | 3        | 6        | 7        | 79      | 7        | 36      | 61      | 78      | 68       | 73             | 45       | 33       |
| 4       | 5        | 3        | 4       | 4        | 3        | 1       | 6        | 8        | 10       | 6        | -4      | 3        | 4       | 3       | 7       | 5        | 5              | 2        | 2        |
| 4       | 6        | 1        | 1       | 1        | 3        | 0       | 2        | 9        | 4        | 11       | 6       | 0        | 2       | 1       | 5       | 2        | 3              | 5        | 0        |

| 3  | 1  | 1  | 3  | 0  | 1  | -1 | -4 | 4  | 3  | 2  | 1  | 3  | -2 | 1 | 6  | 4  | 2  | -1 | 0  |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|
| 9  | 5  | 0  | 4  | 8  | 12 | 5  | 6  | 55 | 90 | 38 | 7  | 8  | 4  | 4 | 12 | 2  | 15 | 7  | -2 |
| 4  | 2  | 3  | 5  | 19 | 47 | 1  | 0  | 67 | 89 | 60 | 6  | 2  | 4  | 8 | 10 | 5  | 3  | 1  | 1  |
| 3  | -1 | -2 | 20 | 0  | -3 | 2  | 3  | -1 | -6 | 3  | -3 | -3 | -2 | 1 | 2  | -6 | 1  | -5 | -1 |
| 81 | 61 | 22 |    | 78 | 83 | 72 | 66 | 8  | 5  | 6  | -1 | 2  | 1  | 1 | 8  | -2 | 4  | 1  | -1 |
| 48 | 17 | 7  | 7  | 33 | 47 | 6  | 11 | 55 | 79 | 80 | 19 | 6  | -1 | 1 | 48 | 20 | 16 | 3  | 7  |

| CAMK       | CAMK       | CAMK     | CAMK    | CAMK    | CAMK    | CAMK    | CAMK    | CAMK     | CAMK     | CAMK    | CAMK          | CAMK         | CAMK     | CAMK     | CAMK     | CAMK            | CAMK            | CAMK    | CAMK    |
|------------|------------|----------|---------|---------|---------|---------|---------|----------|----------|---------|---------------|--------------|----------|----------|----------|-----------------|-----------------|---------|---------|
| ■ MAPKAPK2 | ∞ MAPKAPK3 | MNK2     | MKNK1   | PRKD3   | PRKD1   | PRKD2   | MARK4   | MARK3    | PAR-1Bα  | MARK1   | SNF1LK2 (QIK) | SNF1LK (SIK) | ARK5     | BRSK1    | BRSK2    | AMPKA1 (A1B1G1) | AMPKA2 (A2B1G1) | ∞ MELK  | TSSK2   |
| 1 2        | 8<br>1     | 17<br>3  | 13<br>5 | 9<br>2  | 12<br>3 | 10<br>2 | 6<br>3  | 13<br>4  | 4<br>1   | 6<br>3  | 54<br>5       | 80<br>5      | 41<br>20 | 6<br>-1  | 10<br>2  | 7<br>6          | 5<br>5          | 8<br>1  | 2       |
| -1         | -2         | 24       | 30      | -2      | -1      | 0       | 13      | 22       | 16       | 16      | 31            | 27           | 61       | 6        | 11       | 9               | 5               | 6       | 1<br>-1 |
| 1          | 1          | 19       | 13      | 3       | 2       | 3       | 8       | 9        | 8        | 9       | 28            | 51           | 36       | 3        | 2        | 2               | 6               | 9       | -1      |
| 1<br>0     | 3<br>2     | 4<br>4   | 6<br>6  | 9<br>9  | 9<br>9  | 4<br>7  | 3<br>2  | 5<br>4   | 5<br>0   | 4<br>3  | 1<br>4        | 1            | 31<br>44 | 21<br>21 | 33<br>31 | 24<br>41        | 7<br>11         | 18<br>6 | -4<br>0 |
| -1         | -1         | 0        | 2       | 16      | 19      | 13      | 55      | 68       | 52       | 61      | 7             | 4            | 34       | 2        | 1        | 39              | 4               | 18      | 3       |
| 4          | 7          | 5        | 7       | 9       | 14      | 12      | 20      | 21       | 14       | 25      | 16            | 11           | 87       | 45       | 58       | 57              | 40              | 26      | 1       |
| 1          | 2<br>9     | 38       | 45      | 3       | 4       | 2<br>7  | 2       | 4        | 2        | 3       | 38            | 89           | 2        | 15       | 9        | 2               | 3               | 4       | 0       |
| -2         | -2         | 5<br>24  | 8<br>25 | 7<br>5  | 7<br>6  | 7<br>5  | 3<br>12 | 10<br>12 | 5<br>10  | 7<br>12 | 12<br>33      | 9<br>69      | 5<br>81  | 3<br>22  | 9<br>19  | 62<br>18        | 16<br>11        | 8<br>9  | 1<br>-2 |
| 1          | 3          | 9        | 10      | 1       | 2       | 2       |         | 7        | 0        | 5       | 5             | 4            | 7        | 2        | 5        | 2               | 2               | 2       | 5       |
| 4          | 4          | 8        | 2       | 5       | 5       | 4       | 2<br>7  | 9        | 7        | 8       | 9             | 13           | 19       | 1        | 4        | 4               | 6               | 10      | 2       |
| 3          | 8          | 1        | 1       | 4       | 3       | 3       | 3       | 29       | 6<br>11  | 7       | 0<br>10       | 10           | 26       | 2        | 3<br>5   | 13<br>8         | 8               | 11      | -1<br>3 |
| 3          | 4<br>1     | 1<br>0   | 3<br>1  | 10<br>2 | 13<br>2 | 7<br>2  | 8<br>7  | 12<br>4  | 4        | 10<br>4 | 10            | 11<br>1      | 3<br>62  | 0<br>10  | ວ<br>13  | 7               | 4<br>12         | 81<br>6 | -1      |
| -2         | -4         | 25       | 31      | 3       | 5       | 4       | 0       | 5        | 0        | 0       | 30            | 89           | 4        | 12       | 8        | 0               | 2               | 3       | -1      |
| 0          | 2          | 1        | 6       | 9       | 4       | 6       | 3       | 9        | 3        | 6       | 3             | 3            | 15       | 10       | 16       | 35              | 7               | 5       | -1      |
| 5          | 24         | 9        | 12      | 23      | 25      | 33      | 2       | 5        | 2        | 7       | 53            | 90           | 5        | 2        | 5        | 6               | 4               | 9       | 3       |
| -1         | 3<br>0     | 6<br>2   | 6<br>2  | 12<br>5 | 12<br>4 | 12<br>4 | 24<br>1 | 31<br>3  | 20<br>1  | 24<br>2 | 22<br>3       | 42<br>0      | 72<br>48 | 60<br>1  | 73<br>-1 | 24<br>1         | 14<br>1         | 38<br>3 | 4<br>11 |
| 1          | 4          | 4        | 4       | 3       | 3       | 1       | 5       | 6        | 5        | 8       | 10            | 28           | 46       | 3        | 2        | 4               | 5               | 4       | 1       |
| -1         | 0          | 3        | 3       | 9       | 16      | 11      | 28      | 20       | 19       | 33      | -1            | 0            | 34       | 19       | 31       | 10              | 5               | 42      | 1       |
| 0          | 37         | 4        | 11      | 44      | 40      | 46      | 1       | 3        | 0        | 5       | 23            | 5            | 4        | 0        | 2        | 4               | 2               | 3       | 3       |
| 4<br>2     | 5<br>4     | 4<br>6   | 7<br>12 | 7<br>1  | 6<br>2  | 6<br>1  | 2<br>2  | 6<br>10  | -1<br>-4 | 7<br>3  | 10<br>14      | 6<br>15      | -1<br>4  | 1<br>4   | 2<br>4   | 6<br>5          | 4<br>4          | 3<br>7  | 5<br>2  |
| -2         | 0          | 5        | 9       | 3       | 4       | 3       | 13      | 28       | 13       | 15      | 28            | 18           | 7        | 7        | 12       | 5               | 5               | 2       | 2       |
| -1         | 35         | 1        | 3       | 26      | 34      | 38      | 1       | -2       | 0        | 2       | 47            | 6            | 3        | 0        | 0        | 0               | 1               | 1       | 0       |
| -1         | 0          | 2        | 0       | 1       | 2       | 1       | 4       | 3        | 5        | 6       | -1            | 3            | 63       | 8        | 16       | 8               | 12              | 35      | 1       |
| 2          | 5<br>2     | 77<br>9  | 48<br>4 | 5<br>1  | 5<br>4  | 5<br>0  | 77<br>3 | 88       | 71       | 80      | 69<br>25      | 61<br>37     | 54<br>58 | 76<br>7  | 82<br>9  | 75<br>4         | 31<br>4         | 8<br>3  | 5<br>-1 |
| 1          | 4          | 21       | 13      | 3       | 3       | 5       | 4       | 8        | 11       | 13      | 14            | 10           | 27       | 0        | 3        | 2               | 3               | 50      | 3       |
| 0          | 0          | 3        | 6       | 2       | 1       | 1       | 4       | 0        | 1        | 5       | 23            | 15           | 22       | 7        | 12       | 4               | 4               | 80      | 1       |
| -2         | -3         | 6        | 0       | 0       | 3       | 3       | 19      | 16       | 16       | 24      | -6<br>4       | 3            | 44       | 16       | 31       | 12              | 4               | 21      | -1      |
| 2 3        | 1<br>4     | 65<br>10 | 46<br>9 | 8<br>1  | 8<br>2  | 8<br>1  | 5<br>5  | 9<br>10  | 4<br>2   | 10<br>7 | 1<br>11       | 4<br>17      | 11<br>42 | 8<br>5   | 16<br>5  | 20<br>4         | 6<br>4          | 6<br>7  | 1<br>3  |
| 0          | 4          | 3        | 5       | 3       | 3       | 2       | 2       | 2        | 3        | 4       | 4             | 4            | -4       | 3        | 6        | 9               | 4               | 5       | -2      |
| 1          | 2          | 13       | 26      | 0       | -1      | 2       | 0       | 23       | -2       | 2       | -2            | 3            | 9        | 3        | 4        | 2               | 2               | -1      | 2       |
| 3          | 7          | 12       | 20      | 5       | 5       | 4       | 3       | 3        | 3        | 4       | 37            | 29           | 12       | -1       | 3        | 6               | 6               | 15      | 3       |
| -2<br>-2   | 36<br>-1   | 0<br>7   | 0<br>7  | 19<br>1 | 19<br>5 | 23<br>3 | 1<br>12 | 0<br>5   | 2<br>7   | 1<br>9  | 29<br>8       | 5<br>-1      | 40<br>11 | 1<br>11  | 1<br>17  | 1<br>15         | -2<br>9         | 1<br>39 | 0<br>-1 |
| 0          | 1          | 4        | 5       | 2       | 1       | 1       | 1       | 7        | 1        | 1       | 6             | 3            | 3        | 1        | -1       | 1               | 1               | 3       | -1      |

| 1       | 5       | 8        | 14       | 6       | 7       | 6       | 7      | 11      | 9      | 10     | 8       | 6        | 10      | 9       | 11      | 5       | 6      | 5      | -1      |
|---------|---------|----------|----------|---------|---------|---------|--------|---------|--------|--------|---------|----------|---------|---------|---------|---------|--------|--------|---------|
| 2       | 4       | 11       | 10       | 8       | 9       | 8       | 5      | 5       | 7      | 13     | 10      | 9        | 1       | 2       | 6       | 7       | 6      | 61     | 5       |
| -1      | 0       | 3        | 6        | 76      | 58      | 76      | 6      | 8       | 9      | 12     | 8       | 8        | 9       | 6       | 5       | 7       | 8      | 15     | 95      |
| 0       | 0       | 9        | 17       | 6       | 7       | 6       | 4      | 10      | 4      | 9      | 14      | 13       | 18      | 9       | 11      | 7       | 5      | 7      | 3       |
| 2       | 1       | 14       | 10       | 3       | 3       | 2       | 1      | 4       | 2      | 2      | 6       | 8        | 4       | -2      | 3       | 3       | 4      | 7      | 3       |
| -2      | 1       | 7        | 6        | 5       | 5       | 2       | 4      | 5       | 3      | 6      | 5       | 14       | -4      | 4       | 4       | 3       | 4      | 8      | 2       |
| 4       | 4       | 3        | 2        | 14      | 13      | 11      | 62     | 78      | 62     | 74     | 15      | 11       | 43      | 10      | 19      | 83      | 43     | 76     | 3       |
| 2       | 4       | 0        | 6        | 7       | 8       | 6       | 3      | 3       | 2      | 6      | 6       | 9        | -1      | 1       | 1       | 2       | 5      | 20     | 0       |
| -2      | -1      | 0        | -1<br>26 | 0       | 0       | 0       | 2      | 2<br>2  | 2      | 0      | -3      | -5<br>84 | 4       | 1       | -2<br>7 | -1      | -1     | 1      | -2<br>1 |
| 2 -1    | 3<br>-1 | 16<br>2  | 26<br>6  | 4<br>6  | 5<br>7  | 4<br>5  | 1<br>1 | 1       | 0<br>0 | 3<br>3 | 20<br>7 | 7        | 8<br>2  | 8<br>0  | 7<br>1  | 5<br>1  | 2<br>4 | 5<br>5 | 1 2     |
| 1       | 3       | 5        | 4        | 6       | 7       | 7       | 9      | 7       | 7      | 9      | 14      | 32       | 58      | 6       | 4       | 5       | 7      | 16     | -1      |
| 2       | 4       | 13       | 7        | 7       | 9       | 5       | 8      | 17      | 14     | 15     | 6       | 9        | 2       | 6       | 9       | 8       | 4      | 61     | 2       |
| -1      | 0       | 5        | 8        | -3      | -2      | -2      | 1      | 2       | 1      | 1      | 28      | 76       | 3       | 5       | 5       | 0       | 0      | 0      | -1      |
| 0       | 3       | 28       | 12       | 3       | 4       | 6       | 4      | 12      | 11     | 11     | 5       | 2        | 19      | 4       | 3       | 2       | 10     | 44     | -1      |
| 3       | 3       | 25       | 7        | 6       | 7       | 5       | 6      | 10      | 5      | 10     | 3       | 6        | 11      | 3       | 3       | 6       | 7      | 6      | 1       |
| 1       | 4       | 12       | 11       | 5       | 5       | 2       | 4      | 2       | 3      | 5      | 34      | 21       | 33      | 9       | 7       | 6       | 8      | 6      | 2       |
| 2       | 4       | 26       | 23       | 3       | 4       | 4       | 15     | 31      | 18     | 36     | 33      | 27       | 28      | 18      | 23      | 21      | 20     | 75     | 1       |
| 1       | 2       | 1        | 3        | 3       | 5       | 3       | 8      | 14      | 8      | 8      | 11      | 6        | 12      | 6       | 9       | 6       | 4      | 5      | -1      |
| 0       | 2       | 2        | 7        | 1       | 1       | 3       | 17     | 19      | 16     | 16     | 20      | 9        | 48      | 13      | 19      | 9       | 11     | 7      | 0       |
| -1      | 16      | 37       | 28       | -1      | -2      | -1      | 2      | 0       | 1      | 0      | 1       | 4        | 6       | 0       | 1       | 2       | 4      | 9      | -1      |
| 2       | 4       | 5        | 7        | 5       | 6       | 6       | 2      | 4       | 1      | 4      | 3       | 4        | 9       | 1       | 4       | 5       | 3      | 4      | 2       |
| 1       | 3       | 2        | 3        | 7       | 6       | 7       | 1      | 0       | 2      | 1      | -1      | 6        | 7       | 1       | 0       | 1       | 2      | 4      | -3      |
| 0       | 0       | 4<br>10  | 8<br>18  | -4<br>3 | -2<br>3 | -2<br>2 | 2<br>2 | 4<br>14 | 1<br>2 | 3<br>1 | 2<br>4  | 1<br>29  | 8<br>9  | 3<br>9  | 9       | 4<br>2  | 3<br>4 | 0      | 1<br>0  |
| -1      | -1      | 3        | 2        | 0       | 3<br>1  | 0       | 0      | -2      | -1     | 1      | 2       | 7        | 42      | 1       | 6<br>7  | 0       | 0      | 4<br>1 | 0       |
| 5       | 11      | 10       | 10       | 4       | 4       | 5       | 0      | -3      | 0      | 3      | 11      | 10       | 1       | -2      | 4       | 3       | 4      | 3      | 4       |
| 2       | 5       | 6        | 7        | 3       | 2       | 4       | 8      | 8       | 4      | 16     | 14      | 16       | 65      | 8       | 9       | 39      | 25     | 63     | 4       |
| 0       | 2       | 8        | 6        | -1      | 0       | -2      | 2      | 0       | -1     | 2      | 4       | 8        | 1       | 2       | 2       | 1       | -1     | 5      | 1       |
| 1       | 2       | 3        | 4        | 3       | 2       | 1       | 1      | 0       | 5      | 1      | 4       | 8        | 2       | 0       | 2       | 1       | 1      | 8      | 2       |
| -2      | -2      | 3        | 5        | 0       | 1       | 2       | 1      | -1      | 0      | 2      | -1      | 6        | 0       | -1      | 1       | -1      | 0      | -2     | 1       |
| 3       | 8       | 11       | 14       | 12      | 17      | 14      | 27     | 28      | 13     | 33     | 18      | 15       | 46      | 16      | 26      | 20      | 13     | 41     | 5       |
| 1       | 0       | 46       | 28       | 0       | 1       | 2       | 13     | 13      | 3      | 11     | 10      | 13       | 30      | 10      | 9       | 3       | 3      | 3      | 2       |
| 3       | 3       | 8        | 15       | 7       | 8       | 6       | 18     | 36      | 10     | 25     | 12      | 10       | 39      | 17      | 26      | 19      | 15     | 26     | 6       |
| 3       | 4       | 6        | 7        | 8       | 11      | 7       | 10     | 33      | 6      | 11     | 16      | 14       | 14      | 5       | 7       | 11      | 10     | 7      | 2       |
| 0       | -1      | 3        | 3        | 1       | 2       | 2       | 2      | 1       | 2      | 2<br>4 | 4       | 2        | 3       | 3       | 9       | 2       | 4      | 1      | 1       |
| 4       | 11<br>6 | 5<br>40  | 4<br>12  | 4<br>6  | 6<br>6  | 2<br>6  | 4      | 4       | 1<br>2 | 7      | 2<br>10 | 6<br>9   | 6       | 4<br>6  | 4<br>5  | ა<br>10 | 4<br>8 | 2<br>8 | 1       |
| -1      | 2       | 9        | 3        | 10      | 14      | 12      | 43     | 37      | 32     | 52     | 36      | 28       | 59      | 38      | 52      | 72      | 34     | 73     | -1      |
| 1       | 6       | 3        | 12       | 3       | 3       | 4       | 2      | -3      | -1     | 4      | 8       | 10       | -1      | -2      | 3       | 3       | 2      | 5      | 4       |
| 3       | 11      | 7        | 7        | 4       | 4       | 4       | 1      | -2      | 1      | 4      | 24      | 55       | 64      | 1       | 4       | 2       | 4      | 5      | 3       |
| -1      | 2       | 0        | 1        | 3       | 1       | 2       | 2      | 2       | 1      | 1      | 4       | 3        | -3      | 2       | 2       | 1       | 4      | 1      | -2      |
| -1      | -3      | 6        | 10       | 6       | 7       | 5       | 11     | 13      | 6      | 11     | 11      | 11       | 49      | 9       | 15      | 16      | 13     | 9      | 3       |
| 0       | -1      | 16       | 8        | 12      | 18      | 15      | 33     | 40      | 24     | 34     | 21      | 18       | 61      | 17      | 20      | 13      | 14     | 57     | 2       |
| 1       | 4       | 0        | 0        | 2       | 2       | 2       | 0      | 7       | 1      | 2      | 0       | 4        | 4       | 1       | -2      | 3       | 2      | 1      | -2      |
| 0       | 2       | 3        | 3        | 4       | 1       | 2       | 6      | 7       | 6      | 6      | 5       | 4        | 14      | 5       | 4       | 5       |        | -4     | 0       |
| 1       | 5       | 5        | 6        | 5       | 7       | 5       | 5      | 5       | 3      | 9      | 4       | 7        | 6       | 0       | 3       | 6       | 3      | 8      | 49      |
| -1      | 20      | 2        | 4        | 4       | 3       | 3       | 0      | -1      | -1     | 0      | -2      | 2        | -3      | 0       | -1      | 0       | 0      | -1     | 0       |
| 1       | 2       | 10       | 17       | 3       | 3       | 2       | 0      | 2       | 1      | 3      | 12      | 72       | 4       | 5       | 4       | 4       | 4      | 6      | 2       |
| -2<br>1 | 5<br>4  | 11<br>13 | 7<br>6   | 3<br>4  | 3<br>5  | 3<br>5  | 0      | 3<br>2  | 0<br>2 | 4<br>3 | 3<br>4  | 6<br>9   | -1<br>9 | 77      | 2<br>80 | 1<br>4  | 2<br>1 | 2<br>1 | 2<br>-1 |
| 1<br>0  | -1      | 13       | о<br>11  | 4<br>6  | ა<br>7  | 5<br>6  | 1      | 10      | -2     | 5<br>5 | 11      | 9        | 1       | 77<br>2 | 3       | 5<br>5  | 2      | 1<br>5 | 5       |
| 0       | 4       | 9        | 4        | 3       | 4       | 4       | 1      | 10      | 1      | 3      | 5       | 4        | 2       | 5       | 5<br>6  | 0       | -23    | 2      | -1      |
| 3       | 5       | 5        | 1        | 8       | 12      | 9       | 2      | 3       | 4      | 3      | 0       | 9        | 5       | -1      | 0       | 4       | 3      | 18     | 12      |
| 0       | 2       | 4        | 3        | 2       | 3       | 3       | 3      | 1       | 2      | 0      | 4       | 8        | 4       | 2       | 1       | 1       | 4      | 2      | -1      |
| 0       | 29      | 6        | 8        | 6       | 7       | 5       | 3      | 3       | 5      | 5      | 11      | 12       | 5       | 1       | 5       | 4       | 4      | 9      | 2       |
| 1       | 2       | 1        | 3        | 5       | 5       | 5       | 1      | 1       | 2      | 4      | 5       | 2        | 2       | 3       | 1       | 1       | 3      | 7      | -1      |
| 2       | 3       | 2        | 3        | 55      | 25      | 42      | 4      | 4       | 5      | 6      | 0       | 7        | 8       | 5       | 5       | 7       | 8      | 18     | 73      |

| 3      | 3       | 15      | 29       | 4       | 5       | 4       | 3       | 6       | 0       | 7             | 18       | 40      | 9      | 15      | 17      | 8       | 7       | 4        | 3       |
|--------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------------|----------|---------|--------|---------|---------|---------|---------|----------|---------|
| -1     | -2      | 4       | 2        | -1      | -1      | 0       | 2       | 4       | 3       | 3             | 7        | 12      | 2      | 0       | 2       | 1       | -2      | -2       | -1      |
| -1     | 34      | -1      | -1       | -1      | -1      | 0       | 1       | 0       | 2       | 0             | -5       | 7       | 2      | -1      | 2       | 0       | -3      | 1        | -2      |
| 2      | 5       | 10      | 14       | 40      | 41      | 41      | 13      | 23      | 23      | 23            | 16       | 12      | 7      | 6       | 8       | 7       | 8       | 88       | 3       |
| 0      | 20      | 8       | 16       | 1       | 1       | 1       | 0       | 0       | 0       | 0             | -7       | 1       | -4     | 0       | 0       | 0       | 2       | 4        | 0       |
| 0      | 14      | 0       | 0        | 3       | 2       | 3       | 1       | 22      | 2       | 1             | 2        | 4       | 4      | 1       | 0       | -1      | 3       | 0        | -1      |
| 2      | 2       | 2       | 4        | 3       | 8       | 1       | 1       | 1       | 1       | 2             | 7        | 9       | 4      | -1      | 2       | 3       | 3       | 10       | 1       |
| -1     | 0       | 12      | 9        | 1       | 1       | 1       | 2       | 2       | 2       | 4             | 1        | 0       | 4      | 3       | 4       | 4       | 3       | -1       | -1      |
| 4      | 11      | 15      | 10       | 4       | 6       | 3       | 4       | 5       | 2       | 6             | 6        | 10      | 6      | 7       | 8       | 4       | 5       | 1        | 2       |
| 1      | 31<br>0 | 1<br>11 | 3<br>6   | 6<br>-3 | 7<br>-3 | -5      | 5       | 12<br>0 | 2<br>-1 | 5<br>0        | 8<br>0   | 7<br>9  | 7<br>2 | -3      | 5<br>1  | 5<br>0  | 5<br>-1 | 7<br>8   | 1<br>1  |
| 1      | 2       | 16      | 7        | 4       | 4       | 3       | 0       | 0       | 2       | 2             | 6        | 9       | 1      | -s<br>1 | 4       | 3       | 5       | 4        | 2       |
| 0      | 31      | 2       | 5        | 3       | 2       | 4       | 0       | 2       | -1      | 1             | 5        | 0       | -1     | 0       | 1       | 1       | 1       | 0        | 1       |
| 4      | 8       | 5       | 6        | 6       | 6       | 4       | 3       | 4       | 5       | 4             | 8        | 7       | 7      | 4       | 9       | 6       | 3       | 11       | 2       |
| 1      | -1      | 11      | 10       | 10      | 11      | 8       | 5       | 7       | 6       | 6             | 15       | 13      | 16     | 9       | 13      | 7       | 6       | 13       | 4       |
| 0      | 0       | -1      | 2        | 0       | 0       | -1      | 2       | 4       | 2       | 2             | 2        | 5       | 4      | 0       | 1       | 1       | 3       | 5        | 5       |
| 3      | 3       | 3       | 3        | 29      | 30      | 26      | 18      | 35      | 18      | 27            | -2       | 7       | 47     | 1       | 6       | 66      | 15      | 82       | 2       |
| 1      | 2       | 4       | 7        | 2       | 2       | 2       | 0       | 1       | 0       | 5             | -2       | 5       | 8      | 4       | 4       | 4       | 1       | 1        | 5       |
| 0      | 1       | 35      | 30       | 1       | 2       | 2       | 1       | 2       | 0       | 1             | 0        | 7       | -1     | 1       | 1       | 1       | 3       | 0        | 0       |
| 0      | -1      | 2       | 1        | 6       | 6       | 7       | 7       | 15      | 10      | 12            | -1       | 0       | 3      | 2       | 3       | 3       | 7       | 6        | -1      |
| 3      | 5       | 9       | 9        | 6       | 6       | 5       | 4       | 7       | 3       | 7             | 12       | 13      | 31     | 3       | 4       | 7       | 6       | 11       | 2       |
| 1      | 36      | 1       | 4        | 8       | 10      | 9       | 4       | 1       | 1       | 5             | 16       | 9       | 4      | 2       | 5       | 5       | 6       | 10       | 2       |
| 2      | 5       | 15      | 15       | 10      | 11      | 10      | 6       | 7       | 6       | 10            | 4        | 9       | 45     | 12      | 12      | 15      | 9       | 24       | -1      |
| -1     | 33      | 1       | 2        | 2       | 1       | 4       | 1       | 0       | -2      | 1             | 8        | 9       | 2      | -1      | 3       | 0       | -2      | 4        | 1       |
| 2      | 29      | 0       | 3        | 5       | 8       | 5       | 3       | 5       | 1       | 4             | 9        | 10      | 0      | 2       | 3       | 5       | 4       | 5        | 3       |
| -1     | 31      | 4       | 6        | 12      | 14      | 11      | 6       | 8       | 4       | 8             | 14       | 9       | 6      | 5       | 8       | 7       | 7       | 8        | 3       |
| 4      | 38      | 4       | 4        | 10      | 13      | 14      | 5       | 8       | 5       | 8             | 19       | 15      | 4      | -1      | 4       | 9       | 7       | 6        | 3       |
| 2      | 37      | 8       | 16       | 11      | 15      | 15      | 2       | 6       | 0       | 8             | 17       | 7       | 1      | 4       | 6       | 6       | 4       | 5        | 4       |
| 0      | 0       | 8       | 6        | 1       | 1       | 3       | 2       | 3       | 1       | 2             | 1        | 7       | -2     | 1       | 2       | 2       | 3       | -4       | 0       |
| 2      | 6       | 3       | 4        | 5       | 6       | 3       | 4       | 4       | 4       | 4<br>1        | 7        | 24      | -2     | 5       | 4       | 3       | 4       | 7        | 2       |
| 1<br>3 | 4<br>9  | 1<br>5  | 0<br>11  | 38<br>4 | 18<br>6 | 32      | 1<br>1  | 1<br>2  | 0<br>2  | 2             | -4<br>7  | 5<br>16 | 4<br>1 | 1<br>-1 | -2<br>2 | 1<br>4  | 4<br>3  | 18<br>15 | 73<br>3 |
| 1      | 4       | 4       | 5        | 3       | 3       | 2<br>4  | 1       | 8       | 0       | 3             | 5        | 5       | 3      | 0       | 2       | 4       | -4      | 4        | 4       |
| 1      | 5       | 2       | 3        | 4       | 5       | 4       | 3       | 4       | 3       | 4             | 2        | 3       | 2      | 1       | 1       | 0       | 4       | 4        | -2      |
| 2      | 6       | 5       | 3        | 9       | 8       | 8       | 4       | 4       | 3       | 5             | 14       | 13      | 11     | 2       | 4       | 5       | 0       | 10       | 4       |
| -3     | -5      | 5       | 6        | 0       | 0       | -1      | 1       | 3       | 5       | 3             | -2       | 7       | 8      | 0       | 2       | 0       | 1       | 3        | 0       |
| 5      | 10      | 3       | 4        | 6       | 6       | 5       | 2       | 2       | 2       | 6             | 5        | 7       | 7      | 5       | 3       | 4       | 6       | 7        | 0       |
| -2     | -2      | 1       | 0        | -1      | -2      | 1       | 3       | 5       | 5       | 1             | -14      | -4      | 28     | 1       | 3       | 0       | -3      | 47       | -3      |
| 1      | 0       | 3       | 6        | 0       | 0       | 2       | 1       | 19      | 0       | 3             | 3        | 7       | 3      | 1       | 6       | 3       | 1       | 7        | 0       |
| 1      | 4       | 4       | 6        | 4       | 4       | 4       | 3       | 12      | -1      | 4             | 10       | 10      | 4      | 1       | 4       | 4       | 4       | 8        | 2       |
| 6      | 29      | 9       | 9        | 0       | 0       | 1       | 2       | 1       | 1       | 3             | 7        | 3       | 5      | 9       | 13      | 6       | 2       | 2        | 7       |
| -3     | 30      | 3       | 3        | 1       | 2       | 1       |         | -1      | 2       | 2             | 0        | 8       | 0      | 0       | 2       | 0       | 1       | 4        | 1       |
| 5      | 11      | 1       | 3        | 5       | 7       | 4       | 1       | 8       | 2       | 3             | 7        | 14      | 3      | -2      | 2       | 5       | 3       | 10       | 3       |
| 2      | 1       | 4       | 9        | 4       | 6       | 4       | 54      | 69      | 46      | 61            | 18       | 18      | 37     | 7       | 11      | 52      | 16      | 32       | 5       |
| 1      | 29      | 1       | 2        | 8       | 9       | 10      | 2       | 5       | 2       | 4             | -4       | 5       | 3      | 6       | 5       | 1       | 3       | 5        | 0       |
| -1     | -1      | 10      | 7        | -1      | -3      | 0       | 6       | 11      | 10      | 11            | -1<br>-7 | -7      | 10     | 10      | 12      | 5       | 2       | 16       | 5       |
| -1     | 3       | 1       | 7        | 0       | 1       | -1      | 7       | 4       | 4       | 4             | -7       | 0       | 2      | 41      | 52      | 0       | 0       | 3        | 0       |
| 2      | 2       | 6       | 5<br>1.4 | 4       | 5       | 4       | 2       | 3       | 2       | 3             | 4        | 7       | 6      | 2       | 1       | 2       | 4       | 5<br>7   | -1      |
| 1<br>Ω | 4<br>46 | 1<br>2  | 14<br>2  | 5<br>7  | 6<br>9  | 5<br>6  | 2<br>3  | -5<br>2 | 2<br>4  | 3<br>4        | 5<br>10  | 6<br>13 | 4<br>1 | 13<br>0 | 11      | 3<br>4  | 6<br>4  | 7<br>11  | -1      |
| 8<br>4 | 46<br>2 | 6       | 2<br>11  | 7<br>16 | 9<br>24 | ь<br>19 | 3<br>34 | 34      | 4<br>21 | 4<br>41       | 10       | 20      | 60     | 40      | 2<br>56 | 4<br>75 | 4<br>35 | 91       | 2       |
| 2      | 5       | 0       | 3        | 6       | 24<br>5 | 6       | 5<br>5  | 3       | 2       | 7             | 15       | 25      | 47     | 2       | 5       | 8       | 33<br>6 | 13       | ა<br>1  |
| 2      | 5<br>5  | 4       | 3<br>6   | 8       | 9       | 8       | 2       | 3<br>4  | 2       | <i>7</i><br>5 | 15<br>11 | 25<br>8 | 9      | 3       | 3       | 6       | 5       | 8        | 3       |
| 0      | 1       | 26      | 29       | 2       | 3       | 3       | 19      | 27      | 17      | 20            | 39       | 29      | 61     | 12      | 13      | 5       | 15      | 9        | 0       |
| 1      | 13      | 1       | 5        | 1       | 0       | 1       | 0       | 2       | -1      | 2             | 0        | 1       | -5     | 0       | 1       | 0       | 1       | -3       | -2      |
| 3      | 7       | 16      | 31       | 9       | 10      | 11      | 4       | 6       | 1       | 8             | 19       | 33      | 2      | 4       | 6       | 6       | 5       | 8        | 2       |
| 4      | 46      | -2      | 1        | 15      | 18      | 14      | 4       | 5       | 4       | 5             | 13       | 9       | 2      | 4       | 5       | 5       | 5       | 5        | 1       |
| 1      | -1      | 18      | 23       | -1      | -1      | -1      | 2       | -5      | 1       | 5             | 8        | 26      | 4      | 9       | 9       | 2       | 0       | -4       | 3       |

| 1        | 1        | 15       | 10       | 20     | 23      | 17     | 8       | 19      | 15      | 21      | 2       | 5       | 10      | 18      | 27      | 11      | 6       | 71      | 1      |
|----------|----------|----------|----------|--------|---------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 1        | 6        | 18       | 9        | 22     | 22      | 18     | 11      | 23      | 18      | 23      | 6       | 8       | 13      | 22      | 28      | 14      | 7       | 67      | -1     |
| -2       | -2<br>4  | 28       | 77       | -1     | -1      | -1     | 1<br>-1 | -1      | 0<br>-1 | -1<br>0 | -4<br>0 | -7      | 9       | 22      | 19      | 4       | 6<br>-1 | 1       | -1     |
| -2<br>-2 | -4<br>-5 | 12<br>72 | 16<br>69 | 1<br>0 | 1<br>1  | 2<br>1 | 9       | 3<br>9  | 5       | 10      | 21      | 2<br>10 | 4<br>36 | 0<br>25 | 6<br>29 | 0<br>4  | 2       | 2<br>4  | 2 3    |
| 1        | 3        | 2        | 4        | 5      | 4       | 4      | 3       | 4       | 2       | 4       | 9       | 11      | 6       | 4       | 5       | 4       | -2      | 2       | 1      |
| 0        | -2       | 14       | 17       | -5     | -5      | -6     | 5       | 4       | 4       | 6       | 34      | 12      | 22      | 4       | 6       | 4       | 1       | -5      | 5      |
| 1        | 3        | 6        | 18       | 1      | 1       | 1      | 3       | 6       | 3       | 2       | 9       | 3       | 8       | 7       | 7       | 2       | 6       | 1       | -3     |
| 5        | 10       | -1       | 1        | 3      | 5       | 2      | 1       | 3       | 2       | 4       | 5       | 7       | 1       | -2      | 2       | 2       | 3       | 3       | 2      |
| 1        | 4        | 64       | 65       | 5      | 5       | 4      | 4       | 6       | 3       | 5       | 54      | 95      | 5       | 19      | 13      | 4       | 5       | 9       | 1      |
| 3        | 7        | 3        | 3        | 12     | 11      | 12     | 4       | 7       | 5       | 5       | 22      | 75      | 7       | -1      | 3       | 4       | 4       | 9       | 2      |
| 6        | 11       | 14       | 17       | 18     | 23      | 22     | 15      | 5       | 10      | 22      | 13      | 14      | 66      | 31      | 46      | 64      | 26      | 47      | 7      |
| 4        | 34       | 6        | 7        | 4      | 4       | 4      | 0       | 2       | 0       | 2       | 5       | 10      | 4       | 0       | 4       | 4       | 4       | 2       | 1      |
| 1        | 4        | 11       | 17       | 4      | 4       | 4      | 2       | 2       | 1       | 2       | 31      | 29      | 13      | 0       | 1       | 1       | 4       | 11      | -3     |
| -1       | 0        | 6        | 4        | 1      | 2       | 2      | 0       | -2      | -2      | 1       | -1      | 4       | 2       | -1      | 1       | -1      | 1       | -1      | 1      |
| 1        | 3        | 7        | 6        | 3      | 3       | 2      | 2       | 4       | 1       | 2       | 12      | 6       | 2       | 3       | 3       | 2       | 3       | 4       | -1     |
| 6        | 12       | 7        | 6        | 11     | 15<br>2 | 6      | 3       | 6       | 0       | 4       | 5<br>6  | 10      | 5       | 5<br>4  | 9<br>5  | 6<br>3  | 5<br>3  | 9<br>3  | 2      |
| -3<br>0  | -5<br>0  | 12<br>9  | 32<br>8  | 2<br>7 | 13      | 2<br>9 | 3<br>26 | 2<br>17 | 1<br>17 | 3<br>16 | 6<br>7  | 3<br>14 | 2<br>35 | 4<br>15 | 5<br>24 | ა<br>16 | ა<br>12 | 33      | 2 2    |
| 3        | 8        | 9<br>5   | 6        | ,<br>5 | 7       | 9<br>5 | 3       | 6       | 0       | 5       | 7       | 10      | 3       | 4       | 4       | 6       | 4       | აა<br>3 | 4      |
| 1        | 2        | 5        | 4        | 2      | 2       | 2      | 4       | 1       | 3       | 3       | 1       | 6       | -1      | 1       | 3       | 1       | 2       | 7       | 2      |
| 0        | 1        | 3        | 3        | 0      | 1       | 2      | 1       | 3       | -1      | 1       | 10      | 15      | 15      | 3       | 9       | 0       | 1       | 2       | 0      |
| -1       | 31       | 7        | 8        | 9      | 12      | 10     | 3       | 5       | 3       | 5       | 19      | 7       | 3       | 6       | 6       | 4       | 4       | 6       | 4      |
| 2        | 4        | 32       | 47       | 15     | 25      | 27     | 4       | 6       | 3       | 8       | 28      | 39      | 13      | 8       | 10      | 6       | 4       | 8       | 3      |
| -1       | -1       | 24       | 34       | -2     | -1      | -3     | 4       | 4       | 3       | 5       | 30      | 26      | 37      | 52      | 61      | 2       | 4       | 5       | 0      |
| 4        | 36       | 3        | 2        | 0      | 1       | -2     | 1       | 2       | 2       | 1       | 9       | 10      | 4       | -1      | 1       | 3       | 0       | 12      | 2      |
| 3        | 2        | 16       | 7        | 4      | 5       | 4      | 3       | 3       | 3       | 2       | 17      | 51      | 7       | 7       | 9       | 4       | 2       | 15      | 3      |
| 2        | 25       | 15       | 26       | 4      | 6       | 7      | 3       | 6       | 0       | 4       | 10      | 12      | 2       | 2       | 4       | 3       | 5       | 6       | 3      |
| 4        | 6        | 9        | 9        | 6      | 7       | 5      | 1       | 4       | -1      | 7       | 13      | 8       | 2       | 2       | 5       | 6       | 4       | 9       | 5      |
| 6        | 24       | 8        | 10       | 33     | 35      | 40     | 0       | 7       | -1      | 4       | 15      | 9       | 6       | 2       | 5       | 6       | 3       | 11      | 7      |
| 2        | 5        | 7        | 7        | 6      | 6       | 6      | 1       | 5       | 1       | 6       | 9       | 7       | 5       | 2       | 3       | 4       | 2       | 2       | 2      |
| 3 2      | 4<br>4   | 5<br>6   | 8<br>6   | 2<br>3 | 4<br>5  | 2<br>3 | 1<br>2  | 6<br>8  | 0<br>2  | 5<br>6  | 0<br>5  | 6<br>4  | 5<br>5  | 2<br>2  | 4<br>4  | 4<br>3  | 4<br>4  | 5<br>8  | 4<br>2 |
| 0        | 3        | 48       | 8        | 2      | 3       | 2      | 0       | 3       | 0       | 3       | -1      | 0       | -3      | 3       | 3       | 2       | 2       | -1      | -1     |
| 5        | 10       | 13       | 11       | 4      | 4       | 3      | 20      | 19      | 9       | 17      | 38      | 34      | 13      | 6       | 11      | 14      | 11      | 4       | 2      |
| 0        | 3        | 6        | 4        | 4      | 4       | 5      | 1       | 0       | 1       | 1       | 10      | 4       | 0       | 1       | 1       | -1      | 3       | 3       | -1     |
| -2       | 19       | 1        | -1       | -2     | -3      | 0      | 4       | 5       | 6       | 3       | -8      | -5      | 7       | 3       | 6       | 0       | -3      | -6      | -2     |
| 0        | 2        | 56       | 50       | 2      | 3       | 3      | 0       | -1      | 1       | 1       | 3       | 9       | 2       | 2       | 7       | 1       | 1       | 3       | 1      |
| 0        | 24       | 2        | 3        | 3      | 4       | 3      | 2       | 3       | 1       | 4       | 8       | 2       | -1      | 2       | 3       | 4       | 4       | 2       | 0      |
| 0        | 23       | 7        | 9        | 0      | 0       | 0      | 3       | 3       | 3       | 2       | 7       | 7       | 7       | 5       | 4       | 1       | 3       | 3       | -2     |
| 5        | 31       | 3        | 3        | 5      | 6       | 4      | 2       | 4       | 4       | 3       | 9       | 13      | 1       | 0       | 2       | 4       | 2       | 11      | 2      |
| 2        | 4        | 5        | 4        | 39     | 34      | 33     | 56      | 49      | 40      | 61      | 17      | 32      | 83      | 63      | 75      | 87      | 64      | 98      | 2      |
| -2       | -3       | 6        | 15       | 2      | 3       | 4      | 1       | 5       | 0       | 1       | 1       | 2       | 7       | 2       | 0       | -1      | 2       | 1       | -2     |
| 0        | 28       | 4        | 3        | 5<br>4 | 6       | 6      | 0       | 0       | 1       | 2       | 15      | 4       | 1       | 1       | 1       | 0       | 2       | 7       | 0      |
| 4        | 9<br>32  | 17<br>1  | 18<br>3  | 4<br>4 | 5<br>3  | 3<br>3 | 4<br>1  | 3<br>8  | 4<br>1  | 3<br>0  | 4<br>14 | 6<br>14 | 2<br>4  | 1<br>2  | 5<br>0  | 3<br>1  | 4<br>2  | 8<br>1  | 0      |
| 1        | 32       | 1<br>5   | 5<br>5   | 3      | 5<br>5  | 3      | 3       | 4       | 1       | 3       | 7       | 6       | 4       | 4       | 5       | 3       | 2       | 2       | 2      |
| 2        | 31       | 5        | 4        | 5      | 7       | 3      | 2       | 7       | 4       | 4       | 4       | 11      | 2       | 0       | 2       | 4       | 3       | 12      | 2      |
| 0        | 9        | 9        | 6        | 2      | 3       | 2      | 2       | 2       | 2       | 2       | 6       | 8       | -3      | 0       | 3       | 1       | 1       | 6       | 1      |
| 1        | 2        | 15       | 9        | 4      | 5       | 4      | 3       | 22      | 3       | 4       | 1       | 8       | 10      | 8       | 9       | 2       | 4       | 7       | -1     |
| 0        | 5        | 7        | 12       | 1      | 2       | 1      | 1       | 2       | 1       | 0       | 4       | 2       | 2       | 3       | 0       | 0       | 5       | -11     | -2     |
| 2        | 3        | 0        | 2        | 5      | 5       | 5      | 1       | 1       | 2       | 2       | 0       | 3       | 5       | 4       | 3       | 2       | 3       | 4       | -1     |
| -1       | -2       | 8        | 14       | 5      | 6       | 6      | 3       | 5       | 1       | 6       | 8       | 8       | 4       | 4       | 7       | 6       | 5       | 6       | 6      |
| 2        | 25       | 5        | 9        | 42     | 45      | 52     | 2       | 3       | 1       | 7       | 12      | 7       | 7       | 3       | 5       | 5       | 3       | 22      | 2      |
| 0        | 18       | 10       | 16       | -2     | -2      | -1     | 2       | 0       | 3       | 1       | 1       | 4       | 4       | 3       | 0       | 0       | 3       | 0       | -1     |
| 4        | 4        | 18       | 8        | 3      | 5       | 1      | 2       | 2       | 2       | 2       | 9       | 9       | 4       | 0       | 2       | 3       | 3       | 14      | 3      |
| -3<br>4  | 26       | 1        | 3        | 4      | 3       | 4      | 1       | 1       | 0       | 1       | 1       | 3       | 1       | 5       | 6       | 1       | 1       | 4       | 2      |
| -1       | -1       | 1        | 4        | 17     | 8       | 9      | 3       | 2       | 1       | 3       | -1      | 2       | 10      | 0       | 0       | 8       | 6       | 21      | 27     |

| -2       | -2            | 11      | 8        | -1      | -2       | -1      | 2       | -2      | 1       | 2      | -1       | -3      | 6        | 7       | 9        | 7       | 2       | 5       | 0       |
|----------|---------------|---------|----------|---------|----------|---------|---------|---------|---------|--------|----------|---------|----------|---------|----------|---------|---------|---------|---------|
| 3        | 7             | 6       | 6        | 7       | 9        | 8       | 3       | 7       | 2       | 7      | 6        | 11      | 3        | 2       | 4        | 7       | 4       | 6       | 4       |
| 0        | 3             | 8       | 5        | 0       | 1        | 2       | 0       | -1      | 0       | 0      | 3        | 0       | 1        | -1      | -1       | 1       | 3       | 3       | 0       |
| 1        | 5<br>31       | 0<br>10 | 3<br>11  | 3       | 3<br>-2  | 3<br>3  | 2<br>6  | 3<br>11 | 1<br>4  | 1<br>7 | 2        | 8<br>1  | 3<br>6   | 1<br>8  | -1<br>12 | 1<br>4  | 2<br>5  | 2       | -1<br>6 |
| 3        | 5             | 14      | 19       | -2      | -2<br>-2 | -1      | 1       | 3       | 0       | 1      | 0        | -2      | 2        | 5       | 6        | 3       | -1      | -3      | 6       |
| 3        | 3             | 13      | 17       | 4       | 5        | 3       | 2       | 7       | 2       | 5      | 14       | 14      | 17       | 12      | 18       | 6       | 3       | 6       | 2       |
| -3       | -5            | 10      | 6        | 0       | 0        | -1      | 2       | 2       | 4       | 2      | -4       | 4       | 2        | 0       | 2        | 0       | 0       | 3       | 1       |
| 0        | 0             | 6       | 12       | -1      | 0        | -1      | 6       | -2      | 3       | 6      | 14       | 12      | -25      | 14      | 21       | 5       | 6       | 11      | 1       |
| 2        | 4             | 5       | 9        | 21      | 13       | 17      | 3       | 20      | 1       | 8      | 9        | 9       | 17       | 1       | 3        | 6       | 4       | 20      | 54      |
| 0        | 16            | 3       | 5<br>1   | 3<br>42 | 4<br>40  | 3<br>44 | 1       | 5       | 1<br>1  | 4<br>1 | 4<br>69  | 5       | 2<br>-3  | 1       | 4<br>1   | 2<br>1  | 3<br>1  | 7       | 2<br>-1 |
| 0        | 35<br>0       | 1<br>1  | 1        | 1       | 0        | -1      | 0       | 0<br>0  | 1       | 1      | 0        | 24<br>4 | 3        | -2      | 1        | 1       | 1       | -3<br>2 | 0       |
| 4        | 12            | 2       | 4        | 9       | 11       | 11      | 16      | 17      | 13      | 24     | 11       | 11      | 36       | 18      | 26       | 12      | 11      | 19      | 1       |
| 1        | 20            | 1       | 3        | 2       | 3        | 0       | 2       | -1      | 2       | 2      | 7        | 5       | 1        | 0       | 3        | 3       | 2       | 8       | 2       |
| 3        | 5             | 8       | 8        | 5       | 8        | 5       | 2       | 4       | 1       | 3      | 1        | 8       | 4        | -1      | 4        | 4       | 3       | 10      | 2       |
| 2        | 2             | 9       | 18       | 3       | 5        | 3       | 2       | 3       | 2       | 2      | 2        | 8       | 1        | 1       | 4        | 4       | 2       | 5       | 2       |
| 1        | 5             | 3       | 5        | 6       | 5        | 6       | 1       | 11      | 0       | 3      | 12       | 5       | 1        | 0       | 1        | 3       | 2       | 2       | 1       |
| -2<br>1  | -3<br>17      | 52<br>2 | 50<br>6  | 3<br>4  | 3<br>4   | 3       | 11<br>0 | 18<br>7 | 6<br>-1 | 8<br>3 | 20<br>2  | 18<br>5 | 57<br>-2 | 40<br>2 | 43<br>4  | 5<br>3  | 7<br>-8 | 44<br>5 | -1<br>5 |
| 1<br>5   | 17            | 1       | 6<br>4   | 4<br>8  | 7        | 4<br>6  | 2       | 0       | 2       | 3<br>4 | 8        | ວ<br>10 | 1        | 4       | 4<br>4   | 3       | -8<br>6 | 5<br>5  | ა<br>1  |
| 0        | 2             | 3       | 4        | 4       | 3        | 2       | 2       | 1       | 1       | 4      | 3        | 4       | 7        | 5       | 3        | 2       | 3       | 4       | 0       |
| 0        | 34            | 17      | 41       | 17      | 26       | 16      | 0       | 6       | -1      | 7      | 22       | 7       | 6        | 1       | 7        | 8       | 4       | 13      | 2       |
| 2        | 23            | 1       | 8        | 5       | 5        | 5       | 2       | 9       | 1       | 7      | 12       | 6       | -2       | -1      | 2        | 3       | 5       | 3       | 3       |
| 1        | 1             | 3       | 2        | 2       | 2        | 3       | 2       | 3       | 1       | 2      | 2        | 6       | 2        | 4       | 0        | 3       | 5       | 2       | 2       |
| 1        | 20            | 0       | 4        | 4       | 4        | 4       | 4       | 0       | 2       | 5      | 7        | 13      | 2        | 0       | 1        | 3       | 5       | 7       | 0       |
| -2       | 9             | 1<br>7  | -1<br>11 | -3<br>3 | -4<br>3  | -1<br>2 | 1<br>2  | 0<br>3  | 2       | 1<br>4 | -9<br>5  | -1<br>2 | 4<br>-2  | -1<br>1 | 2<br>2   | -1<br>3 | -5<br>2 | -3<br>1 | -2<br>1 |
| 0        | 4<br>0        | 4       | 9        | 3<br>4  | 8        | 5       | 32      | 33      | 0<br>19 | 36     | 18       | 15      | -2<br>56 | 43      | 54       | 45      | 27      | 20      | 1       |
| 2        | 6             | 7       | 12       | 6       | 7        | 7       | 1       | 4       | 1       | 6      | 7        | 5       | 3        | 3       | 5        | 7       | 2       | 5       | 4       |
| 0        | -1            | 4       | 8        | 1       | 1        | 1       | 2       | -1      | 1       | 3      | 2        | 7       | 21       | 6       | 7        | 1       | 4       | 10      | -1      |
| 1        | 28            | -2      | 3        | 6       | 5        | 2       | 3       | 1       | -1      | 2      | 5        | 7       | 0        | 2       | 1        | 4       | 3       | 6       | 2       |
| 3        | 3             | 6       | 9        | 2       | 2        | 1       | 5       | 10      | 1       | 10     | 9        | 6       | 13       | 15      | 18       | 7       | 5       | 6       | 4       |
| -1       | 27            | 1       | 4        | 9       | 6        | 10      | 2       | 3       | 3       | 2<br>3 | 3<br>5   | 1<br>7  | 2        | 0       | 2<br>3   | -2<br>2 | 3       | 2<br>32 | -1      |
| 0        | 3<br>2        | 4<br>1  | 2<br>3   | 3<br>4  | 4<br>4   | 1<br>3  | 1<br>2  | 2<br>2  | 1<br>1  | 3      | 2        | 3       | 4<br>19  | 5<br>3  | 3<br>4   | 4       | 3<br>4  | 2       | 0<br>-2 |
| 1        | 6             | 5       | 9        | 4       | 4        | 5       | 1       | 2       | 0       | 2      | 8        | 12      | 2        | 1       | 1        | 3       | 4       | 5       | 2       |
| 2        | 7             | 7       | 6        | 7       | 11       | 7       | 4       | 2       | 3       | 4      | 10       | 12      | 3        | 3       | 5        | 6       | 6       | 6       | 3       |
| 1        | 2             | 6       | 6        | 7       | 6        | 6       | 3       | 7       | 3       | 5      | 3        | 8       | 7        | 5       | 5        | 5       | 5       | 5       | 0       |
| 2        | 7             | 0       | 3        | 8       | 8        | 10      | 2       | 4       | 2       | 4      | 7        | 6       | 6        | 2       | 1        | 3       | 4       | 4       | -2      |
| 3        | 7             | 0       | 1        | 3       | 2        | 4       | 1       | 2<br>4  | 3       | 0      | -1       | 3       | 4        | 3       | 2        | 0       | 2       | -1      | -1      |
| 2        | 4<br>4        | 5<br>14 | 5<br>22  | 6<br>6  | 6<br>7   | 5<br>7  | 2       | 0       | 2<br>-2 | 6<br>6 | 8<br>9   | 5<br>16 | 5<br>3   | 3<br>0  | 5<br>4   | 4<br>6  | 3<br>6  | 8<br>9  | 4<br>6  |
| 3        | 13            | 9       | 19       | 4       | 6        | 4       | 4       | 3       | 3       | 6      | 2        | 13      | 5        | 3       | 5        | 3       | 5       | 7       | 0       |
| 1        | 16            | 2       | 6        | 0       | 0        | -1      | 2       | -1      | 3       | 5      | 11       | 7       | 5        | -3      | 3        | 3       | 4       | 6       | 3       |
| 1        | 3             | 1       | 2        | 6       | 5        | 5       | 3       | 1       | 1       | 3      | 1        | 6       | 2        | 5       | 5        | 6       | 40      | 3       | -1      |
| 1        | 36            | 4       | 6        | 34      | 14       | 17      | 2       | 4       | 2       | 3      | 17       | 7       | 3        | 3       | 3        | 1       | 3       | 2       | -3      |
| -1       | 1             | 1       | 2        | 2       | 3        | 2       | 1       | 2       | 0       | 1      | 8        | 4       | 2        | 1       | 2        | 2       | 2       | 5       | 0       |
| 1<br>-2  | 19<br>-2      | 2<br>1  | 3<br>5   | 3<br>1  | 4        | 3       | 1<br>3  | 1       | 1<br>3  | 1<br>3 | 0<br>-6  | 3<br>-2 | 5<br>1   | 3<br>1  | 4<br>4   | 1<br>0  | 1<br>1  | 2<br>6  | 0       |
| -2<br>-1 | -2<br>-1      | 2       | 0        | -1      | 0        | 2       | 3       | 3       | 3       | 3      | -6<br>-1 | 3       | 3        | 2       | 4        | 1       | 1       | -3      | 0       |
| -1       | 2             | 3       | 7        | 4       | 5        | 4       | 1       | 2       | 2       | 5      | 11       | 9       | 4        | 1       | 3        | 3       | 4       | 9       | 4       |
| 1        | 3             | 0       | 4        | 5       | 5        | 4       | 3       | 4       | 1       | 4      | 3        | 5       | -2       | 3       | 4        | 2       | 4       | 5       | 1       |
| 0        | 11            | 2       | 0        | 2       | 3        | 2       | 3       | 5       | 2       | 3      | 0        | 0       | 2        | 1       | 1        | 3       | 2       | 0       | 0       |
| 1        | 3             | 23      | 19       | 4       | 5        | 4       | 1       | 0       | 0       | 3      | 5        | 5       | 3        | 8       | 9        | 3       | 2       | 2       | -1      |
| 6        | 13<br>7       | 4<br>3  | 12<br>3  | 9<br>5  | 10<br>o  | 7<br>11 | 5<br>1  | 6<br>1  | 6<br>0  | 6<br>1 | 10<br>-1 | 14<br>1 | 29<br>1  | 8<br>-1 | 17<br>0  | -1      | 5<br>2  | 10<br>3 | 1       |
| 3        | <i>1</i><br>8 | ა<br>11 | 3<br>10  | ა<br>3  | 9<br>3   | 2       | 0       | 0       | 0       | 0      | 8        | 6       | 1<br>5   | 4       | 7        | 2       | 3       | 3       | -1<br>0 |
| J        | U             |         | 10       | J       | 9        |         | U       | 0       | J       | U      | J        | U       | 9        | 7       | 1        |         | J       | 9       | U       |

| 1        | 38      | 0       | 4       | 48      | 36      | 52      | 3       | 0       | -1      | 3      | 45       | 38       | -1       | -1      | 0      | 1        | 4      | 10       | 1        |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|----------|----------|----------|---------|--------|----------|--------|----------|----------|
| -1       | 31      | 5       | 7       | 2       | 3       | 4       | 3       | 5       | 3       | 3      | 8        | 4        | 4        | 1       | 1      | -1       | 3      | -1       | -1       |
| 7        | 10      | 19      | 6       | 6       | 7       | 4       | 5       | 4       | 5       | 6      | 10       | 14       | 3        | 2       | 5      | 6        | 5      | 22       | 1        |
| 3        | 4       | 4       | 9       | 6       | 7       | 5       | 3       | 5       | 1       | 6      | 8        | 10       | 2        | 4       | 5      | 3        | 5      | 11       | 4        |
| 2        | 3       | 34      | 13      | 4       | 6       | 3       | 17      | 20      | 8       | 15     | 17       | 18       | 44       | 2       | 8      | 6        | 7      | 13       | 0        |
| 0        | 2       | 2       | 4       | 4       | 4       | 4       | 1       | 0       | 0       | 0      | 1        | 3        | 5        | 1       | 1      | 3        | 2      | 3        | 1        |
| 3        | 32      | 6       | 6       | 5       | 5       | 5       | 2       | 10      | 1       | 8      | 7        | 9        | 6        | 8       | 7      | 9        | 6      | 5        | 5        |
| -4       | -5      | 4       | 10      | 0       | 0       | 0       | 0       | -2      | -2      | -2     | -1       | 4        | 5        | 3       | 3      | -1       | 1      | 1        | 0        |
| -1       | -1      | 1       | 3       | 0       | -1      | 0       | 3       | 2       | 2       | 3      | -1       | 0        | 5        | 1       | 4      | 2        | 3      | -2       | 0        |
| 2        | 3       | 13      | 15      | -2      | -2      | -1      | 9       | 20      | 2       | 16     | 25       | 24       | 63       | 50      | 61     | 13       | 6      | 5        | 7        |
| 1        | 4       | 2       | 13      | 4       | 4       | 5       | 5       | 0       | 0       | 6      | 22       | 11       | -2       | 15      | 14     | 2        | 10     | 5        | 1        |
| -1       | 0       | 4       | 7       | -2      | -1      | -3      | 2       | -1      | 3       | 2      | 8        | 9        | 6        | 1       | 4      | 1        | 3      | 5        | 2        |
| 1        | 32      | 2<br>7  | 3       | 47      | 34      | 49      | 2       | 3<br>2  | 2<br>1  | 4<br>2 | 6<br>2   | 7        | 6        | 3<br>-1 | 3<br>1 | 0        | 4      | 5        | -1       |
| 2        | 3<br>6  | 43      | 8<br>20 | 2<br>50 | 1<br>40 | 0<br>52 | 2<br>5  | ∠<br>13 | 8       | 10     | 8        | 0<br>6   | 2<br>26  | 7       | 1<br>8 | 2<br>7   | 2<br>8 | 3<br>44  | 1<br>-4  |
| 0        | 2       | 35      | 11      | 7       | 6       | 6       | 7       | 9       | 8       | 14     | 7        | 11       | 11       | 8       | 13     | 21       | 11     | 18       | 1        |
| 3        | 7       | 4       | 10      | 2       | 1       | 2       | 1       | 2       | 0       | 0      | 3        | 4        | 3        | 3       | 5      | 2        | 4      | 2        | -1       |
| -1       | 4       | 6       | 12      | 0       | 2       | 1       | 1       | 2       | -1      | 1      | -5       | 3        | 8        | 6       | 4      | 2        | 1      | -8       | 0        |
| 0        | 37      | 1       | 0       | 9       | 7       | 10      | 1       | 2       | 0       | 3      | 6        | 13       | 3        | 2       | 2      | 2        | 0      | 3        | -1       |
| 1        | 4       | 5       | 22      | 2       | 1       | 2       | 0       | 2       | -1      | 5      | 6        | 5        | 0        | 5       | 11     | 2        | 2      | -1       | 5        |
| 2        | 5       | 59      | 70      | 9       | 10      | 9       | 5       | 8       | 3       | 9      | 54       | 28       | 55       | 53      | 60     | 9        | 8      | 7        | 2        |
| 3        | 18      | 6       | 10      | 21      | 27      | 32      | 2       | 1       | -3      | 3      | 8        | 9        | -3       | 1       | 2      | 5        | 2      | 7        | 7        |
| 2        | 30      | 1       | 7       | 10      | 10      | 9       | 6       | 1       | 6       | 8      | 9        | 8        | -15      | 4       | 5      | 7        | 9      | 8        | 1        |
| 5        | 43      | 7       | 13      | 28      | 25      | 33      | 3       | 22      | 2       | 5      | 40       | 16       | 4        | 5       | 4      | 7        | 5      | 7        | 2        |
| 2        | 17      | 22      | 21      | 4       | 3       | 4       | 3       | 23      | 1       | 5      | 6        | 10       | 3        | 0       | 3      | 3        | 5      | 2        | 1        |
| 0        | 3       | 5       | 3       | 3       | 2       | 3       | 1       | 0       | 2       | 1      | 7        | 4        | 4        | 4       | 5      | -1       | 2      | 1        | -1       |
| 4        | 9       | 7       | 26      | 5       | 6       | 4       | 3       | 5       | 2       | 6      | 8        | 7        | 3        | 26      | 34     | 5        | 6      | 8        | 1        |
| 1        | 31      | -1      | 2       | 6       | 8       | 5       | 2       | 0       | -1      | 3      | 10       | 8        | 1        | 0       | 3      | 4        | 3      | 5        | 5        |
| 2        | 19      | 5       | 6       | 19      | 29      | 35      | 4       | 11      | 4       | 6      | 24       | 49       | 7        | 6       | 4      | 4        | 6      | 4        | -1       |
| 3        | 16      | 56      | 47      | 3       | 3       | 3       | 5       | 6       | 1       | 7      | 11       | 14       | 9        | 12      | 14     | 9        | 8      | -9       | 3        |
| 2        | 0       | 8<br>7  | 5<br>10 | 4<br>6  | 4<br>6  | 4<br>6  | 2<br>2  | 6<br>12 | 0       | 3<br>8 | -3<br>14 | 7<br>24  | -4<br>2  | 1<br>4  | 1      | 0<br>3   | 4<br>4 | 2<br>8   | 14       |
| 1        | 3       | 36      | 13      | 5       | 4       | 4       | 4       | 6       | 4<br>5  | 9      | 0        | 5        | 5        | 4       | 3<br>2 | 3        | 7      | 10       | 2        |
| 2        | 2       | 19      | 21      | 6       | 6       | 6       | 11      | 12      | 8       | 13     | 19       | 9        | 37       | 15      | 17     | 12       | 9      | 1        | 1        |
| 1        | 3       | 17      | 8       | 9       | 15      | 10      | 4       | 9       | 5       | 7      | 0        | 8        | 5        | 6       | 6      | 3        | 4      | 22       | 0        |
| 3        | 4       | 10      | 31      | 6       | 6       | 5       | 6       | 9       | 4       | 9      | 13       | 9        | 3        | 21      | 20     | 4        | 8      | 4        | 1        |
| 5        | 7       | 9       | 2       | 80      | 84      | 84      | 38      | 67      | 39      | 48     | 9        | 14       | 85       | 0       | 2      | 34       | 13     | 78       | 91       |
| 5        | 6       | 18      | 11      | 14      | 27      | 46      | 16      | 34      | 12      | 39     | 78       | 77       | 77       | 102     | 95     | 78       | 52     | 78       | 5        |
| -3       | 5       | 7       | 6       | 48      | 56      | 64      | 4       | 7       | -1      | 4      | 10       | 6        | 7        | 2       | 4      | 3        | 1      | 27       | 2        |
| 0        | 8       | 67      | 73      | 3       | 4       | 4       | 2       | -1      | -2      | 2      | 0        | 7        | 10       | 6       | 2      | 1        | 2      | -2       | 1        |
| 1        | 4       | 68      | 73      | 5       | 7       | 6       | 17      | 18      | 12      | 17     | 76       | 61       | 77       | 67      | 72     | 12       | 15     | 12       | -1       |
| 2        | 5       | 8       | 11      | 5       | 6       | 5       | 2       | 0       | -1      | 5      | 3        | 7        | 1        | 2       | 1      | 3        | 2      | 12       | 2        |
| 5        | 6       | 7       | 4       | 62      | 71      | 68      | 14      | 21      | 15      | 16     | 9        | 9        | 70       | 4       | 7      | 29       | 15     | 45       | 38       |
| 1        | 8       | 2       | 3       | 58      | 66      | 81      | 5       | 5       | 7       | 5      | 0        | -2<br>-7 | 7        | 7       | 4      | -1<br>-7 | 4      | 4        | -1       |
| 3        | 14      | 7<br>3  | 7<br>3  | 27      | 38      | 45      | 2<br>-1 | 6<br>0  | 2<br>-1 | 7      | 11<br>0  | 7<br>-1  | 2<br>-41 | 3<br>2  | 3<br>0 | 7        | 3      | 8        | 4        |
| -3<br>-2 | 27<br>8 | 3<br>29 | ა<br>17 | 1<br>-2 | 2<br>-1 | 2<br>0  | 1       | 0       | 1       | 0      | -6       | 3        | 2        | -1      | 1      | -1       | -2     | 0<br>-27 | -2<br>-2 |
| 1        | 36      | 1       | 2       | 81      | 71      | 87      | 2       | 1       | 1       | 3      | 33       | 24       | 6        | 2       | 1      | 2        | 3      | 6        | -3       |
| 0        | 1       | 7       | 9       | 1       | 2       | 0       | 2       | 12      | 2       | 3      | 6        | 8        | 2        | 1       | 4      | 7        | 4      | 7        | 2        |
| 3        | 12      | 8       | 11      | 66      | 74      | 76      | 43      | 67      | 41      | 50     | 12       | 15       | 63       | 2       | 7      | 27       | 13     | 79       | 91       |
| 1        | 14      | 40      | 30      | 2       | 2       | 1       | 3       | 3       | 3       | 3      | 1        | 7        | 6        | 9       | 7      | 2        | 0      | -33      | -2       |
| 1        | 16      | 6       | 4       | 33      | 35      | 44      | 6       | 5       | 3       | 6      | 29       | 61       | 2        | 6       | 7      | 5        | 4      | 3        | 3        |
| -1       | 1       | 0       | 1       | 4       | 5       | 3       | 3       | 3       | 2       | 4      | -1       | 3        | 2        | 3       | 1      | 2        | 2      | -3       | -1       |
| 0        | 3       | 3       | 2       | 31      | 33      | 47      | -1      | 0       | 0       | 2      | 14       | 4        | _ 5      | 2       | 2      | 0        | 2      | 4        | 1        |
| -4       | -8      | 3       | 4       | 8       | 10      | 9       | 17      | 28      | 14      | 20     | 2        | 0        | 95       | 5       | 5      | 67       | 21     | 28       | 0        |
| 4        | 17      | 3       | 6       | 73      | 80      | 81      | 41      | 68      | 40      | 53     | 11       | 10       | 60       | 2       | 3      | 20       | 11     | 75       | 86       |
| -1       | 27      | 4       | 4       | 51      | 40      | 57      | 3       | 4       | 4       | 5      | 10       | 16       | 5        | 1       | 3      | 3        | 3      | 10       | 2        |
| 4        | 8       | 11      | 6       | 4       | 4       | 5       | -1      | 3       | 3       | 1      | 0        | 2        | 10       | 1       | 4      | 2        | 1      | 16       | -1       |

| 0  | 4  | 26 | 21 | 4  | 5  | 2  | 1  | 0  | 2  | 4  | 0  | 2  | 2  | 4  | 6  | 3  | 2  | 27  | 0  |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|----|
| 4  | 11 | 51 | 57 | 5  | 6  | 6  | 8  | 12 | 5  | 8  | 67 | 49 | 39 | 21 | 30 | 7  | 8  | 5   | -2 |
| 3  | 21 | 54 | 39 | 6  | 8  | 4  | 4  | 5  | 4  | 8  | 4  | 10 | 8  | 10 | 10 | 5  | 5  | -14 | 3  |
| -2 | 34 | 5  | 12 | 18 | 27 | 29 | 1  | 1  | 2  | -1 | 37 | -2 | 8  | 6  | 7  | 0  | -2 | 5   | -1 |
| -1 | -3 | 8  | 5  | 2  | 3  | 5  | 11 | 24 | 22 | 17 | 9  | -4 | 7  | 4  | 6  | 5  | 3  | 75  | -2 |
| 2  | 10 | 11 | 24 | 54 | 67 | 58 | 46 | 43 | 35 | 54 | 26 | 21 | 69 | 53 | 62 | 60 | 43 | 89  | 3  |

| CAMK              | CAMK        | CAMK              | CAMK              | CAMK             | CAMK             | CAMK         | Other                 | Other        | Other        | Other       | Other        | CAMK                | Other              | Other              | Other              | CMGC             | CMGC         | CMGC              | CMGC             |
|-------------------|-------------|-------------------|-------------------|------------------|------------------|--------------|-----------------------|--------------|--------------|-------------|--------------|---------------------|--------------------|--------------------|--------------------|------------------|--------------|-------------------|------------------|
| TSSK1             | DAPK1       | PIM2              | PIM3              | PIM1             | CHEK1            | PASK         | NEK1                  | NEK2         | 0<br>0<br>10 | NEK7        | NEK6         | TBK1                | IKKE               | 8 HKKB             | IKKA<br>10         | CDK5/p35         | CDK1/cyclinB | CDK2/cyclinA      | o ∞ CDK2/cyclinE |
| 5<br>3<br>0<br>13 | 0<br>2<br>1 | -3<br>0<br>1<br>2 | 2<br>2<br>2<br>-1 | 1<br>0<br>2<br>1 | 2<br>4<br>6<br>3 | 0<br>0<br>-1 | 1<br>4<br>2<br>2<br>8 | 3 2 1 0      | 9<br>8       | 4<br>2<br>4 | 3<br>3<br>-4 | 20<br>7<br>14<br>26 | 19<br>6<br>1<br>13 | 27<br>5<br>4<br>17 | 10<br>6<br>5<br>-1 | 1<br>3<br>6<br>2 | 1<br>2<br>6  | 16<br>2<br>9<br>3 | 6                |
| 0                 | 3 4         | 1                 | -2                | 0                | 3                | 0<br>-2      | 8<br>3<br>2           | 0 3          | 6<br>-6      | 2 3         | -1<br>-1     | 4                   | 2                  | 1                  | -5                 | 6                | 3<br>7       | 6                 | 6<br>7           |
| 1<br>70           | 1<br>1      | 1<br>7            | 1<br>10           | -1<br>8          | 4<br>3           | -2<br>8      |                       | 3<br>1       | 2<br>0       | 2<br>-1     | 2<br>1       | 4<br>41             | 4<br>99            | 1<br>4             | 2                  | 3<br>-1          | 2<br>1       | 10<br>0           | 14<br>0          |
| 2                 | 10<br>2     | 1<br>1            | 4<br>-1           | 2<br>1           | 10<br>1          | 2            | 1<br>2<br>3           | 0            | 2<br>0       | 0<br>4      | 1<br>2       | 26<br>2             | 22<br>91           | 3<br>1             | 3<br>1             | 73<br>2          | 70<br>1      | 92<br>2           | 79<br>3          |
| 4                 | 10          | 0                 | 0                 | 0                | 11               | 0            | 4                     | 2<br>5<br>-2 | 8            | 3           | 3            | 3                   | 5                  | 6                  | 4                  | 2                | 2            | 9                 | 3<br>8           |
| 16<br>6           | 0<br>3      | 1<br>0            | 3<br>3            | 1<br>0           | 44<br>2          | 2<br>2       | 9<br>2<br>4           | -2<br>0      | 7<br>5       | -3<br>1     | -3<br>5      | 26<br>4             | 21<br>6            | 17<br>6            | 41<br>4            | 14<br>31         | 14<br>17     | 60<br>44          | 34<br>40         |
| 4                 | 3           | 0                 | 2                 | 1                | 6                | 1            |                       | 4            | 5<br>81      | 5           | 2            | 7                   | 6                  | 5                  | 8                  | 8                | 5            | 9                 | 9                |
| 6<br>18           | 12<br>-1    | 1<br>1            | 0<br>4            | 1<br>4           | 10<br>2          | -1<br>1      | 11<br>3               | 32<br>3      | 81<br>7      | 2<br>9      | -1<br>2      | 29<br>9             | 21<br>47           | 0<br>9             | -6<br>8            | 1<br>2           | 0<br>2       | 2<br>4            | 3<br>5           |
| 0                 | 1<br>-3     | 2                 | -1                | 1                | 4                | 0            | 3<br>2                | 0            | 4            | 2           | 2<br>-2      | 9<br>7              | -3                 | 1                  | 5                  | 45               | 23           | 70                | 74               |
| 0<br>-1           | -3<br>-2    | 1<br>-1           | 0<br>-1           | 1<br>0           | -3<br>-1         | -1<br>-2     | 1<br>-1               | 4<br>1       | 4<br>3       | 3<br>4      | 1<br>-3      | 4<br>0              | 1 -1               | 2<br>0             | -1<br>3            | 0<br>-1          | 0<br>-1      | -2<br>4           | 1<br>3           |
| 5                 | 13          | 1                 | 1                 | 1                | 9                | 5            | 5                     | 5            | 8            | 4           | 5            | 9                   | 7                  | 8                  | 10                 | 3                | -2           | 4                 | 5                |
| 14<br>31          | 9<br>-2     | 3<br>0            | 53<br>0           | 70<br>1          | 10<br>2          | 3<br>-1      | 54<br>1               | 65<br>0      | 90<br>-1     | 10          | 0<br>-2      | 6<br>1              | 7<br>1             | 3<br>-2            | 2<br>-4            | 3<br>5           | 4<br>5       | 4<br>3            | 5                |
| 3                 | 4           | -3                | -2                | 1                | 5                | -1<br>-2     | 5                     | 20           | 6            | 3           | 1            | 8                   | 6                  | 5                  | 4                  | 0                | ე<br>1       | ა<br>5            | 4<br>4           |
| 5                 | 2           | 0                 | 2                 | 3                | 10               | -1           | 1                     | 0            | 2            | 0           | -1           | 5                   | 2                  | 1                  | 3                  | 45               | 15           | 56                | 48               |
| 3                 | 3           | 0                 | 6                 | 3                | 1<br>7           | 2            | 2                     | 4            | 10           | 3           | 4            | 3                   | 7                  | 4                  | 2                  | 1                | 3            | 0                 | 2                |
| 7<br>5            | 11<br>3     | 0                 | 1<br>5            | 0<br>2           | -1               | 1<br>2       | 5<br>5                | 6<br>2       | 10<br>3      | 4<br>3      | 4<br>3       | 5<br>6              | 10<br>5            | 9<br>5             | 11<br>-1           | 1<br>3           | 2<br>2       | 2<br>7            | 4<br>9           |
| 3                 | -4          | 0                 | 1                 | 1                | -2               | 1            | 2                     | 4            | 9            | 4           | 3            | 7                   | 8                  | 4                  | 1                  | 20               | 21           | 26                | 20               |
| -1<br>2           | -1<br>-2    | 1<br>1            | 1                 | -1<br>1          | -2<br>2          | -1<br>1      | 1<br>2                | 0<br>1       | -1<br>-6     | 0<br>1      | 3            | 3<br>4              | 1<br>3             | 0<br>-2            | 4<br>1             | 1<br>39          | 1<br>22      | 6<br>72           | 2<br>68          |
| 69                | 6           | 1                 | -1                | 1                | 23               | 0            | 3                     | 14           | 2            | 3           | 0            | 83                  | 115                | 1                  | 6                  | 3                | 6            | 5                 | 6                |
| 1                 | -3          | 0                 | 2                 | 0                | 2                | 0            | 5                     | 1            | 11           | 1           | 1            | 7                   | 3                  | 22                 | 5                  | 4                | 3            | 5                 | 5                |
| 73<br>2           | -1<br>1     | 1<br>4            | 2<br>8            | 10<br>2          | 4<br>5           | -1<br>-1     | 4<br>10               | 2<br>6       | 17<br>6      | 4<br>3      | 5<br>2       | 7<br>6              | 28<br>2            | 3<br>-2            | 10<br>-1           | 0<br>46          | 4<br>48      | 7<br>47           | 5<br>32          |
| 2                 | -3          | 1                 | 2                 | 0                | 6                | 1            | -2                    | -3           | 10           | -3          | -3           | 14                  | 8                  | -1                 | 14                 | 40               | 9            | 18                | 22               |
| 1                 | 2           | 0                 | -1                | 0                | 4                | 0            | 5                     | 3            | 3            | 3           | 1            | 3                   | 4                  | 2                  | 8                  | 3                | -1           | 8                 | 9                |
| 6                 | 5<br>1      | 1<br>1            | 2<br>-1           | 0<br>0           | 3<br>3           | 2<br>-1      | 5<br>1                | 2<br>3       | 5<br>-2      | 3<br>3      | 4<br>0       | 4<br>2              | 95<br>3            | 4                  | 8<br>-1            | 2<br>0           | 3<br>0       | 11<br>4           | 5<br>4           |
| 2                 | -2          | -2                | 2                 | 1                | -1               | 1            | -1                    | -1           | 4            | 0           | 2            | 1                   | 1                  | 0                  | -9                 | 2                | 3            | 7                 | 4                |
| 6                 | 7           | 0                 | 4                 | 5                | 13               | 0            | 5                     | 7            | 16           | 0           | 1            | 12                  | 9                  | 10                 | 11                 | 1                | 1            | 4                 | 6                |
| -2<br>0           | 0<br>-3     | 1<br>0            | 0<br>1            | -1<br>1          | 0<br>8           | -1<br>-2     | 0<br>-1               | -4<br>-3     | -2<br>2      | -5<br>-3    | -2<br>-2     | 1<br>8              | -3<br>-1           | -2<br>0            | 6<br>3             | 2<br>69          | 6<br>52      | -5<br>79          | 1<br>87          |
| -1                | 0           | 1                 | 1                 | 6                | 2                | -1           | 2                     | -3<br>-1     | -1           | -1          | -2           | 5                   | 0                  | -1                 | 3                  | 3                | 2            | 8                 | 4                |

| 2        | 5       | 1        | -1      | 1       | 8       | -3       | 3      | 6       | 2       | 3      | -1       | 9       | 6         | 0        | 2       | 2       | 3       | 1        | 5       |
|----------|---------|----------|---------|---------|---------|----------|--------|---------|---------|--------|----------|---------|-----------|----------|---------|---------|---------|----------|---------|
| 19       | 9       | 48       | 79      | 94      | 6       | 23       | 3      | 6       | 19      | 7      | 6        | 20      | 36        | 6        | 19      | 1       |         | -1       | 6       |
| 96       | 5       | 12       | 68      | 93      | -3      | -1       | 3      | 7       | 10      | 42     | 5        | 51      | 35        | 6        | 0       | 7       | 6       | -1       | 10      |
| 5        | -3      | 7        | 10      | 3       | -2      | 1        | 5      | 8       | 16      | 7      | 2        | 8       | 8         | 8        | 12      | 7       | 8       | 13       | 12      |
| 4        | 2<br>-4 | 0        | 3<br>1  | 1<br>2  | 3<br>-3 | 1        | 3      | 2       | 15<br>- | 4      | 2<br>2   | 2<br>3  | 5<br>8    | 5        | 3       | 2<br>2  | 2<br>1  | 2        | 3       |
| 4<br>71  | -4<br>6 | 1<br>12  | 1<br>24 | 24      | 4       | 13       | 3<br>2 | 6<br>3  | 5<br>5  | 5<br>5 | 2        | 3<br>46 | 96        | 10<br>5  | 9<br>1  | 2       | 2       | 3<br>2   | 4<br>3  |
| 8        | 6       | 0        | 1       | 19      | 5       | -1       | 2      | 5       | 12      | 2      | 5        | 6       | 5         | 4        | 4       | 2       | 2       | -4       | 6       |
| -3       | -1      | 0        | 0       | -1      | -1      | -1       | -2     | -2      | -2      | -4     | 2        | 1       | -3        | -1       | 5       | 2       | 1       | -9       | 1       |
| 6        | 6       | 0        | 3       | 2       | 3       | 2        | 3      | 4       | 4       | 2      | 4        | 4       | 9         | 7        | 6       | 3       | 3       | 4        | 6       |
| 4        | -3      | 0        | -3      | 1       | -2      | -1       | 2      | 8       | 12      | 4      | 1        | 2       | 4         | 9        | 10      | 0       | 2       | 5        | 2       |
| 6        | 5       | 3        | -1      | 1       | 1       | 0        | 3      | -3      | 5       | 3      | 4        | 6       | 6         | 2        | 0       | 3       | 3       | 0        | 5       |
| 32       | 0       | 19<br>-3 | 69      | 87      | 0       | 4<br>1   | 5      | 7<br>-1 | 12      | 5<br>1 | 1<br>0   | 9<br>1  | 18        | 8<br>-1  | 14      | 1<br>-1 | 1       | 4        | 5<br>-2 |
| -1<br>52 | 0<br>1  | 1        | 3<br>2  | 1<br>9  | 0<br>6  | 2        | 3<br>4 | 1       | 3<br>5  | 1      | 2        | 6       | 1<br>14   | 2        | -1<br>3 | 2       | 1       | 5<br>9   | 3       |
| 1        | 7       | 0        | -3      | 1       | 6       | -1       | 3      | 7       | 6       | 4      | 0        | 7       | 5         | 11       | 11      | 3       | 2       | 3        | 7       |
| 5        | -1      | 1        | 0       | 2       | 1       | -1       | 4      | 6       | 7       | 5      | 2        | 4       | 11        | 8        | 4       | 7       | 4       | 13       | 15      |
| 12       | 4       | 4        | 21      | 11      | 66      | 2        | 12     | 5       | 8       | 6      | 6        | 21      | 96        | 14       | 62      | 16      | 16      | 28       | 14      |
| 2        | 4       | 0        | -1      | 2       | 2       | -1       | 2      | 3       | -5      | 2      | -1       | 7       | 5         | 3        | 1       | 27      | 21      | 21       | 19      |
| 2        | 2       | 2        | 1       | 4       | 5       | 0        | 0      | 2       | 9       | 2      | -3       | 24      | 0         | -3       | 1       | 7       | 8       | 7        | 11      |
| 0        | -1      | -4       | 1       | 1       | -1<br>5 | 0        | 0      | 0       | 7       | 1      | 0        | 1       | 0         | -2<br>1  | 5<br>7  | -5<br>6 | -4<br>6 | 3        | -4<br>o |
| 2        | 5<br>4  | 0        | 3<br>-2 | 1       | 5<br>2  | 0<br>-1  | 5<br>2 | 5<br>3  | -2      | 3<br>2 | 1<br>1   | 4<br>2  | 7<br>4    | 1<br>3   | -6      | 6<br>2  | 6<br>2  | 11<br>4  | 8<br>4  |
| 1        | 0       | -3       | 4       | 1       | 0       | 2        | 2      | -6      | 2       | 0      | -1       | 2       | 4         | 3        | -4      | -1      | 0       | 4        | 2       |
| 1        | 5       | 0        | 0       | 2       | 3       | -1       | 5      | 4       | 4       | 5      | 0        | 4       | 2         | 2        | 9       | 5       | 6       | 1        | 5       |
| 1        | -2      | 1        | 3       | 0       | 0       | 0        | 0      | 0       | 5       | 1      | 2        | 0       | -1        | 0        | -4      | 6       | 7       | 29       | 19      |
| 6        | 12      | 1        | 0       | 1       | 12      | 0        | 4      | 4       | 10      | 4      | 4        | 4       | 3         | 5        | 5       | 0       | 2       | -1       | 3       |
| 9        | 1       | 3        | 7       | 2       | 5       | 1        | 22     | 38      | 86      | 10     | 9        | 26      | 19        | 3        | 4       | 10      | 7       | 21       | 29      |
| 3        | 2       | -3       | 0       | 0       | 2       | 0        | 2<br>1 | 4       | 6       | 5      | 4<br>-1  | 1       | 5<br>1    | 11       | 2       | -2      | -3      | -1       | 0       |
| 3        | 1<br>-1 | 1<br>0   | 1<br>0  | 2<br>0  | 1<br>-3 | 0        | 0      | 3<br>0  | 2<br>-1 | 6<br>1 | -1<br>-1 | 2<br>-1 | 0         | 27<br>-2 | -12     | 0<br>1  | 0<br>2  | 1<br>1   | 1<br>0  |
| 9        | 3       | 0        | 5       | 2       | 16      | 64       | 3      | 6       | 16      | 5      | 4        | 21      | 23        | 12       | 10      | 24      | 8       | 8        | 13      |
| 3        | 4       | 0        | 4       | 0       | 5       | 3        | 2      | 1       | -6      | 2      | 2        | 9       | 9         | 3        | -10     | 2       | 4       | 12       | 3       |
| 7        | 7       | 2        | 5       | 1       | 13      | 2        | 5      | 4       | 12      | 4      | 8        | 17      | 16        | 11       | 2       | 22      | 11      | 13       | 22      |
| 3        | 9       | 1        | -1      | 1       | 9       | -2       | 3      | 8       | 3       | 5      | -4       | 7       | 6         | 5        | 2       | 32      | 13      | 78       | 56      |
| 3        | 0       | 1        | 3       | 2       | 1       | 1        | 2      | 4       | 10      | 4      | 0        | 1       | 4         | 3        | 3       | 2       | 4       | 3        | 3       |
| 4        | 11<br>5 | 1        | 0<br>-2 | 1<br>3  | 11      | -3       | 2      | 5       | 7<br>1  | 4      | -1<br>0  | 1<br>6  | 5<br>13   | 10       | 1       | 2<br>5  | 2<br>5  | 8<br>-1  | 5<br>9  |
| 11       | 0       | 4        | 14      | 19      | -4      | 0        | 1      | 1       | 8       | 2      | 0        | 63      | 60        | 1        | 3       | 75      | 75      | 94       | 81      |
| 6        | 1       | -1       | -5      | 1       | 0       | -1       | 1      | 4       | 19      | 5      | 7        | 2       | 3         | 41       | 11      | -2      | 1       | -6       | 2       |
| 5        | 8       | 1        | 0       | 1       | 56      | 0        | 4      | 5       | 13      | 4      | 1        | 10      | 5         | 5        | 4       | 3       | 6       | 2        | 9       |
| -1       | -1      | 1        | 1       | 0       | -2      | 1        | 2      | 1       | 1       | 2      | 0        | 4       | 0         | 2        | 5       | 1       | 1       | -1       | 1       |
| 6        | -4      | 2        | 5       | 2       | -2      | 2        | 3      | 4       | 9       | 4      | 5        | 10      | 8         | 5        | 11      | 61      | 43      | 103      | 80      |
| 7<br>-1  | -3<br>4 | 1<br>1   | -3      | 10<br>0 | 10<br>2 | -1<br>-1 | 4<br>3 | 5<br>2  | 8<br>-2 | 4<br>3 | 2<br>2   | 13<br>1 | 20<br>-13 | 6<br>0   | 5<br>0  | 8<br>1  | 4<br>1  | 5<br>9   | 11<br>3 |
| 1        | 2       | 2        | 1       | 2       | 1       | 1        | ა<br>1 | 1       | 5       | 0      | 1        | 47      | 15        | 5        | -2      | 2       | 4       | 4        | 3<br>4  |
| 71       | 2       | 1        | 6       | 1       | 6       | 1        | 5      | 4       | 5       | 3      | 5        | 6       | 7         | 9        | 4       | 2       | 2       | 6        | 5       |
| 1        | 1       | 1        | 1       | -1      | -2      | 0        | -1     | 1       | 1       | 1      | -3       | 0       | 0         | 1        | -2      | -1      | 0       | -2       | 0       |
| 2        | 1       | 2        | 2       | 0       | 3       | 0        | 4      | 3       | 3       | 4      | 3        | 2       | 92        | 2        | 2       | 3       | 3       | 0        | 7       |
| 3        | 3       | 1        | 1       | 0       | 3       | 2        | 4      | 1       | 4       | 2      | 2        | 1       | 1         | 4        | 0       | 1       | 2       | -5       | 1       |
| 2 7      | 2       | 0        | -2<br>1 | 0       | 7<br>-1 | -1<br>1  | 1      | 4       | 7       | 2<br>4 | 2        | 22      | 3         | 0        | 1<br>7  | 1<br>-1 | 2<br>1  | 3        | 5       |
| 0        | 0<br>3  | 0<br>0   | 1<br>-2 | 1<br>0  | -1<br>4 | -1       | 4<br>2 | 8<br>3  | 13<br>4 | 4<br>2 | 3<br>-1  | 3<br>3  | 10<br>1   | 11<br>0  | 1       | -1<br>0 | 1<br>0  | -1<br>-1 | 3<br>3  |
| 32       | 5       | 0        | 2       | 0       | 5       | -1       | 7      | 2       | 6       | 6      | 1        | 3       | 2         | 1        | 4       | 0       | 1       | 2        | 0       |
| 2        | 3       | 0        | -2      | -1      | 0       | 0        | 0      | 1       | 5       | 2      | -3       | 2       | 1         | 3        | -12     | 2       | 2       | 4        | 5       |
| 4        | -5      | -1       | 3       | 3       | -1      | 0        | 5      | 7       | 8       | 8      | 5        | 6       | 7         | 7        | 10      | 1       | 0       | 2        | 6       |
| 1        | 5       | 1        | -4      | 1       | 4       | -2       | 2      | 3       | 0       | 2      | -1       | 4       | 5         | 4        | 0       | 2       | 2       | 2        | 3       |
| 94       | 8       | 5        | 23      | 66      | 5       | -4       | 3      | 4       | 9       | 7      | 0        | 26      | 10        | -1       | 7       | 6       | 5       | 10       | 10      |

| 5      | 8       | 1       | 5        | 2      | 6        | 1       | 4       | 6      | 4       | 4      | 4      | 6       | 6      | 5        | 2       | 10      | 8        | 11       | 16      |
|--------|---------|---------|----------|--------|----------|---------|---------|--------|---------|--------|--------|---------|--------|----------|---------|---------|----------|----------|---------|
| 1      | -3      | 2       | 7        | 2      | 3        | 0       | 4       | -2     | 2       | -1     | -1     | 2       | -1     | 6        | -4      | 5       | 6        | 3        | 5       |
| 0      | 1       | 0       | 2        | 2      | 2        | 0       | 0       | -1     | 3       | 2      | -1     | 3       | -2     | 0        | 7       | 1       | 1        | 0        | 1       |
| 32     | 10      | 45      | 69       | 83     | 12       | 3       | 3       | 8      | 6       | 8      | 3      | 12      | 11     | 7        | 7       | 12      | 11       | 30       | 31      |
| 1      | -1      | 0       | 1        | 1      | 0        | -1      | 1       | 1      | -3      | 1      | -5     | 0       | -1     | -1       | -1      | 2       | 3        | 3        | 3       |
| 0      | 2       | 1       | -3       | 0      | -1       | 0       | 1       | 0      | 3       | 2      | -1     | 0       | -16    | 3        | -9      | 4       | 3        | 1        | 6       |
| 4      | -2      | -1      | 0        | 2      | -2       | -1      | 4       | 4      | 11      | 9      | 2      | 1       | 7      | 6        | -3      | 4       | 4        | 5        | 4       |
| 0      | -2      | -1      | -1       | -1     | 0        | 1       | 0       | 0      | 0       | 1      | 1      | 1       | 2      | -1       | -3      | 3       | 4        | -1       | 2       |
| 3      | 11      | 1       | 0        | 1      | 12       | 1       | 3       | 6      | 8       | 4      | 2      | 3       | 5      | 6        | 10      | 3       | 1        | 3        | 7       |
| 3      | 2       | -3      | 0        | -1     | 6        | 0       | 1       | 4      | 6       | 7      | 2      | 5       | 5      | 6        | 4       | 4       | 2        | -1       | 6       |
| 2      | -2      | -4<br>1 | 0        | -1     | 3        | -1      | 2       | 2<br>3 | 3       | 7      | 0      | 2       | 2      | 4        | 2       | -2      | -3<br>-5 | -3       | -4      |
| 4 3    | 1<br>5  | 1       | 2<br>-1  | 1<br>0 | 0<br>1   | 1<br>0  | 2<br>0  | 3      | 16<br>5 | 4<br>1 | 3<br>0 | 3<br>1  | 5<br>2 | 5<br>4   | 4<br>7  | 2<br>1  | 2        | 3<br>1   | 4<br>3  |
| 4      | 6       | 0       | 4        | 3      | 8        | -1      | 8       | 7      | 3       | 8      | 5      | 6       | 5      | 9        | 5       | 0       | 0        | 2        | 3       |
| 15     | -4      | 1       | 8        | 4      | -5       | 1       | 10      | 11     | 10      | 10     | 3      | 5       | 7      | 9        | 10      | 7       | 8        | 11       | 8       |
| 16     | 2       | -3      | 1        | 3      | -1       | -1      | 2       | 4      | 4       | 2      | -1     | 3       | 1      | -1       | 2       | -4      | -4       | 1        | -3      |
| 44     | 5       | 3       | 4        | 4      | 10       | 8       | 3       | 4      | 4       | 4      | 2      | 7       | 38     | 5        | 3       | 3       | 1        | 4        | 3       |
| 5      | 3       | 1       | 3        | 1      | 3        | 2       | 2       | 3      | 11      | 2      | 1      | 2       | 7      | 7        | 10      | 2       | 2        | 2        | 5       |
| 2      | 0       | 1       | 2        | 1      | -2       | 1       | 2       | 1      | 1       | 1      | 0      | 2       | 4      | 3        | 2       | 2       | 2        | 2        | 3       |
| 10     | 0       | 2       | 1        | -1     | -2       | 2       | 3       | 1      | 3       | 0      | -1     | 10      | 30     | -3       | 1       | 2       | 2        | -1       | 2       |
| 7      | 5       | 0       | 1        | 0      | 5        | 0       | 6       | 5      | 10      | 5      | 5      | 32      | 27     | 7        | 7       | 36      | 41       | 60       | 57      |
| 5      | -3      | 1       | 1        | 2      | 0        | 0       | 3       | 4      | 13      | 7      | 3      | 5       | 6      | 7        | -5      | 4       | 4        | 3        | 7       |
| 1      | 7       | 3       | 11       | 10     | 7        | -2      | 1       | 3      | 5       | 4      | -2     | 10      | -11    | 1        | 0       | 7       | 7        | 4        | 9       |
| 2      | -2<br>7 | -4      | 0        | 0      | 0        | -1<br>4 | 2       | 2<br>7 | 5       | 7<br>7 | 2<br>3 | 3       | 4<br>7 | 3        | 1       | -2<br>1 | -2<br>1  | -2       | -1<br>4 |
| 5<br>4 | 7<br>-5 | 0       | 1<br>1   | 2      | 9        | 1<br>1  | 3<br>2  | 7      | 4<br>6  | 7      | 3<br>1 | 4<br>6  | 7      | 8<br>7   | 5<br>5  | 7       | 6        | 3<br>5   | 4<br>9  |
| 5      | 5       | 0       | 4        | 2      | 7        | 1       | 2       | 2      | -3      | 6      | 1      | 5       | 7      | 4        | -1      | 2       | 2        | 3        | 3       |
| 7      | 5       | 3       | 5        | 2      | 7        | 1       | 3       | 6      | 9       | 3      | 5      | 8       | 10     | 6        | 7       | 1       | 1        | -1       | 5       |
| 1      | 1       | 1       | 1        | 0      | -1       | 2       | 1       | 1      | 5       | 2      | 0      | 1       | 3      | 0        | 0       | 2       | 2        | 1        | 2       |
| 5      | 5       | 1       | 0        | 1      | 2        | 0       | 3       | 4      | 6       | 5      | 1      | 4       | 6      | 8        | 6       | 0       | 1        | 3        | 4       |
| 89     | 35      | 2       | 16       | 43     | -1       | -3      | 0       | 4      | 2       | 10     | 0      | 26      | 6      | -6       | -6      | -2      | -2       | -9       | 0       |
| 5      | 1       | -1      | 0        | 2      | 1        | -1      | 4       | 5      | 6       | 10     | 2      | 4       | 5      | 5        | 1       | 0       | 0        | 4        | 3       |
| 4      | 3       | -1      | 0        |        | 2        | 1       | 2       | 4      | 2       | 1      | 5      | 6       | 7      | 5        | 0       | 1       | 3        | 9        | 2       |
| 1      | 5       | 5       | -1       | 1      | 4        | -1      | 2       | 4      | 2       | 3      | 0      | 5       | 4      | 3        | 4       | 1       | 1        | 0        | 4       |
| 6      | 5       | 0       | 2        | 3      | 9        | -1      | 3       | 1      | 10      | 10     | 0      | 6       | 8      | 8        | 7       | 10      | 5        | 11       | 12      |
| 1      | -10     | 2<br>1  | 1<br>-2  | 1<br>1 | -5       | 0<br>-2 | 3<br>3  | 2<br>8 | 2<br>6  | 5<br>4 | 2      | 2<br>6  | 4      | 0<br>5   | 1       | 2<br>3  | 1<br>3   | 2<br>0   | 3       |
| 3      | 14      | 1<br>5  | -2<br>5  | 2      | 13<br>-3 | 0       | ى<br>1- | -5     | -1      | -3     | -1     | 0<br>1  | 4      | -3<br>-2 | 4       | ა<br>16 | ა<br>15  | 0        | 6       |
| -1     | 4       | 0       | 3        | 1      | 3        | 2       | 2       | -1     | 2       | 0      | 1      | 4       | 2      | 0        | -6      | 2       | 5        | 5        | 4       |
| 4      | -1      | -1      | 0        | 2      | -1       | -2      | 3       | 5      | 29      | 4      | 3      | 2       | 6      | 6        | 11      | -1      | 1        | 2        | 3       |
| 6      | 10      | 3       | 8        | 2      | 9        | 8       | 2       | 3      | 6       | -1     | 4      | 5       | 4      | 5        | 7       | 1       | 1        | -2       | 3       |
| 1      | -10     | 1       | 2        | 2      | -7       | 0       | 1       | 1      | 3       | 4      | 3      | 2       | 0      | 0        | 0       | 1       | 1        | 2        | 1       |
| 6      | 8       | -1      | 2        | 2      | 14       | -1      | 4       | 6      | 6       | 11     | 4      | 6       | 8      | 9        | 5       | 1       | 1        | 3        | 3       |
| 73     | 2       | 3       | 21       | 17     | 6        | 13      | 3       | 4      | 9       | 3      | 5      | 45      | 99     | 5        | 7       | 6       | 4        | 4        | 10      |
| 2      | 5       | 1       | 1        | 1      |          | -1      | 4       | 4      | 1       | 3      | 1      | 5       | 1      | 4        | 0       | 1       | 0        | 2        | 2       |
| 11     | -3      | 6       | 33       | 36     | 0        | 17      | -3      | -5     | -9      | -10    | -2     | 4       | 2      | 1        | -1      | 2       | 2        | 1        | 3       |
| 0      | 3       | 0       | 1        | 1      | 2        | -1      | -1      | 0      | 2       | -3     | 0      | 0       | -3     | -2       | 5       | 2       | 1        | -7       | 3       |
| -3     | 3<br>4  | 0       | -3<br>-3 | 0      | 3<br>4   | -2<br>2 | 2       | 6<br>4 | 5<br>4  | 4<br>3 | 1<br>1 | 4<br>5  | 3<br>4 | 2<br>2   | -7<br>2 | 2<br>4  | 2<br>5   | -1<br>28 | 4       |
| 2 4    | 4<br>13 | 0       | 0        | 1<br>1 | 4<br>16  | -2<br>0 | 2<br>2  | 3      | 4<br>5  | ა<br>9 | 3      | ა<br>3  | 6      | 6        | -2<br>5 | 2       | 5<br>3   | 28<br>4  | 9<br>4  |
| 21     | 5       | 5       | 9        | 7      | 11       | 3       | 4       | 4      | 9       | 4      | 5<br>5 | 3<br>44 | 49     | 5        | 1       | 79      | 71       | 110      | 86      |
| 5      | 2       | 0       | -3       | 1      | 3        | -3      | 0       | 4      | 7       | 5      | -1     | 29      | 9      | 4        | 5       | 2       | 1        | 4        | 8       |
| 6      | 4       | 1       | 1        | 4      | 3        | 0       | 6       | 6      | 8       | 4      | 2      | 7       | 19     | 4        | 7       | 4       | 3        | 3        | 6       |
| 2      | 1       | 2       | 2        | 2      | 50       | 1       | 5       | 2      | 9       | 1      | -2     | 11      | 4      | 5        | 4       | 46      | 30       | 32       | 28      |
| -3     | 4       | 0       | 2        | 0      | 1        | 2       | 1       | -1     | 0       | -3     | -1     | 2       | -1     | -1       | -2      | 2       | 4        | 7        | 1       |
| 3      | 6       | 3       | 4        | 1      | 4        | 1       | 5       | 7      | 12      | 5      | 4      | 6       | 7      | 6        | 12      | 3       | 4        | 1        | 6       |
| 4      | 12      | 0       | 0        | 2      | 12       | 0       | 0       | 6      | 6       | 5      | 4      | 2       | 5      | 6        | 3       | 3       | 4        | 7        | 6       |
| 2      | 2       | 0       | 5        | 1      | 3        | 4       | 2       | -1     | 3       | -1     | 6      | 4       | 3      | 2        | -3      | 2       | 3        | -1       | 1       |

| 17      | -2       | 9       | 32         | 59     | 11       | 1        | 3       | 4       | 4        | 3       | 2        | 9       | 10       | 3        | 3        | 12      | 4       | 30      | 19       |
|---------|----------|---------|------------|--------|----------|----------|---------|---------|----------|---------|----------|---------|----------|----------|----------|---------|---------|---------|----------|
| 14      | 4        | 11      | 31         | 56     | 14       | 1        | 6       | 5       | 2        | 3       | 0        | 15      | 11       | 1        | 2        | 17      | 8       | 28      | 24       |
| -2      | 1        | 1       | 6          | 4      | 3        | -1       | 1       | -2      | 0        | -4      | -2       | 1       | -4       | -3       | 5        | 3       | 5       | 6       | 5        |
| 1       | -5       | 0       | 4          | 0      | -7       | 1        | 1       | 1       | 4        | -3      | 3        | 1       | 3        | 3        | -1       | 0       | 1       | 2       | 0        |
| 6       | -8       | 0       | 4          | 1      | -6       | 3        | 8       | 1       | 0        | -1      | 3        | 20      | 13       | 3        | 1        | 13      | 23      | 42      | 9        |
| 2       | 3<br>-3  | 1<br>-3 | 0<br>7     | 0<br>0 | 3<br>0   | 1<br>4   | 2<br>9  | 4<br>-1 | 9        | -2      | 2<br>3   | 4       | 5<br>5   | 3        | 6<br>-2  | 2       | 2<br>1  | 2<br>8  | -2       |
| 5       | 4        | -3<br>0 | <i>-</i> 2 | 1      | 4        | -1       | 2       | 3       | 5<br>4   | -3<br>2 | 0        | 3<br>3  | 3        | 3<br>3   | 3        | 4       | 5       | o<br>13 | 6        |
| 3       | 10       | 0       | 0          | 0      | 12       | 0        | 2       | 3       | 8        | 7       | 3        | 1       | 4        | 5        | 5        | 2       | 1       | 2       | 3        |
| 3       | 4        | -3      | -1         | 2      | 2        | -1       | 3       | 5       | 9        | 4       | 1        | 5       | 4        | 5        | 4        | -3      | -3      | 2       | 1        |
| 4       | 4        | 0       | 4          | 3      | 5        | -1       | 3       | 4       | 6        | 8       | 3        | 2       | 6        | 7        | 8        | 6       | 6       | 3       | 7        |
| 13      | 14       | 7       | 19         | 16     | 19       | 3        | 5       | 5       | 19       | 5       | 4        | 30      | 27       | 15       | 0        | 73      | 67      | 98      | 82       |
| 3       | 12       | 0       | 1          | 1      | 11       | 1        | 3       | 4       | 7        | 4       | 0        | 6       | 3        | 4        | 1        | 1       | 1       | -1      | 3        |
| 0       | 4        | 1       | -1         | 3      | 3        | -2       | 1       | 3       | 4        | 2       | 1        | 9       | 4        | 1        | -4       | 2       | 3       | 5       | 7        |
| 1       | -1       | 0       | -1         | -1     | -3       | 0        | 2       | 1       | 2        | 1       | 1        | -2      | 0        | 0        | 8        | 1       | 1       | 3       | 3        |
| 0       | 2        | 0       | -1         | 0      | 3        | -1       | 4       | 5       | -2       | 3       | -1       | 4       | 4        | -7<br>-7 | 3        | 1       | -1      | 2       | 3        |
| 4       | 12<br>-9 | -1<br>1 | 3<br>-1    | 2<br>0 | 10<br>-4 | 0<br>-2  | 6<br>1  | 6<br>1  | 3<br>-4  | 9<br>2  | 1<br>-3  | 2<br>5  | 6<br>-1  | 7<br>1   | 9<br>3   | 2<br>5  | 1<br>3  | 3<br>-3 | 5<br>3   |
| 12      | -9<br>-4 | 25      | 16         | 39     | 7        | 4        | 0       | 2       | 7        | 9       | 2        | 38      | 27       | 10       | 35       | 72      | 67      | 94      | 75       |
| 5       | 7        | 1       | 1          | 2      | 10       | 0        | 6       | 7       | 5        | 5       | 3        | 6       | 7        | 7        | -1       | 1       | 2       | 3       | 5        |
| 3       | 1        | 2       | 2          | 2      | 3        | 0        | 2       | 2       | 1        | 6       | 1        | 3       | 1        | 1        | 4        | 6       | 5       | 3       | 6        |
| 1       | -2       | 0       | 1          | 0      | 1        | 0        | 5       | 3       | 3        | 0       | -2       | 1       | 2        | 0        | 3        | 0       | 2       | 0       | 1        |
| 4       | -5       | 1       | 1          | 2      | -2       | 1        | 6       | 6       | 8        | 5       | 2        | 4       | 6        | 9        | 9        | 2       | 1       | 3       | 6        |
| 6       | 3        | -1      | 36         | 40     | 5        | 4        | 9       | 6       | 10       | 3       | 4        | 8       | 9        | 9        | 12       | -3      | -3      | -1      | 1        |
| -1      | -2       | -3      | 2          | 2      | -1<br>-  | 0        | 5       | 2       | 1        | 2       | 0        | 8       | 9        | 0        | -1       | 59      | 64      | 68      | 42       |
| 3       | 3        | -5      | 0          | 0      | 7        | -1       | 1       | 4       | 5        | 10      | 4        | 4       | 6        | 6        | 5        | -2      | -1      | -1      | 1        |
| 4       | 1<br>6   | -1<br>0 | 7<br>2     | 2<br>3 | 5<br>6   | 0        | 2<br>3  | 3<br>4  | 6<br>7   | 10<br>5 | 5<br>4   | 5<br>3  | 6<br>5   | 11<br>3  | 1<br>5   | -1<br>3 | -1<br>3 | 0<br>-1 | 4<br>6   |
| 7       | 11       | 0       | 5          | 2      | 9        | 0        | 5       | 8       | 6        | 4       | 5        | 4       | 11       | 9        | 7        | 0       | 1       | 8       | 6        |
| 13      | 15       | 0       | 5          | 4      | 13       | 1        | 7       | 5       | 12       | 4       | 7        | 4       | 9        | 7        | 14       | 0       | 2       | 1       | 4        |
| 3       | 6        | 1       | 1          | 0      | 5        | 1        | 6       | 4       | 2        | 4       | 5        | 4       | 92       | 5        | 6        | 5       | 4       | 4       | 8        |
| 6       | 5        | 0       | 4          | 1      | 5        | 1        | 3       | 3       | 7        | -3      | 4        | 7       | 10       | 3        | 4        | 3       | 4       | 5       | 7        |
| 3       | 4        | 0       | 3          | 2      | 6        | 0        | 5       | 3       | 7        | 3       | 1        | 6       | 5        | 5        | 9        | 3       | 3       | 1       | 6        |
| 1       | 2        | 1       | 4          | 1      | 0        | 0        | 2       | 4       | 7        | 2       | 2        | 2       | 3        | 1        | 2        | 1       | 2       | 0       | 2        |
| 7       | 12       | 2       | 6          | 2      | 18       | 3        | 4       | 6       | 9        | 5       | 7        | 15      | 8        | 5        | 11       | 31      | 9       | 11      | 28       |
| 0<br>-2 | 2<br>-2  | 1       | -1<br>5    | 0<br>4 | 0<br>-4  | 0        | 0<br>2  | 3<br>1  | 5<br>-3  | 2<br>-5 | -1<br>-4 | 3<br>-1 | -3<br>-3 | 3<br>-3  | 0<br>-2  | 1<br>2  | 0<br>2  | 7<br>5  | 1<br>0   |
| 0       | 6        | 0       | 6          | 9      | 4        | 1        | 2       | 2       | -3<br>-8 | 2       | 4        | 2       | 3        | 2        | -2<br>-4 | 0       | 0       | 10      | 1        |
| 2       | 2        | 0       | 1          | 1      | -3       | 0        | 1       | 1       | 4        | 2       | 1        | 2       | 4        | 5        | 8        | 2       | 2       | 2       | 4        |
| -1      | 1        | -3      | -1         | 1      | 1        | 0        | 4       | 1       | 1        | 1       | -1       | 5       | 1        | 0        | -2       | 2       | 2       | 3       | 1        |
| 5       | 7        | 0       | 2          | 2      | 7        | -1       | 3       | 5       | 5        | 9       | 1        | 4       | 6        | 7        | 6        | 0       | 1       | 3       | 3        |
| 11      | 12       | 25      | 45         | 52     | 17       | -3       | -1      | 5       | 10       | 7       | 2        | 27      | 19       | 4        | 13       | 84      | 76      | 89      | 90       |
| 0       | -5       | 1       | -2         | 1      | -4       | 0        | 1       | 3       | 2        | 3       | 1        | 3       | 0        | -1       | -2       | 0       | 0       | 2       | 1        |
| 1       | 1        | 0       | -1         | 0      | 0        | 0        | 2       | 1       | 2        | 3       | 1        | 0       | 0        | 1        | -1<br>0  | 1       | 2       | 2       | 2        |
| 4       | 8        | 2<br>1  | 1<br>0     | 1<br>0 | 14<br>-1 | 0        | 1<br>1  | -3<br>2 | 8<br>-4  | 6<br>1  | 3<br>2   | 1<br>3  | -4       | 4<br>-4  | 8<br>0   | 7<br>1  | 6<br>1  | 3<br>4  | 7<br>2   |
| 3       | 2        | 1       | -1         | 1      | 5        | 1        | 2       | 5       | 6        | -27     | 3        | 2       | 5        | 9        | 8        | 2       | 2       | 3       | 4        |
| 5       | -4       | 0       | 2          | 2      | 1        | 0        | 5       | 6       | 5        | 10      | 2        | 4       | 7        | 7        | 7        | 2       | 1       | 4       | 4        |
| 3       | 1        | 0       | 1          | 1      | 0        | -1       | 1       | 0       | 3        | 6       | 2        | 2       | 2        | 2        | -2       | 1       | 1       | 2       | 2        |
| 1       | 7        | 2       | 11         | 5      | 5        | 1        | 3       | 4       | 1        | 4       | 0        | 3       | 2        | -1       | -1       | 1       | 1       | 2       | 4        |
| -1      | 3        | 0       | -3         | 1      | 5        | -1       | 7       | 16      | -2       | 0       | 1        | 3       | 5        | 1        | -3       | 2       | 4       | 3       | 4        |
| 1       | 5        | 1       | -1         | 2      | 3        | -1       | 2       | 4       | 7        | 2       | -4       | 4       | 4        | 8        | 2        | 2       | 2       | 5       | 4        |
| 7       | -2<br>4  | 1       | 4<br>2     | 3<br>2 | 0<br>6   | 1<br>-1  | 5<br>36 | 4<br>7  | 19<br>11 | 5<br>3  | 1<br>5   | 3<br>7  | 7        | 12<br>5  | 1<br>5   | 4<br>7  | 9<br>8  | 6       | 8        |
| 7       | -1       | 1<br>-2 | 0          | 1      | 0<br>1   | -1<br>-1 | 36<br>1 | 0       | -2       | 3<br>1  | -2       | 4       | 7<br>-1  | -1       | -6       | -3      | -4      | 0<br>5  | 11<br>-2 |
| 5       | -5       | 18      | 18         | 11     | -1       | -2       | 4       | 3       | 7        | 11      | 4        | 3       | 4        | 4        | 3        | 0       | 1       | 4       | 3        |
| 2       | -7       | 1       | 1          | 1      | -6       | -1       | 1       | 2       | 2        | 1       | 0        | 0       | 1        | -1       | 1        | 0       | 0       | 0       | 0        |
| 57      | 17       | 3       | 11         | 25     | 4        | 2        | 1       | 1       | -2       | 2       | -2       | 2       | -2       | -5       | -9       | 0       | 1       | 6       | 1        |

|        |         | <b>50</b> | 40      | 00      | _       |         | 0      | 0      | 0       |         | 0       | •             |         | _       | 0       | 0      |          |          | 0       |
|--------|---------|-----------|---------|---------|---------|---------|--------|--------|---------|---------|---------|---------------|---------|---------|---------|--------|----------|----------|---------|
| 0<br>6 | -5<br>6 | 50<br>1   | 43<br>5 | 26<br>2 | 1<br>5  | -2<br>1 | 2<br>4 | 3<br>5 | 9<br>8  | -1<br>4 | 3<br>7  | 0<br>7        | -1<br>9 | 0<br>6  | 2<br>-3 | 3<br>1 | 2        | -1<br>14 | 3<br>5  |
| 0      | 5       | 1         | 2       | 2       | 5<br>5  | 1       | 4      | ე<br>1 | o<br>7  | 3       | -2      | <i>7</i><br>8 | 2       | 0       | 3       | 1      | 3<br>0   | 4        | 5<br>1  |
| -2     | 5       | 2         | -1      | 1       | 5       | -1      | 1      | 3      | -5      | 4       | -3      | 4             | 1       | -2      | -8      | 1      | 0        | 8        | 4       |
| 5      | 2       | 5         | 10      | 2       | 2       | 11      | 2      | 1      | -1      | -6      | 1       | 5             | -2      | 2       | 1       | 4      | 4        | -2       | 5       |
| 5      | 8       | -1        | 9       | 1       | 5       | 6       | 2      | -2     | 3       | -4      | 4       | 0             | 2       | 3       | -2      | 1      | 0        | 0        | 0       |
| 5      | 5       | 0         | 0       | 1       | 6       | 0       | 4      | 2      | 7       | 3       | 3       | 7             | 8       | 4       | 7       | 33     | 36       | 49       | 15      |
| 2      | -11     | 1         | 2       | 2       | -7      | 0       | 3      | 0      | 4       | 3       | -1      | 3             | 0       | 0       | 2       | 4      | 4        | 4        | 5       |
| 2      | -1      | -3        | -1      | 1       | 3       | -2      | 2      | 3      | 3       | 3       | 1       | 6             | 5       | 0       | 7       | 34     | 33       | 39       | 13      |
| 85     | 47      | -3        | 5       | 2       | 6       | 1       | 5      | 5      | 15      | 3       | 4       | 4             | 10      | 10      | 11      | -4     | -2       | 4        | 1       |
| 3      | 3       | 0         | 2       | 1       | 1       | 4       | 4      | 3      | 7       | 3       | 0       | 5             | 6       | 9       | 4       | 2      | 1        | 1        | 2       |
| -1     | 0       | 1         | 0       | -2      | -1      | 1       | 2      | 2      | 4       | 2       | 2       | 0             | 4       | 1       | -1      | 0      | 0        | 0        | 0       |
| 2      | -1      | 0         | -1      | 0       | 1       | 1       | 0      | -1     | 2       | 2       | 1       | -2            | 1       | 2       | -3      | 6      | 3        | 8        | 2       |
| 5      | 12      | 1         | -2      | 1       | 14      | -1      | 5      | 5      | 4       | 4       | 2       | 14            | 15      | 4       | 4       | 16     | 7        | 8        | 16      |
| 4      | -3      | 0<br>-1   | 1       | 2       | -1<br>4 | -1      | 3      | 1      | 10      | 8       | 0       | 3             | 4       | 6       | 8       | 2      | 2        | 3        | 4       |
| 4      | 0       | 1         | 2<br>4  | 2<br>2  | 3       | -1<br>1 | 6<br>5 | 6<br>3 | 9<br>9  | 9<br>4  | 3<br>4  | 5<br>3        | 5<br>7  | 7<br>4  | 10<br>7 | 1<br>7 | 0<br>7   | 1<br>10  | 5<br>10 |
| 4      | 3       | 1         | 0       | 1       | 3       | 1       | 3      | 3      | 6       | 2       | 5       | 2             | 4       | 4       | 4       | 1      | 2        | 4        | 3       |
| 2      | -6      | 2         | 0       | 2       | -3      | -3      | 16     | 4      | 1       | 5       | 0       | 21            | 9       | -1      | -1      | 24     | 36       | 42       | 14      |
| 5      | 2       | 0         | 3       | 0       | -3      | 2       | 3      | 2      | 7       | 3       | 3       | 2             | 6       | 8       | 3       | 0      | 0        | -2       | 2       |
| 3      | 13      | 1         | -1      | 1       | 12      | -1      | 3      | 5      | 6       | 5       | 2       | 8             | 5       | 10      | -5      | 4      | 4        | 0        | 8       |
| 3      | 2       | 0         | -2      | -1      | 4       | 0       | 1      | 1      | 5       | 0       | 3       | 13            | 12      | 4       | 7       | 4      | 7        | 9        | 14      |
| 3      | 2       | 6         | 21      | 19      | -1      | 2       | 1      | 3      | 11      | 3       | 2       | 4             | 7       | 4       | 7       | 1      | 2        | 1        | 3       |
| 3      | 6       | 2         | 1       | 1       | 5       | 1       | 4      | 6      | 15      | 4       | 0       | 5             | 6       | 5       | 5       | 0      | 3        | -4       | 3       |
| 2      | 3       | 2         | 3       | 1       | -1      | 2       | 1      | 1      | -4      | 1       | 3       | 4             | 5       | 4       | 0       | 7      | 9        | 14       | 8       |
| 3      | 2       | -3        | -2      | 2       | 4       | -2      | 3      | 4      | 7       | 3       | 1       | 3             | 4       | 5       | 4       | -3     | -4       | 1        | 0       |
| -2     | -2      | 1         | 3       | 1       | -3      | 0       | -1     | -4     | 5       | -5      | -4      | -1            | -4      | -2      | -2      | 3      | 3        | 0        | 1       |
| 3      | 2       | 1         | 1       | 1       | 1       | 2       | 3      | 3      | 6       | 1       | 1       | 4             | 4       | 5       | 2       | 2      | 2        | 2        | 3       |
| 10     | 1       | 1         | 1       | 1       | 35      | -1      | 2      | 3      | 5       | 3       | 2       | 50            | 23      | 1       | 7       | 57     | 34       | 83       | 54      |
| 7      | 6       | 1         | 4<br>1  | 1       | 6       | 2       | 4      | 5      | 9       | 3       | 4       | 6             | 9       | 9       | 5       | 1      | 2        | 6        | 5       |
| 1 4    | 1<br>-1 | 1         | 0       | 0<br>2  | 1<br>-2 | 1<br>0  | 2<br>3 | 1<br>6 | 7<br>7  | 2<br>5  | 2<br>2  | 37<br>1       | 27<br>5 | -3<br>7 | 4<br>6  | 9      | 12<br>-2 | 12<br>2  | 12<br>2 |
| 5      | 3       | 1         | 5       | 2       | 6       | 5       | 9      | 8      | 11      | 3       | 5       | 6             | 6       | 5       | 4       | 1      | 3        | 3        | 5       |
| 1      | 2       | 2         | -1      | 1       | 1       | 0       | 0      | 1      | 1       | 1       | -4      | 2             | 3       | 5       | -2      | 1      | 2        | -1       | 3       |
| 2      | 2       | 1         | 0       | -1      | 1       | 0       | 3      | 5      | 9       | 2       | 0       | 4             | 5       | 3       | 7       | 3      | 4        | 14       | 26      |
| 3      | 5       | 0         | -2      | 0       | 5       | -2      | 4      | 3      | 4       | 2       | 2       | 3             | 4       | 4       | 1       | 3      | 2        | 4        | 4       |
| 3      | 2       | 0         | 1       | 0       | 3       | 2       | 2      | 3      | 15      | 3       | 3       | 4             | 5       | 8       | 7       | 1      | 2        | -1       | 2       |
| 5      | 6       | 0         | 1       | 2       | 11      | 0       | 4      | 8      | 12      | 8       | 2       | 5             | 7       | 8       | 9       | 4      | -1       | 4        | 7       |
| 4      | 5       | 1         | 4       | 2       | 3       | 0       | 4      | 5      | 5       | 3       | 0       | 10            | 6       | 4       | 1       | 3      | 3        | 0        | 6       |
| 2      | 6       | 1         | -3      | 1       | 3       | -1      | 3      | 5      | 3       | 2       | 0       | 5             | 5       | 5       | 8       | 1      | 1        | -3       | 5       |
| -1     | 9       | 3         | 0       | 0       | 7       | 1       | 2      | -1     | -4      | 2       | -4      | 3             | -2      | -1      | -8<br>- | 2      | 1        | -1       | 2       |
| 3      | 5       | 0         | 4       | 1       | 9       | 0       | 7      | 3      | 2       | 3       | 5       | 6             | 5       | 8       | 7       | 6      | 4        | 8        | 8       |
| 8      | 8       | 1         | 2<br>1  | 1       | 8<br>8  | 0       | 5<br>3 | 5      | 18      | 4       | 6<br>0  | 4             | 4       | 6       | 7<br>3  | 2<br>3 | 3        | 5<br>6   | 7       |
| 4      | 8<br>2  | 0<br>-3   | 1       | 1<br>1  | 8<br>2  | 1<br>0  | ა<br>5 | 3<br>3 | 6<br>12 | 6<br>4  | 5       | 3<br>4        | 5<br>5  | 3<br>5  | 3<br>6  | -4     | -1       | -3       | 5<br>0  |
| 3      | 5       | 4         | 2       | 2       | 2       | 0       | -3     | 3<br>4 | 0       | 3       | -2      | 8             | 3       | ა<br>1  | -3      | 1      | 4        | 6        | 5       |
| -1     | 1       | -1        | 0       | 2       | -1      | -2      | 0      | 2      | 1       | -4      | -1      | 5             | 0       | 0       | 2       | 4      | 3        | -4       | 4       |
| 1      | 0       | 0         | 2       | -1      | 1       | 1       | 3      | 1      | 1       | 2       | 2       | 1             | 4       | 4       | 5       | 0      | 0        | -1       | 1       |
| 1      | 4       | 0         | 0       | 2       | 2       | -1      | 3      | 4      | 6       | 2       | 1       | 2             | 3       | 1       | 2       | 1      | 1        | 0        | 3       |
| 0      | 1       | 0         | 1       | 1       | 1       | -1      | 0      | -1     | 2       | -1      | -2      | 3             | -3      | -1      | 6       | 5      | 3        | -11      | 5       |
| 1      | -2      | 1         | 3       | 2       | -4      | 1       | 3      | 3      | 1       | 0       | -1      | 0             | 0       | -1      | 6       | 2      | 2        | 1        | 0       |
| 7      | -4      | 4         | 4       | 2       | -3      | 2       | 4      | 5      | 18      | 5       | 5       | 5             | 7       | 8       | 3       | -1     | 2        | -7       | 2       |
| 0      | 2       | 1         | 1       | 1       | 4       | 0       | 1      | 3      | 0       | 3       | -1      | 3             | 2       | -1      | -6      | 2      | 1        | -6       | 4       |
| 2      | 1       | 2         | 1       | 0       | 0       | 1       | 2      | 1      | 2       | 0       | 0       | 5             | 0       | -5      | 0       | 1      | 2        | 2        | 2       |
| -2     | 4       | 0         | 0       | 2       | 5       | -1      | 2      | 3      | 6       | 2       | 2       | 3             | 3       | 3       | 8       | 1      | 2        | 4        | 4       |
| 5      | 11      | 1         | 4       | 3       | 13      | 0       | 2      | 3      | 24      | 10      | 3       | 3             | 6       | 6       | 8       | 9      | 6        | 6        | 8       |
| 1      | -1<br>0 | 0         | -1<br>2 | 0       | 2<br>7  | -1<br>0 | 1      | 2      | 3       | 1       | -1<br>1 | 0             | 1       | 0       | -4<br>2 | 0<br>7 | 2        | 0        | 1       |
|        | 9       | 1         | 2       | 1       | T       | 0       | 3      | 4      | 4       | 3       | 1       | 5             | 1       | 0       | 3       | 1      | 8        | -2       | 7       |

| S   | 2  | 2  | - 1     | 1        | 4      | 1       | 2       | 1  | 1  | 12 | 5  | 1  | 5  | 7  | 5      | 0       | 0      | 1      | 1   | 2  |
|---|----|----|---------|----------|--------|---------|---------|----|----|----|----|----|----|----|--------|---------|--------|--------|-----|----|
| 6 - 8 - 53  | 3  | 2  | -1<br>1 | -4<br>-1 | 1<br>0 | -1<br>3 | -3<br>0 | 1  | 4  | 12 | 5  | 4  | 5  | 7  | 5<br>0 | 8<br>-4 | 0<br>3 | 1<br>ว | 4   | 3  |
| 5         8         1         3         3         7         2         3         8         11         5         0         4         17         7         9         1         2         7         6         2         0         1         1         0         2         0         2         2         3         2         1         2         3         -2         1         2         1         1         3         4         4         1         3         4  |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 2 3 0 0 2 0 0 3 0 0 29 0 3 00 29 3 30 5 4 1 13 14 6 10 8 5 111 6 3 6 7 1 4 1 1 1 1 1 3 1 4 6 10 8 5 111 6 3 6 7 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |    |    |         |          |        | _       |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 1   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 6   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| -1  |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 9 -3 -2 8 8 2 4 7 8 8 15 28 2 11 4 -1 15 28 2 2 11 4 4 -1 5 5 7 5 8 5 7 17 17 12 3 -3 -3 -3 1 1 4 4 0 4 0 4 5 9 2 4 4 4 3 1 1 2 0 2 0 2 -2 2 1 1 4 1 1 -2 1 3 3 -2 11 4 4 2 3 0 0 2 2 3 0 0 1 2 0 0 0 5 0 4 4 1 0 0 6 3 1 3 2 2 1 1 0 2 0 0 0 5 0 5 0 4 4 1 0 0 6 3 1 3 2 2 1 1 0 2 0 0 0 5 0 5 0 4 4 1 0 0 6 3 1 3 2 2 1 1 0 0 2 0 0 0 5 5 0 4 4 1 0 0 1 1 0 1 1 1 1 1 1 1 1 1 1 1   | -1 | -9 | 0       |          | 1      | -10     | 0       |    | 0  | -2 | 0  |    | 2  | -2 | -3     |         | 2      |        | -1  | 1  |
| 2 0 0 -1 -2 1 1 1 -3 1 2 11 4 -1 5 7 5 8 5 5 7 17 12 3 -3 -3 3 1 1 2 0 1 2 -2 2 2 1 1 4 1 1 4 1 1 -2 1 3 3 -2 11 4 2 3 3 0 2 3 0 1 2 0 2 2 2 2 2 1 1 4 1 1 0 6 3 3 1 3 2 -1 0 1 2 0 2 0 3 1 5 3 1 5 3 3 2 -1 1 3 1 1 4 1 0 6 6 3 1 3 1 2 0 0 2 2 0 5 1 4 3 4 4 14 18 5 3 32 6 6 0 7 7 4 6 6 4 1 1 41 5 2 2 8 8 6 7 1 19 16 1 1 8 0 0 1 2 2 1 4 1 1 2 0 3 3 -1 3 1 1 0 -1 1 2 3 7 7 19 16 1 1 1 1 0 1 1 -2 1 1 4 1 1 0 2 0 3 3 -1 3 1 1 3 1 1 8 4 7 2 2 1 1 0 0 0 0 0 -1 1 0 0 | -1 | -2 | 0       | 2        | 1      | 1       | 0       | -1 | -1 | 4  | -1 | -1 | 1  | 0  | -3     | 4       | 14     | 23     | 20  | 12 |
| 3   | 9  | -3 | -2      | 8        | 2      | 4       | 7       | 8  | 15 | 28 | 2  | 6  | 17 | 8  | 6      | 5       | -2     | 0      | 7   | 5  |
| 1   | 2  | 0  | -1      | -2       | 1      | 1       | -3      | 1  | 2  | 11 | 4  | -1 | 5  | 7  | 5      | 8       | 5      |        |     | 12 |
| 2 3 0 1 1 0 5 0 4 1 1 0 6 6 3 1 1 3 2 2 1 6 0 0 0 5 3 1 5 3 2 5 1 43 4 14 1 18 53 32 6 0 7 4 4 3 5 5 1 6 5 6 1 1 6 23 22 51 43 4 14 18 53 32 6 0 7 7 4 4 6 4 1 41 52 2 2 8 6 6 7 1 19 16 14 8 8 0 0 0 1 8 8 0 1 2 2 0 3 3 -1 3 3 -1 0 1 1 2 3 7 7 4 1 1 1 1 0 1 1 -2 1 1 4 1 8 1 8 1 0 0 2 2 7 7 1 1 2 3 7 7 4 1 5 1 8 1 1 1 5 5 5 5 2 1 8 1 3 1 1 1 1 5 5 5 5 5 2 1 1 2 2 2 2 1 1 3 1 3 1 3 1 8 4 7 2 2 1 1 0 1 1 5 5 5 5 5 2 1 1 2 7 7 -2 2 2 5 7 7 5 0 8 8 5 9 9 0 3 2 2 3 6 6 3 3 1 3 3 1 8 1 1 1 2 2 1 3 7 7 4 1 1 5 5 4 1 1 5 5 4 1 1 1 1 2 2 1 1 4 1 1 2 2 5 6 8 3 3 5 5 4 2 5 1 1 1 2 2 2 2 1 1 3 1 1 1 1 1 1 1 1 1 1   | 3  | -3 | -3      |          |        | 4       |         | 4  |    |    |    |    |    |    | 1      |         |        |        | -2  | 2  |
| S   |    |    |         |          |        |         |         |    |    | 2  |    |    |    |    |        |         |        |        |     | 5  |
| 4   |    |    |         |          |        |         |         |    |    |    |    |    | 1  |    |        |         |        |        |     |    |
| -1  |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| -1  |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 0 2 1 2 0 -1 0 3 4 8 1 0 0 1 0 2 2 2 2 1 0 0 0 0 5 4 0 1 -1 2 2 2 2 1 3 3 1 3 1 -8 4 7 2 4 1 11 5 5 5 5 2 4 3 3 6 0 0 13 5 7 3 4 13 9 4 2 7 9 82 77 65 9 3 -1 1 2 1 1 2 7 -2 2 5 7 5 5 0 8 5 9 0 3 2 3 6 3 4 15 0 1 2 1 1 2 1 1 4 7 5 4 -1 1 5 4 2 5 3 3 3 -1 2 2 1 1 6 3 3 4 6 6 -2 1 2 7 -2 2 5 7 5 5 0 8 5 9 0 3 3 2 3 6 6 1 2 2 4 1 5 1 0 1 1 8 -1 1 4 7 7 5 4 -1 1 5 4 2 5 3 3 3 -1 3 3 4 5 0 2 1 1 2 2 4 1 1 5 1 0 1 1 8 -1 1 4 7 7 5 4 -1 1 5 4 2 5 3 3 3 -1 3 3 3 4 5 0 2 1 1 2 2 4 1 1 5 1 0 1 1 8 -1 1 4 7 7 5 4 -1 1 5 4 2 5 5 3 3 3 -1 3 3 3 5 4 5 0 0 2 1 1 1 3 3 11 -1 2 5 6 6 3 3 3 5 5 6 6 5 1 1 2 2 2 4 1 1 2 2 1 1 4 1 7 7 3 9 -2 4 4 4 1 10 5 4 2 5 1 1 1 2 2 7 7 5 1 1 2 2 5 7 7 5 1 1 2 2 2 7 7 5 1 1 2 2 1 1 1 2 1 1 1 1 2 1 1 1 1 1 1  |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 5         4         0         1         -1         2         2         2         1         3         1         -8         4         7         2         4         1         5         5         5         2         4         3         6         0         13         5         7         3         4         13         9         4         2         79         82         77         6         3           4         6         -2         1         2         7         -2         2         5         7         5         0         8         5         9         0         3         2         3         6           4         15         1         0         1         8         -1         4         7         5         4         -1         5         9         5         1         2         2         3         3         1         2         2         2         5         1         -1         -5         3         3         5         4         2         -1         3         5         4         2         -1         3         5         4         2         -1         3  |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 5         5         2         4         3         6         0         13         5         7         3         4         13         9         4         2         79         82         77         65           9         3         -1         2         1         -1         1         0         4         13         9         4         2         79         82         77         65           4         6         -2         1         2         7         -2         2         5         7         5         0         8         5         9         0         3         2         4           1         5         0         0         0         6         1         3         3         10         4         2         5         1         3         3         4         4         2         5         1         3         3         5         4         2         1         3         3         5         6         4         2         5         1         3         5         6         7         4         1         3         3         5         6         5         1   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 9 3 -1 2 1 1 1 1 0 4 13 4 8 3 7 10 4 -2 -1 6 3 4 4 15 1 0 1 2 7 -2 2 5 7 5 0 8 5 9 0 3 2 3 6 4 15 1 0 1 8 -1 4 7 7 5 4 1 5 0 8 5 9 0 3 2 3 6 4 15 1 0 1 8 -1 4 7 7 5 4 1 5 1 0 1 3 3 1 2 3 6 4 2 5 1 2 2 2 4 1 1 5 0 0 0 0 0 6 1 3 3 3 10 4 2 5 5 3 3 3 -1 3 3 3 4 5 5 0 2 1 1 -2 1 3 1 2 0 3 3 2 1 6 6 -15 1 -5 3 3 3 5 4 4 1 5 1 1 1 2 1 2 5 6 6 3 3 3 5 5 4 2 1 1 3 5 6 6 7 4 1 1 3 11 -1 2 5 6 6 3 3 3 5 6 4 2 1 1 3 5 6 6 7 4 1 1 3 1 1 1 2 2 5 6 6 3 3 3 5 6 4 2 1 1 3 5 6 6 7 4 1 1 2 3 3 3 5 1 1 0 4 2 2 5 5 9 6 4 3 3 5 6 5 1 1 1 2 3 3 3 5 5 1 1 0 4 5 0 2 2 5 9 9 6 4 3 3 5 6 5 1 1 1 2 3 3 3 5 5 1 1 0 4 5 0 2 2 5 9 9 6 4 3 3 5 6 5 1 1 1 2 2 3 3 3 5 5 1 1 0 4 5 0 2 2 5 9 9 6 4 3 3 5 6 5 5 1 1 1 2 2 3 5 5 5 5 1 5 1 5 1 7 4 17 7 7 39 -2 4 4 4 10 5 5 3 4 8 28 29 19 5 0 -1 0 4 0 1 1 4 1 3 -1 5 0 -1 0 0 1 1 -2 2 2 2 7 5 5 1 1 -6 47 49 38 1 1 0 3 6 4 4 4 0 9 9 15 27 32 0 2 2 5 5 4 1 1 5 3 5 5 0 5 1 1 5 1 1 7 6 6 10 9 87 4 4 2 2 2 7 16 2 2 1 1 3 3 6 4 5 5 3 2 8 6 12 15 70 66 10 9 87 4 2 2 2 7 1 6 2 2 1 3 3 6 6 4 4 5 3 2 2 8 6 12 15 70 66 10 9 87 4 2 2 2 7 1 6 2 2 0 5 1 3 6 6 3 1 1 8 4 4 7 5 5 6 11 9 8 1 1 1 2 2 7 7 1 -2 2 0 2 5 2 8 3 11 3 3 6 7 4 6 7 4 3 3 0 7 7 6 2 8 7 7 3 3 3 3 5 5 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 4       6       -2       1       2       7       -2       2       5       7       5       0       8       5       9       0       3       2       3       6         4       15       1       0       1       8       -1       4       7       5       4       -1       5       4       2       5       3       3       -1       2       2       4         1       5       0       0       0       6       1       3       3       10       4       2       5       3       3       -1       3       3       5       4         2       10       1       1       2       0       0       2       5       9       6       4       3       5       6       5       1       1       2       0       0       2       5       9       6       4       3       5       6       5       1       1       2       2       8       7       7       5       1       -2       2       2       7       5       6       3       3       3       4       8       28       29       1   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 4       15       1       0       1       8       -1       4       7       5       4       -1       5       4       2       5       1       2       2       4         1       5       0       0       0       6       1       3       3       10       4       2       5       3       3       -1       -5       3       3       4       5         0       2       1       -3       11       -1       2       0       0       2       5       6       3       3       5       4       2       -1       3       5       6       7         4       0       1       1       2       0       0       2       5       9       6       4       3       5       6       5       1       1       1       2       2       6       -1       3       5       1       1       2       2       7       5       5       6        5       1       1       1       2       2       2       2       7       5       6       4       1       3       3       1       1       0       1   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 1         5         0         0         0         6         1         3         3         10         4         2         5         3         3         -1         3         3         4         5           0         2         1         -2         1         -3         1         2         0         3         2         1         6         -15         -1         -5         5         6         7           4         0         1         1         2         0         0         2         5         9         6         4         3         5         6         5         1         1         2         2         0         2         5         -1         3         -5         6         5         1         1         2         3         3         5         6         5         1         1         2         3         3         5         1         1         2         3         2         4         4         10         5         3         4         8         28         29         9         15         27         32         0         2         5         4         1   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 0 2 1 -2 1 -3 1 2 0 3 2 1 6 -15 -1 -5 3 3 5 4 2 1 0 1 1 3 11 -1 2 5 6 6 3 3 3 5 4 2 1 1 3 5 6 7 4 0 1 1 2 0 0 0 2 5 9 6 4 3 5 5 6 5 1 1 2 2 2 2 7 5 5 5 1 0 4 5 0 2 5 5 -1 3 -2 7 5 1 1 -2 2 2 2 7 5 5 5 1 1 5 1 7 4 17 7 39 -2 4 4 4 10 5 3 3 4 8 28 29 19 5 0 -1 0 4 0 1 4 1 3 -1 5 0 0 1 0 0 1 -2 2 6 2 6 -2 1 -2 1 -3 -1 3 6 4 4 0 9 15 27 32 0 2 5 4 1 1 -5 3 5 6 1 1 - 2 2 2 2 7 5 1 -1 6 47 49 38 1 1 0 3 3 0 5 1 8 92 2 8 2 1 1 5 70 66 109 87 4 2 2 7 1 6 2 -1 3 3 6 6 3 -1 8 4 4 7 5 6 11 9 8 7 4 11 12 2 7 1 1 2 2 5 68 83 74 66 -1 2 6 6 2 5 5 5 5 5 5 6 8 8 3 74 66 -1 2 6 6 2 6 2 6 2 6 2 6 2 6 2 6 2 6 2 6   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 2 10 1 1 1 3 11 -1 2 5 6 3 3 3 5 4 2 -1 3 5 5 6 7 4 0 1 1 2 3 3 5 5 6 7 4 0 1 1 2 2 3 3 3 5 1 0 4 5 0 0 2 5 5 -1 3 -2 7 5 1 2 2 2 7 5 5 5 5 1 5 1 7 4 17 7 39 -2 4 4 10 5 3 3 4 8 28 29 19 5 0 -1 0 4 0 1 4 1 3 -1 5 0 -1 0 0 1 -2 2 6 -2 1 -2 1 -2 1 -3 -1 3 6 4 4 4 0 9 9 15 27 32 0 2 5 4 1 6 -2 2 7 7 16 2 -1 3 3 6 4 5 3 2 8 6 12 15 70 66 109 87 4 2 2 7 16 2 -1 3 3 6 6 3 -1 8 92 2 8 7 4 11 12 2 7 1 1 -3 3 10 3 10 3 0 7 6 2 8 7 4 11 12 2 7 1 1 1 2 1 1 1 2 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 2 1 1 1 1 2 1 1 1 1 2 1 1 1 1 2 1 1 1 1 2 1 1 1 1 2 1 1 1 1 2 1 1 1 1 1 2 1 1 1 1 1 2 1 1 1 1 1 2 1 1 1 1 1 2 1   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 4 0 1 1 1 2 0 0 0 2 5 9 6 4 3 5 5 6 5 1 1 2 2 3 3 3 5 1 0 4 5 0 2 5 -1 3 -2 7 5 1 -2 2 2 2 7 5 5 5 5 1 5 1 5 1 7 4 17 7 39 -2 4 4 10 5 3 4 8 28 29 19 5 0 -1 0 4 0 1 4 1 3 -1 5 0 -1 0 0 0 1 -2 2 6 -2 1 -2 1 -3 -1 3 6 4 4 0 9 9 15 27 32 0 2 5 4 1 1 -2 2 1 1 -3 -1 3 6 4 4 4 0 9 9 15 27 32 0 2 5 4 1 1 -6 47 49 38 1 1 0 0 3 0 5 1 8 92 2 8 6 12 15 70 66 109 87 4 2 2 7 1 6 2 2 -1 3 3 10 3 0 7 6 2 8 7 4 11 12 2 7 1 -2 0 5 -1 3 6 6 6 3 -1 8 4 4 7 7 5 6 11 9 9 9 1 1 1 2 2 7 1 -2 0 5 -1 3 6 6 6 3 -1 8 4 4 7 7 5 6 11 9 9 9 1 1 1 2 2 7 1 -2 0 5 -1 3 6 6 6 3 -1 8 4 4 4 7 7 5 6 11 9 9 1 1 2 2 5 68 83 74 66 -1 2 6 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 3         5         1         0         4         5         0         2         5         -1         3         -2         7         5         1         -2         2         2         7         5         1         -2         2         2         7         5         1         -2         2         2         7         5         1         -2         2         2         7         5         1         -2         5         4         1         -1         0         0         0         1         1         -2         2         5         4         1         -1         0         0         0         5         1         8         92         2         8         2         1         1         5         3         1         1         0         0         0         0         0         2         2         2         8         6         12         1         1         5         3         <   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 5         5         1         5         1         7         4         17         7         39         -2         4         4         10         5         3         4         8         28         29           19         5         0         -1         0         4         0         1         4         1         3         -1         5         0         -1         0         0         1         -2         2         2         2         8         6         -1         0         0         5         1         8         92         2         8         2         1         1         5         3         0         5         1         8         92         2         8         2         1         1         5         3         1         0         0         5         1         8         92         2         8         2         1         1         5         3         1         1         1         5         6         6         1         2         8         6         12         1         1         1         1         1         1         1         1         1         1   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 19  |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 6   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 1       -6       47       49       38       1       1       0       3       0       5       1       8       92       2       8       2       1       1       5         3       5       0       1       1       8       0       6       4       5       3       2       8       6       12       15       70       66       109       87         4       2       2       7       16       2       -1       3       3       10       3       0       7       6       2       8       7       4       11       12         2       7       1       -2       0       5       -1       3       6       6       3       -1       8       4       4       7       5       6       11       9         95       46       2       20       25       28       3       11       3       13       7       6       7       4       3       0       1       -2       0       0       2       2       2       2       2       4       0       2       0       4       4       1       -9 <th></th> <td></td>   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 3         5         0         1         1         8         0         6         4         5         3         2         8         6         12         15         70         66         109         87           4         2         2         7         16         2         -1         3         3         10         3         0         7         6         2         8         7         4         11         12         2         7         1         -2         0         5         -1         3         6         6         3         -1         8         4         4         7         5         6         11         9           95         46         2         20         25         5         5         54         36         5         7         3         3         3         5         3         -9         0         0         0         -5         0         2         2         2         4         0         2         0         4         1         -9         8         3         4         6         5         14         7         7         90         4         10   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 2         7         1         -2         0         5         -1         3         6         6         3         -1         8         4         4         7         5         6         11         9           95         46         2         20         25         28         3         11         3         13         7         6         7         4         3         0         1         2         0         0           12         25         68         83         74         66         -1         2         6         2         5         5         54         36         5         7         3         3         3         5           3         -9         0         0         0         -5         0         2         2         2         4         0         2         0         4         4         1         -9         6           2         2         0         -2         1         -1         0         9         16         1         4         74         77         90         48           3         0         -1         1         2         -3   | 3  |    |         |          |        |         | 0       | 6  |    | 5  |    | 2  |    |    |        |         | 70     | 66     | 109 |    |
| 95  | 4  | 2  | 2       | 7        | 16     | 2       | -1      | 3  | 3  | 10 | 3  | 0  | 7  | 6  | 2      | 8       | 7      | 4      | 11  | 12 |
| 12       25       68       83       74       66       -1       2       6       2       5       5       54       36       5       7       3       3       3       5         3       -9       0       0       0       -5       0       2       2       2       2       4       0       2       0       4       4       1       -9       6         2       2       0       -2       -1       0       0       3       3       17       -1       0       9       8       3       4       6       5       14       7         0       5       1       4       8       6       0       7       2       1       -1       0       11       -6       1       4       74       77       90       48         3       0       -1       -1       1       2       -3       0       4       10       1       3       2       13       4       9       3       14       6       6         77       6       4       13       7       8       -1       9       8       8       14 <td< td=""><th>2</th><td>7</td><td>1</td><td>-2</td><td>0</td><td>5</td><td>-1</td><td>3</td><td>6</td><td>6</td><td>3</td><td>-1</td><td>8</td><td>4</td><td>4</td><td>7</td><td>5</td><td>6</td><td>11</td><td>9</td></td<>   | 2  | 7  | 1       | -2       | 0      | 5       | -1      | 3  | 6  | 6  | 3  | -1 | 8  | 4  | 4      | 7       | 5      | 6      | 11  | 9  |
| 3   | 95 | 46 | 2       | 20       | 25     | 28      | 3       | 11 | 3  | 13 | 7  | 6  | 7  | 4  | 3      | 0       | 1      | 2      | 0   | 0  |
| 2       2       0       -2       -1       0       0       3       3       17       -1       0       9       8       3       4       6       5       14       7         0       5       1       4       8       6       0       7       2       1       -1       0       11       -6       1       4       74       77       90       48         3       0       -1       -1       1       2       -3       0       4       10       1       3       2       13       4       9       3       14       6       6         77       6       4       13       7       8       -1       9       8       8       14       5       9       10       9       16       10       8       23       28         -3       1       6       4       2       -2       2       -2       -3       -15       -4       -2       2       -7       -7       -8       5       5       0       5         6       6       1       2       0       7       1       4       5       10       3  | 12 | 25 | 68      | 83       | 74     | 66      | -1      | 2  | 6  | 2  | 5  | 5  | 54 | 36 | 5      | 7       | 3      | 3      | 3   | 5  |
| 0       5       1       4       8       6       0       7       2       1       -1       0       11       -6       1       4       74       77       90       48         3       0       -1       -1       1       2       -3       0       4       10       1       3       2       13       4       9       3       14       6       6         77       6       4       13       7       8       -1       9       8       8       14       5       9       10       9       16       10       8       23       28         -3       1       6       4       2       -2       2       -2       -3       -15       -4       -2       2       -7       -7       -8       5       5       0       5         6       6       1       2       0       7       1       4       5       10       3       4       6       10       8       11       1       2       8       6         0       -5       0       1       1       -7       2       1       1       2       1   | 3  |    | 0       | 0        |        |         | 0       |    |    |    |    |    | 0  |    | 0      | 4       | 4      |        |     | 6  |
| 3       0       -1       -1       1       2       -3       0       4       10       1       3       2       13       4       9       3       14       6       6         77       6       4       13       7       8       -1       9       8       8       14       5       9       10       9       16       10       8       23       28         -3       1       6       4       2       -2       2       -2       -3       -15       -4       -2       2       -7       -7       -8       5       5       0       5         6       6       1       2       0       7       1       4       5       10       3       4       6       10       8       11       1       2       8       6         0       -5       0       1       1       -7       2       1       1       2       1       -3       1       0       1       0       0       1       6       -1         0       1       1       1       2       1       1       1       2       2       1  | 2  |    | 0       |          |        |         | 0       |    |    |    |    | 0  |    |    | 3      | 4       |        |        | 14  |    |
| 77       6       4       13       7       8       -1       9       8       8       14       5       9       10       9       16       10       8       23       28         -3       1       6       4       2       -2       2       -2       -3       -15       -4       -2       2       -7       -7       -8       5       5       0       5         6       6       1       2       0       7       1       4       5       10       3       4       6       10       8       11       1       2       8       6         0       -5       0       1       1       -7       2       1       1       2       1       -3       1       0       1       0       0       1       6       -1         0       1       1       1       2       1       -1       18       -4       3       -5       -1       3       1       2       11       5       5       5       6         0       6       1       -4       0       4       -2       2       3       6       3 <t< td=""><th>_</th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>   | _  |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| -3       1       6       4       2       -2       2       -2       -3       -15       -4       -2       2       -7       -7       -8       5       5       0       5         6       6       1       2       0       7       1       4       5       10       3       4       6       10       8       11       1       2       8       6         0       -5       0       1       1       -7       2       1       1       2       1       -0       1       0       0       1       6       -1         0       1       1       1       2       1       -1       18       -4       3       -5       -1       3       1       2       11       5       5       5       5       6         0       6       1       -4       0       4       -2       2       3       6       3       -1       3       3       2       1       2       2       1       6         3       -2       -4       0       0       3       3       3       5       2       0       2       5 <th></th> <td></td>  |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 6 6 1 2 0 7 1 4 5 10 3 4 6 10 8 11 1 2 8 6 0 -5 0 1 1 1 -7 2 1 1 1 2 1 2 1 -3 1 0 1 0 0 1 6 -1 0 1 1 1 1 2 1 1 8 -4 3 -5 -1 3 1 2 11 5 5 5 6 0 1 1 -4 0 4 -2 2 3 6 3 -1 3 3 2 1 2 2 1 6 3 -2 -4 0 0 3 0 3 0 3 3 5 2 0 2 5 4 3 -4 -4 -3 0 95 50 13 49 45 11 21 22 18 33 9 8 10 6 7 19 6 6 1 12 -2 5 0 -1 1 3 3 0 35 -2 5 -8 -1 6 11 2 7 10 11 13 15 5 3 1 1 1 1 2 2 1 4 5 -1 0 4 3 6 6 -4 2 3 3 5 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 0 -5 0 1 1 1 -7 2 1 1 2 1 -3 1 0 1 0 0 1 6 -1 0 1 6 -1 0 1 1 1 2 1 1 8 -4 3 -5 -1 3 1 2 11 5 5 5 6 6 0 6 1 -4 0 4 -2 2 3 6 3 -1 3 3 2 1 2 1 2 2 1 6 3 -2 -4 0 0 3 0 3 0 3 3 5 2 0 2 5 4 3 -4 -4 -3 0 95 50 13 49 45 11 21 22 18 33 9 8 10 6 7 19 6 6 1 12 -2 5 0 -1 1 3 3 0 35 -2 5 8 -1 6 11 2 7 10 11 13 15 5 3 1 1 1 1 2 2 1 4 5 -1 0 4 3 6 6 -4 2 3 3 5 5 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 0 1 1 1 2 1 18 -4 3 -5 -1 3 1 2 11 5 5 5 6 6 0 6 1 -4 0 4 -2 2 3 6 3 -1 3 3 2 1 2 2 1 6 3 -2 -4 0 0 3 0 3 3 5 2 0 2 5 4 3 -4 -4 -3 0 95 50 13 49 45 11 21 22 18 33 9 8 10 6 7 19 6 6 1 12 -2 5 0 -1 1 3 3 0 35 -2 5 -8 -1 6 11 2 7 10 11 13 15 5 3 1 1 1 1 2 1 2 1 4 5 -1 0 4 3 6 6 -4 2 3 3 5 5 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 0 6 1 -4 0 4 -2 2 3 6 3 -1 3 3 2 1 2 2 1 6 3 -2 -4 0 0 3 0 3 3 5 2 0 2 5 4 3 -4 -4 -3 0 95 50 13 49 45 11 21 22 18 33 9 8 10 6 7 19 6 6 1 12 -2 5 0 -1 1 3 0 0 35 -2 5 -8 -1 6 11 2 7 10 11 13 15 5 3 1 1 1 1 2 1 2 1 4 5 -1 0 4 3 6 6 -4 2 3 3 5 5 2 1 1 1 1 1 1 2 1 1 2 1 1 1 1 1 1 1   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 3       -2       -4       0       0       3       0       3       3       5       2       0       2       5       4       3       -4       -4       -3       0         95       50       13       49       45       11       21       22       18       33       9       8       10       6       7       19       6       6       1       12         -2       5       0       -1       1       3       0       35       -2       5       -8       -1       6       11       2       7       10       11       13       15         5       3       1       1       1       2       1       4       5       -1       0       4       3       6       6       -4       2       3       3       5         2       1       0       -1       -1       -1       1       1       -5       0       0       3       5       -7       -1       0       -2       -2       1         1       1       0       -1       0       2       1       2       1       4       2       4   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 95       50       13       49       45       11       21       22       18       33       9       8       10       6       7       19       6       6       1       12         -2       5       0       -1       1       3       0       35       -2       5       -8       -1       6       11       2       7       10       11       13       15         5       3       1       1       1       2       1       4       5       -1       0       4       3       6       6       -4       2       3       3       5         2       1       0       -1       -1       -1       2       1       -1       1       -5       0       0       3       5       -7       -1       0       -2       -2       1         1       1       0       -1       0       2       1       2       1       4       2       4       -2       2       1       6       0       2       -2       1         53       -8       2       6       4       8       16       3       2       -5   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| -2       5       0       -1       1       3       0       35       -2       5       -8       -1       6       11       2       7       10       11       13       15         5       3       1       1       1       2       1       4       5       -1       0       4       3       6       6       -4       2       3       3       5         2       1       0       -1       -1       -1       2       1       -1       1       -5       0       0       3       5       -7       -1       0       -2       -2       1         1       1       0       -1       0       2       1       2       1       4       2       4       -2       2       1       6       0       2       -2       1         53       -8       2       6       4       8       16       3       2       -5       0       3       3       35       -2       2       0       0       6       1         93       47       7       41       51       8       9       22       11       13   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 5       3       1       1       1       2       1       4       5       -1       0       4       3       6       6       -4       2       3       3       5         2       1       0       -1       -1       -1       2       1       -1       1       -5       0       0       3       5       -7       -1       0       -2       -2         1       1       0       -1       0       2       1       2       1       4       2       4       -2       2       1       6       0       2       -2       1         53       -8       2       6       4       8       16       3       2       -5       0       3       3       35       -2       2       0       0       6       1         93       47       7       41       51       8       9       22       11       13       7       3       12       8       4       4       6       3       11       9         4       -6       -1       2       2       -10       0       3       4       7       5  |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 2     1     0     -1     -1     -1     2     1     -1     1     1     -5     0     0     3     5     -7     -1     0     -2     -2       1     1     0     -1     0     2     1     2     1     4     2     4     -2     2     1     6     0     2     -2     1       53     -8     2     6     4     8     16     3     2     -5     0     3     3     35     -2     2     0     0     6     1       93     47     7     41     51     8     9     22     11     13     7     3     12     8     4     4     6     3     11     9       4     -6     -1     2     2     -10     0     3     4     7     5     2     5     6     8     5     4     4     3     7  |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 1     1     0     -1     0     2     1     2     1     4     2     4     -2     2     1     6     0     2     -2     1       53     -8     2     6     4     8     16     3     2     -5     0     3     3     35     -2     2     0     0     6     1       93     47     7     41     51     8     9     22     11     13     7     3     12     8     4     4     6     3     11     9       4     -6     -1     2     2     -10     0     3     4     7     5     2     5     6     8     5     4     4     3     7   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 53     -8     2     6     4     8     16     3     2     -5     0     3     3     35     -2     2     0     0     6     1       93     47     7     41     51     8     9     22     11     13     7     3     12     8     4     4     6     3     11     9       4     -6     -1     2     2     -10     0     3     4     7     5     2     5     6     8     5     4     4     3     7  |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 93     47     7     41     51     8     9     22     11     13     7     3     12     8     4     4     6     3     11     9       4     -6     -1     2     2     -10     0     3     4     7     5     2     5     6     8     5     4     4     3     7  |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
| 4 -6 -1 2 2 -10 0 3 4 7 5 2 5 6 8 5 4 4 3 7   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
|   |    |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |
|   | -1 |    |         |          |        |         |         |    |    |    |    |    |    |    |        |         |        |        |     |    |

| 3  | 2  | 1  | 2  | 3  | 3  | 1  | 1  | 2  | 1  | 2  | 1  | 0  | 0  | 5  | 10 | 23 | 29 | 14 | 16 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| -1 | 11 | 1  | 3  | 5  | 11 | -1 | 11 | 3  | 5  | 4  | -2 | 35 | 17 | 2  | 9  | 73 | 74 | 74 | 45 |
| 5  | 4  | 1  | 1  | 2  | 5  | 0  | 42 | 7  | 18 | 0  | 1  | 5  | 10 | 8  | 11 | 5  | 5  | 9  | 11 |
| -1 | -3 | 2  | 11 | 7  | -3 | -1 | 0  | -4 | 4  | -5 | -3 | -1 | -3 | -2 | 8  | 1  | 2  | -7 | -1 |
| 6  | -2 | 38 | 57 | 79 | 2  | 13 | 1  | -7 | -3 | -1 | -1 | 25 | 16 | -6 | -3 | 18 | 24 | 45 | 41 |
| 19 | 9  | 1  | 4  | 5  | 33 | 0  | 3  | 9  | 22 | 8  | 4  | 47 | 42 | 13 | 14 | 73 | 62 | 94 | 75 |

| CMGC   | CMGC  | CMGC  | CMGC  | CMGC  | CMGC  | CMGC   | CMGC   | CMGC   | CMGC   | CMGC   | CMGC  | CMGC   | CMGC  | CMGC   | CMGC  | CMGC  | CMGC   | CMGC  | CMGC   |
|--|---|---|---|---|---|--|--|--|--|--|---|--|---|--|---|---|--|---|--|
| CDK3/cyclinE   | CDK6/cyclinD3   | CDK4/cyclinD  | JNK2  | Ρ38α  | Рзвв  | P385   | Ρ38γ   | 4 6 9 WAPK1  | MAPK3  | GSK3A  | GSK3B   | SRPK1  | MSSK1   | ∾ ∞ CLK3   | CLK2  | HIPK1   | HIPK4  | DYRK1B  | DYRK1A   |
| 5<br>1<br>6<br>5<br>2<br>3<br>-4<br>99<br>1<br>0<br>24<br>40 | 0<br>53<br>3<br>3<br>10<br>4<br>-5<br>91<br>4<br>0<br>0 | 1<br>15<br>2<br>3<br>7<br>2<br>1<br>69<br>3<br>3<br>5 | 15<br>5<br>-3<br>14<br>4<br>3<br>1<br>7<br>3<br>2<br>5<br>3 | 28<br>4<br>10<br>5<br>5<br>1<br>2<br>7<br>7<br>3<br>4 | 18<br>2<br>0<br>6<br>0<br>2<br>1<br>5<br>1<br>2<br>3<br>6 | 5<br>2<br>-2<br>5<br>6<br>2<br>-2<br>1<br>1<br>4<br>1<br>2 | λ8Ed 2 2 -1 2 3 2 0 0 2 1 2 5                    | 3<br>35<br>40<br>1<br>1<br>3<br>35<br>0            | 1<br>1<br>2<br>20<br>22<br>2<br>3<br>3<br>22<br>2<br>4 | 15<br>13<br>34<br>17<br>11<br>6<br>44<br>53<br>4<br>-2<br>42<br>26 | 17<br>18<br>36<br>16<br>10<br>8<br>47<br>44<br>2<br>2<br>35<br>17 | 1 -2 1 -4 -3 0 -3 3 -1 -1 3 0 0                        | 0<br>0<br>1<br>-1<br>0<br>-4<br>3<br>1<br>-3<br>4   | 1<br>6<br>14<br>5<br>-1<br>2<br>3<br>2<br>9<br>2   | 7<br>10<br>3<br>2<br>9<br>2<br>10<br>7<br>2<br>5<br>28<br>9 | 0<br>13<br>11<br>2<br>7<br>5<br>6<br>11<br>3<br>-1<br>8<br>20 | 11<br>14<br>4<br>4<br>7<br>4<br>0<br>6<br>2<br>2<br>21<br>36 | 12<br>7<br>4<br>5<br>4<br>4<br>-1<br>6<br>3<br>0<br>28<br>4 | 19<br>6<br>8<br>7<br>5<br>-1<br>2<br>7<br>2<br>22<br>6 |
| 5<br>3<br>-2<br>57<br>1<br>0<br>-3<br>-2<br>-2<br>2          | 11<br>3<br>-2<br>37<br>1<br>0<br>4<br>0<br>8<br>15      | 6<br>2<br>7<br>17<br>2<br>-1<br>4<br>7<br>1<br>10     | 8<br>4<br>3<br>1<br>2<br>3<br>5<br>11<br>5<br>8             | 7<br>4<br>7<br>5<br>3<br>5<br>5<br>7<br>2<br>17       | 7<br>4<br>2<br>7<br>2<br>0<br>34<br>6<br>1<br>16          | 3<br>5<br>1<br>3<br>2<br>6<br>6<br>-2<br>6                 | 1<br>6<br>0<br>2<br>1<br>4<br>6<br>-1            | 5<br>9<br>5<br>3<br>2<br>27<br>6<br>9<br>0         | 4<br>5<br>4<br>1<br>3<br>15<br>3<br>8<br>0<br>4        | 12<br>0<br>50<br>31<br>5<br>5<br>2<br>10<br>3<br>6                 | 12<br>1<br>47<br>24<br>5<br>5<br>3<br>9<br>5<br>11                | 0<br>-4<br>-3<br>-6<br>-4<br>-3<br>3<br>-2<br>-1<br>-3 | -2<br>2<br>0<br>-3<br>1<br>2<br>-1<br>0<br>2        | 1<br>2<br>0<br>-1<br>2<br>2<br>3<br>3<br>2<br>1    | 5<br>3<br>4<br>3<br>4<br>4<br>7<br>8<br>21<br>1             | 9<br>11<br>8<br>0<br>1<br>-3<br>2<br>9<br>4                   | 8<br>7<br>2<br>-1<br>4<br>4<br>8<br>22<br>6<br>11            | 2<br>3<br>0<br>2<br>1<br>3<br>3<br>7<br>-3                  | 4<br>6<br>3<br>7<br>4<br>13<br>4<br>6<br>2             |
| 50<br>-2<br>-4<br>2<br>30<br>-1<br>64<br>2<br>3<br>-2        | 75<br>0<br>3<br>6<br>21<br>2<br>56<br>4<br>0            | 32<br>3<br>3<br>29<br>1<br>29<br>4<br>2               | 4<br>75<br>34<br>1<br>4<br>7<br>2<br>6<br>8<br>6            | 3<br>91<br>8<br>5<br>14<br>91<br>0<br>8<br>3<br>6     | 8<br>81<br>6<br>3<br>6<br>59<br>4<br>7<br>2<br>1          | -1<br>22<br>5<br>3<br>3<br>2<br>0<br>4<br>0<br>5           | -2<br>9<br>4<br>1<br>2<br>1<br>1<br>3<br>1<br>4  | -2<br>5<br>6<br>4<br>5<br>2<br>1<br>5<br>2<br>4    | 1<br>6<br>6<br>4<br>3<br>5<br>-1<br>5<br>1             | 7<br>13<br>2<br>11<br>69<br>4<br>68<br>11<br>21                    | 9<br>34<br>1<br>12<br>67<br>6<br>56<br>9<br>16<br>54              | 1<br>-1<br>3<br>5<br>1<br>1<br>-1<br>-2<br>-2<br>-3    | -1<br>0<br>-1<br>1<br>10<br>0<br>0<br>1<br>-1<br>-1 | 1<br>1<br>2<br>6<br>8<br>2<br>1<br>4<br>2          | 2<br>2<br>83<br>49<br>2<br>4<br>11<br>6                     | -1<br>0<br>3<br>23<br>0<br>5<br>3<br>28<br>5<br>12            | 3<br>7<br>5<br>27<br>10<br>2<br>2<br>79<br>8<br>10           | 13<br>0<br>1<br>33<br>22<br>4<br>6<br>14<br>0               | 11<br>3<br>4<br>35<br>23<br>4<br>4<br>19<br>0<br>4     |
| 28<br>17<br>-1<br>1<br>2<br>4<br>-2<br>-1<br>60              | 10<br>59<br>4<br>4<br>2<br>2<br>2<br>1<br>71<br>2       | 19<br>15<br>4<br>2<br>2<br>3<br>4<br>1<br>24<br>0     | 3<br>6<br>1<br>4<br>5<br>1<br>7<br>53<br>2<br>7             | 4<br>-2<br>7<br>6<br>8<br>3<br>15<br>93<br>-2<br>9    | 3<br>3<br>4<br>7<br>2<br>2<br>8<br>62<br>7<br>5           | 3<br>-4<br>2<br>3<br>2<br>0<br>5<br>-3<br>-4<br>-1         | 2<br>0<br>2<br>1<br>2<br>0<br>5<br>-1<br>-2<br>0 | 3<br>-3<br>5<br>8<br>3<br>1<br>7<br>-3<br>-5<br>-3 | 3<br>-3<br>4<br>4<br>0<br>1<br>5<br>0<br>-1            | 37<br>20<br>0<br>8<br>4<br>4<br>6<br>6<br>23<br>9                  | 33<br>17<br>2<br>5<br>5<br>7<br>4<br>14<br>38<br>8                | 1<br>2<br>-1<br>3<br>-1<br>0<br>0<br>5<br>1<br>2       | -1<br>0<br>-1<br>3<br>1<br>-1<br>0<br>1<br>0        | 32<br>1<br>1<br>1<br>2<br>-1<br>12<br>3<br>3<br>14 | 23<br>4<br>1<br>3<br>0<br>3<br>63<br>1<br>4<br>37           | 16<br>3<br>-1<br>5<br>2<br>4<br>24<br>4<br>16<br>7            | 20<br>5<br>-1<br>32<br>2<br>5<br>30<br>3<br>10<br>17         | 8<br>14<br>3<br>2<br>1<br>1<br>12<br>6<br>5<br>19           | 8<br>10<br>2<br>3<br>2<br>1<br>26<br>6<br>5<br>26      |

| 1        | 3        | 5               | 4       | 7        | 4       | 5       | 3      | 5       | 1      | 14              | 10       | -2       | 0        | 3       | 14      | 7        | 8               | 5       | 11      |
|----------|----------|-----------------|---------|----------|---------|---------|--------|---------|--------|-----------------|----------|----------|----------|---------|---------|----------|-----------------|---------|---------|
| -2       | 5        | 2               | 9       | 11       | 9       | 5       | 3      | 8       | 3      | 19              | 12       | 0        | -2       | 2       | 22      | 8        | 3               | 44      | 49      |
| -1       | 10       | 9               | 14      | 11       | 9       | 9       | 4      | 12      | 4      | 21              | 17       | 16       | 4        | 5       | 79      | 8        | 6               | 10      | 15      |
| 1        | 10       | 13              | 6       | 9        | 6       | 9       | 5      | 6       | 4      | 55              | 47       | 0        | 0        | 5       | 10      | 6        | 5               | 8       | 17      |
| -2       | 4        | 3               | 3       | 5        | 5       | 2       | 3      | 3       | 4      | 5               | 6        | -3       | 0        | 1       | 2       | 3        | 9               | 2       | 2       |
| -1       | -1       | 2               | 3       | 11       | 7       | 5       | 4      | 6       | 6      | 4               | 3        | -3       | 1        | 1       | 1       | 1        | 0               | -1      | 3       |
| -2<br>-1 | -1<br>2  | 3<br>4          | 7<br>5  | 11<br>13 | 7<br>8  | 3<br>5  | 3<br>3 | 7<br>5  | 5<br>3 | 49<br>15        | 52<br>12 | -3<br>4  | -2<br>-1 | 0<br>2  | 18<br>3 | 5<br>0   | 3<br>0          | 1<br>5  | 0       |
| 1        | 5        | 0               | 6       | -1       | -1      | -4      | -2     | -6      | 0      | 72              | 49       | -4<br>3  | 2        | 5       | 2       | 4        | 2               | 9       | 9<br>17 |
| -1       | 4        | 4               | 2       | 6        | 4       | 4       | 1      | 4       | 3      | 14              | 13       | 2        | 1        | 3       | 3       | 8        | 6               | 4       | 7       |
| -2       | 2        | 2               | 6       | 8        | 5       | 6       | 3      | 5       | 3      | 6               | 6        | -5       | -2       | 2       | 1       | -1       | 3               | -2      | 5       |
| 0        | 4        | 5               | 5       | 7        | 3       | 4       | 2      | 5       | 1      | 4               | 4        | -3       | -3       | 3       | 4       | 5        | 3               | 2       | 5       |
| 0        | 1        | 4               | 5       | 7        | 4       | 5       | 4      | 7       | 6      | 50              | 42       | -3       | -1       | 10      | 10      | 10       | 3               | 55      | 72      |
| -1       | 1        | -2              | 2       | 8        | 2       | 0       | 0      | 0       | 4      | -1              | 0        | 0        | 3        | -2      | -1      | 3        | 7               | 2       | 2       |
| -1       | 2        | 1               | 3       | 8        | 2       | 3       | 2      | 4       | 1      | 47              | 41       | -2       | -3       | 1       | 1       | 2        | 4               | 4       | 5       |
| 1        | 11       | 6<br>1 <i>E</i> | 4       | 9<br>6   | 6<br>6  | 6       | 4<br>4 | 6       | 4      | 5<br>1 <i>E</i> | 4        | -3       | -2<br>1  | 3       | 1       | 7        | 9               | 3<br>1  | 6       |
| 6<br>7   | 30<br>16 | 15<br>5         | 3<br>6  | 7        | 5       | 4<br>6  | 2      | 6<br>5  | 6<br>7 | 15<br>42        | 12<br>24 | -2<br>2  | 1<br>2   | 1<br>13 | 2<br>29 | 17<br>39 | 13<br>23        | 32      | 6<br>45 |
| ,<br>19  | 29       | 25              | 2       | 4        | 1       | 4       | 1      | 2       | 1      | 61              | 55       | 1        | 5        | 22      | 37      | 39<br>8  | 3               | 15      | 38      |
| 7        | 13       | 14              | 1       | 9        | 5       | 0       | 0      | 2       | 2      | 71              | 65       | -5       | 2        | 5       | 26      | 1        | 1               | 8       | 17      |
| 1        | -3       | -3              | 3       | 39       | 32      | 2       | 3      | 1       | 2      | 3               | 2        | 6        | 40       | -3      | 1       | -2       | 66              | -2      | -1      |
| -3       | 9        | 6               | 7       | 16       | 7       | 5       | 1      | 3       | 3      | 10              | 10       | 0        | 1        | 4       | 2       | 18       | 9               | 5       | 8       |
| 2        | 3        | 4               | 7       | 9        | 5       | 4       | 1      | 1       | 1      | 7               | 8        | -3       | 0        | 2       | 4       | 7        | 5               | 3       | 5       |
| 0        | 3        | 2               | 0       | 1        | -1      | -1      | 0      | 0       | 2      | 2               | 2        | 3        | 4        | 1       | 1       | 0        | 3               | -1      | -2      |
| 0        | 4        | 5               | 2       | 7        | 8       | 4       | 3      | 3       | 3      | 10              | 9        | -1       | 2        | 2       | 3       | 5        | 8               | 2       | 3       |
| 6        | 29       | 8               | 0       | 0        | 3       | -1      | 1      | 0       | -1     | 17<br>0         | 17       | -1       | -4<br>1  | 0       | -2      | 5        | 2<br>-1         | 5<br>-1 | 3       |
| -3<br>8  | -3<br>7  | 2<br>4          | 5<br>5  | 12<br>7  | 9<br>9  | 5<br>2  | 3<br>1 | 5<br>13 | 3<br>7 | 14              | 0<br>28  | 0<br>2   | -1<br>3  | 1<br>3  | 0<br>22 | -3<br>27 | 9               | 11      | 2<br>30 |
| -4       | -5       | -1              | 1       | 5        | 5       | 4       | 3      | 4       | 4      | -1              | -2       | -2       | -1       | -4      | -1      | -5       | 3               | -4      | -3      |
| -2       | -1       | 2               | 1       | 1        | 0       | 1       | 1      | 3       | 2      | 4               | 3        | -2       | 0        | -1      | 2       | 2        | 2               | 1       | 4       |
| -1       | -1       | 2               | 3       | 0        | 2       | -2      | 0      | 1       | 1      | 0               | 0        | 0        | -2       | 2       | -1      | 2        | 3               | -1      | 0       |
| 9        | 59       | 11              | 13      | 11       | 10      | 5       | 4      | 6       | 4      | 14              | 12       | 0        | -1       | 4       | 30      | 6        | 6               | 16      | 23      |
| -1       | -1       | 0               | 9       | 3        | 5       | 1       | -1     | 3       | 5      | 10              | 10       | 2        | 2        | 1       | 5       | 5        | 18              | 2       | 1       |
| 16       | 66       | 25              | 12      | 7        | 8       | 6       | 4      | 6       | 6      | 28              | 25       | 1        | 0        | 2       | 22      | 6        | 3               | 12      | 14      |
| 29<br>-2 | 21<br>-1 | 10              | 6<br>2  | 9<br>4   | 10<br>5 | 7<br>-1 | 3<br>2 | 5<br>2  | 4<br>0 | 6<br>3          | 5<br>2   | -3<br>-4 | -1       | 3<br>-1 | 3<br>0  | 2<br>1   | 3<br>3          | 2<br>1  | 7       |
| -2<br>-4 | -1<br>-4 | 3<br>4          | 1       | 3        | 5<br>5  | 2       | 3      | 5       | 3      | 3<br>4          | 4        | -4<br>-2 | 0<br>-1  | 0       | -2      | 0        | -2              | -1      | 2<br>5  |
| 1        | 7        | 8               | 9       | 11       | 6       | 9       | 4      | 5       | 2      | 10              | 9        | -5       | 0        | 10      | 5       | 8        | 11              | 4       | 11      |
| 89       | 59       | 55              | 8       | 2        | 9       | 1       | 1      | 42      | 17     | 65              | 67       | -2       | -2       | 9       | 62      | 13       | 5               | 1       | 8       |
| -2       | -1       | 2               | 2       | 9        | 5       | 4       | 3      | 5       | 3      | 1               | 1        | -3       | -1       | 1       | 1       | 0        | 3               | -1      | 3       |
| -1       | 0        | 4               | 10      | 20       | 25      | 4       | 2      | 5       | 0      | 4               | 6        | -1       | -2       | 3       | 1       | -2       | 4               | -1      | 1       |
| -1       | 1        | 2               | 2       | 5        | 2       | 0       | 0      | 0       | 0      | 8               | 6        | -4       | -4       | 0       | 1       | -1       | 11              | 2       | 3       |
| 84       | 57       | 28              | 4       | 4        | 6       | 3       | 2      | 5       | 5      | 61              | 54       | 0        | 1        | 2       | 2       | 10       | 8               | 4       | 7       |
| 3        | 31       | 8               | 10      | 7<br>14  | 6       | 7<br>1  | 4      | 7<br>1  | 5      | 10              | 8        | -4<br>2  | 0        | 3       | 14<br>2 | 8<br>5   | 11              | 18      | 34      |
| 3 -2     | -1<br>2  | 2<br>6          | 3<br>1  | 7        | 8<br>2  | 4<br>0  | 2<br>0 | 4       | 1<br>2 | 3<br>85         | 0<br>81  | -3<br>-2 | 1<br>-1  | 2<br>2  | 2<br>13 | -2       | 5<br>1          | 2<br>11 | 3<br>20 |
| -2<br>-1 | 5        | 3               | 72      | 9        | 5       | 4       | 2      | 6       | 6      | 6               | 6        | 6        | 4        | 8       | 41      | 24       | 23              | 33      | 23      |
| -3       | 0        | 1               | 4       | 47       | 11      | -2      | 1      | 0       | 2      | -1              | -1       | -1       | -2       | 0       | -2      | -1       | 1               | 1       | 16      |
| 1        | 5        | 4               | 2       | 6        | 6       | 1       | 2      | 5       | 6      | 8               | 8        | 1        | -4       | 6       | 1       | 7        | 2               | 7       | 9       |
| -2       | 1        | 0               | 3       | 10       | 7       | 1       | 2      | 2       | 5      | 4               | 1        | 0        | 1        | 2       | 0       | 3        | 1               | 1       | 4       |
| 1        | 3        | 2               | 4       | 13       | 3       | 2       | 2      | 4       | 1      | 3               | 0        | -4       | 0        | 3       | 3       | 4        | 19              | 2       | 3       |
| -3       | 0        | 2               | 7       | 7        | 5       | 6       | 3      | 5       | 5      | 4               | 4        | 0        | -2       | 2       | 0       | 1        | 5               | -1      | 7       |
| 0        | -1<br>1  | 2               | 5       | 9        | 6       | 3       | 3      | 3       | 0      | 3               | 2        | -4       | -1<br>4  | 11      | 1       | 3        | 6<br>1 <i>5</i> | 1       | 3       |
| -1<br>-1 | -1<br>-2 | 1<br>3          | 18<br>3 | 7<br>4   | 3<br>2  | 3<br>0  | 3<br>1 | 7<br>2  | 4<br>1 | 2<br>8          | 4<br>5   | -2<br>-6 | 1<br>-3  | 1<br>1  | 45<br>4 | 22<br>0  | 15<br>-1        | 9<br>1  | 10<br>3 |
| 0        | 0        | 2               | 13      | 80       | 55      | 7       | 6      | 7       | 5      | 4               | 4        | -0<br>-1 | -3<br>0  | 2       | 3       | 4        | 5               | 2       | 6       |
| 0        | -1       | 3               | 4       | 8        | 7       | 3       | 2      | 3       | 0      | 11              | 9        | -5       | -1       | 1       | 1       | 2        | -1              | 0       | 4       |
| 2        | 7        | 11              | 9       | 9        | 4       | 6       | 3      | 6       | 1      | 16              | 15       | 0        | 1        | 4       | 93      | 22       | 14              | 8       | 13      |

| 0 4 7 5 6 7 4 2 6 5 12 11 2 3 2 2 3 2 3 3 0 0 -1 -3 -2 1 -2 8 8 1 -1 11 3 5                                |                |          |
|--|----------------|----------|
| / 3 3 0 0 -1 -3 -/ 1 -/ 8 8 1 -1 11 3 5  | 5 17 12        | 2<br>23  |
| 0 0 1 1 90 30 -3 -1 -2 -1 1 0 1 0 0 -1 -   |                | 2        |
| 6 6 10 6 10 11 7 4 8 6 <mark>67 60 -1 -1</mark> 3 29 9   | 5 36           | 38       |
| -1 2 2 3 64 51 0 3 1 -1 4 6 -2 10 0 3 1  |                | 3        |
| 1 -1 5 7 48 9 0 0 1 2 4 1 -5 -1 1 3 -  |                | 0        |
| -3 1 4 6 5 3 5 4 -27 2 58 51 -3 -1 2 1 3<br>-1 0 3 0 0 5 -3 -1 0 2 3 4 -4 -1 0 -1 -                        |                | 8<br>-4  |
| -2 0 5 1 6 7 3 4 6 4 6 5 -2 1 1 0 6  |                | 5        |
| -1 0 4 4 84 27 4 5 6 7 3 3 -1 -1 -4 0 -2   |                | 0        |
| -3 -5 -1 2 4 1 2 3 2 2 0 0 -1 -1 -4 1  |                | 0        |
| -1 1 3 2 7 5 1 3 4 2 3 3 <del>-3</del> 1 0 1 3   |                | 4        |
| -5 0 3 3 <del>79 61</del> 1 2 3 2 1 -1 -1 -2 0 -3 (  |                | 3        |
| 1 2 3 8 14 5 6 6 6 5 1 3 -2 0 1 2 3 -1 -1 7 12 9 4 6 7 8 3 56 47 -2 0 1 6 1                                |                | 5<br>17  |
| 1 -3 -2 3 4 1 2 1 3 2 -1 -3 -3 1 -1 13 2   |                | 15       |
|  | 2 6 3          | 2        |
| 0 3 4 2 4 7 2 2 3 4 7 6 1 0 1 2 2  | 2 2 1          | 2        |
| -1 -1 2 1 1 3 -1 1 2 2 1 0 -2 -2 0 -3 -  |                | 3        |
| -1 1 3 -2 0 0 -2 0 0 1 22 19 -3 -1 1 1 3   | _              | 2        |
| 20 15 18 11 8 5 8 2 8 4 81 73 4 3 53 98 9  |                | 61       |
| 0 2 7 10 93 81 4 4 16 11 6 5 -2 -1 0 0 -3 3 9 11 6 8 6 2 3 3 3 12 9 -4 0 -1 14 1                           |                | 4<br>11  |
| -2 -4 -2 14 86 76 2 2 6 3 -2 -2 -2 -5 -1 -   |                | -2       |
| -2 -1 5 6 <mark>71</mark> 20 5 4 9 5 3 2 -2 -1 1 0 0   |                | 4        |
| -1 2 8 6 <mark>84 71</mark> 5 5 7 4 8 7 -2 2 1 0 2   |                | 5        |
| -3 -4 2 13 <mark>92 77</mark> 3 5 12 8 7 7 -4 0 1 4 2  |                | 2        |
| 0 3 2 37 86 53 4 3 6 7 5 7 3 2 3 2 8   |                | 4        |
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| -3 -2 4 2 8 4 3 3 6 4 3 2 -4 0 2 0 1 0 4 1 13 6 3 2 1 4 1 1 1 -3 8 13 89 6                                 |                | 3<br>20  |
| -1 0 3 8 10 4 7 5 6 6 3 3 -2 1 0 5 -   |                | 5        |
| -3 1 2 3 5 5 1 2 5 4 <mark>78 76 -1 0 2 1 2</mark>   |                | 5        |
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| 6 22 11 13 12 6 5 5 7 4 16 13 -2 0 2 4 3   |                | 3        |
| 0 1 2 1 2 0 1 1 2 2 6 6 -1 1 0 2 2   |                | 7        |
| 0 5 6 5 8 5 6 3 6 3 14 9 -4 -1 2 0 1<br>3 0 5 0 -3 -2 -6 -3 -7 -1 20 18 0 -1 10 4 2                        | 1 3 1<br>2 3 9 | 5        |
| 0 3 3 1 1 4 0 0 0 4 3 4 2 1 9 40 1   |                | 11       |
| -2 2 3 6 10 5 4 2 4 1 7 4 -3 0 5 28 3  |                | 9        |
| -1 -2 2 3 <mark>67</mark> 46 2 3 -9 2 18 14 9 6 2 2 6  |                | 1        |
| -1 -3 1 6 <mark>89</mark> 43 0 2 3 3 2 2 <b>0</b> 1 0 1 -  | 2 1 1          | 1        |
| 1 3 4 9 21 5 7 6 7 7 3 2 -2 -2 1 6 (   |                | 4        |
| 2 5 4 3 6 4 2 2 4 7 54 55 2 3 -2 29 2  |                | 1        |
| -1 1 1 6 <mark>74</mark> 13 3 1 4 2 3 2 -4 0 2 2 0<br>2 -6 -2 -3 -5 1 -4 -3 -5 0 9 14 7 3 -1 1 3           |                | 5<br>4   |
| 2 6 1 -5 9 5 0 -2 -5 0 3 3 1 -7 1 -1 1   |                | 3        |
| 0 9 3 4 5 -1 3 1 3 1 10 8 -1 1 3 2 5   |                | 4        |
| 3 13 8 4 6 4 3 2 5 3 81 66 -5 0 3 3 4  |                | 4        |
| <u>-1 -6 4 12 <mark>95</mark> 54 6 5 10 6 3 4 -2 -1 1 5 2</u>  | 2 1 0          | 4        |
| 96     59     52     9     6     10     5     3     55     26     76     77     2     2     4     37     4 |                | 10       |
| -2 5 3 7 10 8 4 3 5 2 4 3 -6 -2 1 3 (  |                | 3        |
| -1 7 5 7 12 9 4 3 6 5 43 34 1 1 4 7 9 22 23 14 9 5 5 2 1 2 1 38 33 -3 -2 6 6 2                             |                | 13<br>12 |
| 1 2 2 6 39 34 2 2 -1 2 1 2 0 9 3 -1 4  |                | 2        |
| -2 4 6 5 22 17 6 4 8 7 9 11 0 0 2 0 3  |                | 7        |
| -1 -2 5 12 <mark>95</mark> 68 3 4 7 3 5 4 -2 -1 1 0 2  |                | 4        |
| 0 -1 0 -1 0 2 0 0 -2 2 8 10 3 2 1 0 2  | 2 2 1          | 0        |

| 3        | 0        | -1      | 3        | 8        | 1        | 5      | 4      | 4       | 4       | 64       | 62       | -1       | 1        | -2       | 19      | 12      | 8       | 53       | 62       |
|----------|----------|---------|----------|----------|----------|--------|--------|---------|---------|----------|----------|----------|----------|----------|---------|---------|---------|----------|----------|
| 4        | 1        | 3       | 7        | 9        | 7        | 7      | 3      | 8       | 5       | 70       | 68       | -2       | -1       | 3        | 17      | 17      | 11      | 56       | 65       |
| 10       | 71       | 37      | -3       | 0        | 3        | -2     | -2     | -7      | 0       | 78       | 69       | 2        | 2        | 4        | 3       | 6       | 9       | 22       | 21       |
| -1       | 2        | 2       | 1        | 3        | 6        | 0      | 2      | 0       | 3       | 5        | 6        | 1        | 2        | 1        | 1       | 5       | 14      | 1        | 1        |
| 10       | 10       | 10      | 6        | 8        | 26       | 3      | 0      | 2       | 4       | 72       | 69       | 4        | 1        | 10       | 11      | 14      | 28      | 9        | 21       |
| -1       | 2        | 4       | 4        | 5        | 5        | 2      | 2      | 6       | 3       | 6        | 4        | -1       | 0        | 0        | -2      | -2      | 7       | 0        | 2        |
| 1        | -9       | -4      | -1       | -1       | 1        | -2     | -1     | 0       | 2       | 35       | 32       | 4        | 0        | -3       | 6       | 0       | 4       | -1       | 2        |
| 5        | 46       | 7       | 4        | 6        | -1       | 5      | 1      | 3       | 1       | 9        | 8        | -2       | -1       | 3        | 0       | 8       | 4       | 3        | 6        |
| -3       | -4       | 2       | 3        | 5        | 3        | 3      | 2      | 4       | 2       | 5        | 5        | -2       | -1       | 1        | 2       | 0       | 0       | 0        | 4        |
| -2       | -1       | 0       | 9        | 13<br>13 | 3<br>2   | 5      | 3      | 6<br>7  | 5       | 3        | 2        | -2<br>-  | 0<br>-1  | -2<br>1  | 1       | -2<br>- | 3<br>7  | -1       | 3        |
| -3<br>89 | 6<br>57  | 9<br>57 | 9<br>11  | 13<br>8  | 9        | 5<br>6 | 5<br>3 | 38      | 4<br>16 | 13<br>76 | 14<br>78 | -5<br>3  | 0        | 1<br>8   | 2<br>66 | 5<br>34 | 7<br>18 | 4<br>16  | 2<br>16  |
| -2       | 2        | 2       | 4        | 74       | 61       | 4      | 2      | 4       | 4       | 2        | 3        | 1        | 3        | 2        | 0       | 2       | 4       | 1        | 3        |
| 3        | 5        | 3       | 7        | 8        | 5        | 5      | 2      | 1       | -2      | 9        | 11       | -1       | 0        | 13       | 86      | 48      | 66      | 38       | 41       |
| -1       | 5        | 3       | 2        | 1        | 2        | -1     | 0      | 2       | 1       | 5        | 4        | -2       | -1       | -1       | -3      | 0       | 3       | 0        | 2        |
| -2       | 4        | 1       | 7        | 7        | 2        | 3      | 1      | 3       | 3       | 6        | 4        | -1       | -2       | 2        | 0       | 0       | 1       | 1        | 3        |
| -1       | 0        | 4       | 5        | 10       | 5        | 6      | 6      | 6       | 6       | 5        | 4        | -2       | -1       | 1        | 3       | 4       | 4       | 2        | 7        |
| -1       | 5        | 5       | 1        | -1       | -1       | 1      | 1      | 2       | 3       | 8        | 7        | -2       | -2       | 0        | -1      | 0       | 3       | 1        | 7        |
| 89       | 50       | 42      | 2        | 3        | 3        | 3      | 5      | 7       | 3       | 67       | 65       | -1       | 0        | 2        | 36      | 25      | 16      | 39       | 81       |
| -2       | 3        | 6       | 5        | 14       | 7        | 6      | 5      | 9       | 6       | 4        | 3        | -1       | 4        | -1       | 1       | 4       | 5       | 0        | 5        |
| -3       | 4        | 5       | 1        | 1        | -1       | 2      | 4      | 4       | 2       | 6        | 6        | -2       | 1        | 0        | 1       | 3       | 6       | 3        | 2        |
| -1       | -1       | 1       | 2        | 2        | 2        | 0      | 1      | 1       | 0       | 1        | 2        | -2       | -2       | 0        | 2       | 0       | 3       | 0        | 1        |
| -1       | 2        | 4       | 12       | 84       | 79       | 7      | 8      | 11      | 10      | 5        | 4        | 1        | 6        | -2       | 0       | 6       | 8       | 0        | 5        |
| -3       | 0        | 1       | 5        | 14       | 7        | 5      | 4      | 5       | 6       | 2        | 2        | -1       | -2       | -2       | 1       | -1      | 25      | -1       | 5        |
| 21       | 26       | 20      | 5        | 5        | 2        | 7      | 2      | 2       | 2       | 81       | 79       | 0        | 1        | 14       | 18      | 64      | 61      | 47       | 64       |
| -1<br>-3 | -5<br>-6 | 0       | 7        | 91<br>8  | 33<br>4  | 7      | 5<br>6 | 8<br>5  | 6       | -1<br>4  | -2<br>2  | -1<br>0  | 0        | -3<br>-3 | 5       | -2<br>4 | 3<br>8  | -2<br>1  | 1<br>-1  |
| -3<br>-2 | 6        | 4<br>6  | 10<br>11 | 71       | 4<br>48  | 5<br>4 | 2      | 6       | 4<br>6  | 15       | 19       | 1        | 12       | 3        | 6<br>5  | 4<br>4  | 45      | 4<br>8   | 9        |
| -4       | 2        | 2       | 8        | 8        | 9        | 6      | 3      | 9       | 7       | 5        | 3        | 3        | -1       | 1        | 1       | 2       | 4       | 1        | 11       |
| -3       | -3       | 2       | 14       | 50       | 19       | 5      | 3      | 7       | 3       | 11       | 8        | 3        | 1        | 4        | 9       | 7       | 14      | 13       | 32       |
| 1        | 8        | 5       | 10       | 9        | 7        | 6      | 4      | 5       | 7       | 9        | 7        | 4        | 3        | 8        | 3       | 10      | 6       | 8        | 11       |
| 2        | 8        | 6       | 2        | 5        | 6        | 5      | 2      | 4       | 2       | 61       | 49       | 2        | 6        | 4        | 12      | 6       | 7       | 7        | 10       |
| 1        | 8        | 4       | 2        | 7        | 3        | 6      | 2      | 3       | 1       | 13       | 8        | -1       | 1        | 5        | 1       | 10      | 10      | 9        | 18       |
| -1       | -1       | 2       | 0        | 2        | 5        | 0      | 2      | 3       | 2       | 4        | 3        | -2       | -1       | 0        | 0       | 1       | -2      | 2        | 0        |
| 37       | 52       | 10      | 5        | 7        | 5        | 3      | 1      | 4       | 4       | 8        | 10       | 3        | 3        | 3        | 1       | 7       | 7       | 3        | 4        |
| -2       | 1        | 1       | 5        | 3        | 6        | 1      | 1      | 2       | 1       | 8        | 7        | -5       | -2       | 1        | 0       | -4      | 1       | 1        | 2        |
| 0        | -3       | 2       | -2       | 53       | 28       | -5     | -2     | -5      | -2      | 2        | 1        | 1        | -1       | 0        | 0       | 0       | 5       | 3        | 3        |
| -2       | -1       | 1       | 5        | 6        | 6        | 1      | 2      | 5       | 4       | 3        | 2        | 2        | 2        | 0        | 3       | 5       | 19      | 2        | 1        |
| -3       | -1       | 4       | 8        | 58       | 25       | 2      | 2      | 5       | 1       | 3        | 4        | -1       | -1<br>-7 | 1        | -1      | -2      | 1       | 1        | 2        |
| 2        | -1<br>0  | 2<br>4  | 11<br>7  | 68<br>76 | 18<br>15 | 5<br>6 | 5<br>5 | 3<br>7  | 3<br>4  | 8<br>2   | 8<br>1   | 0        | 7<br>-2  | -2<br>2  | 0<br>4  | 2<br>4  | 8<br>2  | 0<br>0   | 2        |
| -1<br>81 | 56       | 56      | 9        | 8        | 6        | 4      | 3      | 7<br>18 | 8       | 87       | 87       | -2<br>-1 | -2<br>0  | 24       | 92      | 4<br>49 | 20      | 32       | ა<br>31  |
| 1        | 0        | 2       | 3        | 6        | 1        | 3      | 2      | 3       | 4       | 5        | 5        | -3       | 0        | 1        | 2       | -1      | 4       | 0        | 1        |
| -1       | 3        | 2       | 25       | 81       | 39       | 0      | 2      | 1       | 1       | 6        | 11       | -3       | 1        | 1        | 1       | 1       | 0       | 2        | 3        |
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| 0        | 5        | 3       | 73       | 83       | 59       | 1      | 2      | 1       | 0       | 12       | 26       | -1       | -1       | 2        | 2       | 3       | 3       | 3        | 6        |
| -2       | -1       | 3       | 1        | 4        | 5        | 2      | 3      | 6       | 4       | 4        | 3        | -2       | 1        | 1        | -1      | 5       | 7       | 0        | 3        |
| 1        | -1       | 3       | 12       | 85       | 30       | 7      | 6      | 7       | 5       | 3        | 3        | -2       | 0        | 2        | 7       | 3       | 0       | 0        | 5        |
| -1       | 0        | 3       | 2        | 21       | 6        | 0      | 2      | 4       | 2       | 1        | 1        | -3       | 0        | -1       | 0       | 0       | 2       | 1        | 3        |
| 1        | 2        | 3       | 3        | 4        | 4        | 3      | 1      | 4       | 2       | 24       | 17       | -3       | 1        | 2        | 5       | 5       | 4       | 7        | 15       |
| 7        | 4        | 2       | 7        | 11       | 9        | 14     | 10     | 2       | 2       | 6        | 8        | 1        | 0        | 1        | 3       | 12      | 63      | 2        | 2        |
| -2       | 3        | 4       | 3        | 9        | 9        | 3      | 2      | 2       | 3<br>7  | 7        | 8        | -5<br>1  | -2<br>1  | 1        | 2       | 0       | 1       | 1        | 3        |
| 6<br>2   | 21<br>8  | 29<br>9 | 6<br>25  | 5<br>76  | 5<br>33  | 6<br>6 | 3<br>3 | 6<br>5  | 4       | 86<br>21 | 84<br>20 | -1<br>1  | -1<br>2  | 3<br>6   | 2<br>9  | 9<br>14 | 4<br>11 | 32<br>20 | 34       |
| 2        | -2       | -3      | 25<br>9  | 52       | 22       | 1      | 2      | 0       | 1       | 1        | -2       | -3       | 4        | -4       | 1       | -3      | 41      | -3       | 37<br>-3 |
| -2       | 1        | 6       | 8        | 9        | 5        | 5      | 6      | 5       | 97      | 5        | 6        | -3       | 0        | 0        | 5       | 7       | 7       | 4        | 5        |
| -1       | 1        | 2       | 4        | 78       | 56       | 1      | 2      | 0       | 2       | 6        | 6        | -1       | -1       | 1        | 0       | -1      | 2       | 1        | 5        |
| 2        | 2        | 3       | 3        | 4        | 0        | 0      | 0      | 18      | 3       | 10       | 9        | -1       | 4        | 2        | 49      | 19      | 25      | 27       | 26       |
|          |          |         |          |          |          |        |        |         |         |          |          |          |          |          |         |         |         |          |          |

| 1        | 1       | 2       | E       | 0        | 2        | 4       | 4       | 2       | 2       | E       | 1       | 4        | 2        | 2       | 2        | E        | 11      | 2      | E       |
|----------|---------|---------|---------|----------|----------|---------|---------|---------|---------|---------|---------|----------|----------|---------|----------|----------|---------|--------|---------|
| -1<br>-1 | -1<br>4 | 2<br>2  | -5<br>7 | 0<br>12  | 3<br>7   | -1<br>4 | -1<br>3 | -3<br>6 | 2<br>7  | 5<br>15 | 4<br>12 | 1<br>2   | -2<br>-1 | 3<br>3  | 2<br>1   | 5<br>4   | 11      | 3<br>1 | 5<br>6  |
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| 4        | 4       | 6       | 33      | 67       | 37       | 0       | 2       | -1      | 3       | 7       | 10      | 13       | 1        | 5       | 3        | 8        | 11      | 6      | 6       |
| -1       | -43     | -1      | -1      | -2       | 3        | -2      | -2      | -2      | 2       | 1       | 4       | 7        | 3        | -1      | 1        | 3        | 1       | 2      | 0       |
| 5        | 17      | 17      | 4       | 7        | 6        | 7       | 1       | 2       | 4       | 88      | 83      | 3        | 1        | 6       | 4        | 27       | 21      | 16     | 24      |
| -1       | -2      | 4       | 1       | 3        | 1        | 2       | 6       | 1       | 1       | 4       | 4       | 2        | 5        | 0       | 2        | 3        | 7       | 3      | 2       |
| 6        | 17      | 22      | 5       | 5        | 0        | 6       | 3       | 3       | 1       | 75      | 73      | -2       | -4       | 0       | 1        | 21       | 21      | 15     | 26      |
| -3       | -6      | -1      | 57      | 10       | 6        | 5       | 3       | 7       | 5       | 0       | -1      | 4        | 3        | 4       | 83       | 46       | 70      | 12     | 13      |
| -1       | 3       | 1       | 3       | 43       | 23       | 2       | 1       | 3       | 6       | 5       | 3       | -2       | -1       | 2       | -1       | -2       | 0       | 1      | 4       |
| -1       | 2       | 2       | 71      | 84       | 75       | 0       | 1       | 4       | 1       | 24      | 45      | -2       | -1       | -1      | -2       | 1        | -1      | -3     | 0       |
| -1       | 1<br>56 | 2<br>18 | 2<br>11 | 1        | 0        | -1      | 0       | 1       | -1      | 12      | 9       | -2<br>4  | -2       | -2<br>3 | 1        | 3<br>3   | 3<br>5  | 8      | 11      |
| 11<br>-2 | 0       | 5       | 4       | 13<br>63 | 10<br>37 | 5<br>3  | 3<br>4  | 5<br>4  | 1<br>2  | 20<br>3 | 20<br>2 | -4<br>-3 | 0<br>-2  | 0       | 14<br>0  | -2       | 5<br>1  | 4<br>0 | 8<br>3  |
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| 3        | 10      | 18      | 6       | 7        | 8        | 3       | 3       | 4       | 5       | 9       | 8       | 0        | 0        | 1       | 3        | 9        | 21      | 5      | 5       |
| -1       | -2      | 2       | 5       | 16       | 11       | 2       | 2       | 1       | 1       | 4       | 7       | -2       | 0        | 2       | 1        | 3        | 2       | 1      | 3       |
| 13       | 22      | 19      | 7       | 11       | 9        | 7       | 6       | 2       | 2       | 79      | 78      | 1        | 4        | 9       | 9        | 28       | 40      | 11     | 29      |
| -1       | 2       | 2       | 4       | 36       | 17       | 1       | 0       | 3       | 4       | 4       | 4       | 0        | -1       | 0       | 2        | -1       | 1       | 1      | 2       |
| 0        | 4       | 6       | 5       | 13       | 7        | 5       | 3       | 6       | 3       | 4       | 3       | -4       | -3       | 2       | 3        | 0        | 1       | 5      | 19      |
| 2        | 2       | 2       | 1       | 1        | 3        | 1       | 1       | 3       | 3       | 46      | 34      | -3       | 2        | 6       | 94       | 70       | 46      | 21     | 6       |
| 0        | 1       | 1       | 11      | 83       | 31       | 4       | 2       | 3       | 3       | 7       | 8       | -1       | -1       | 1       | 14       | 25       | 17      | 2      | 6       |
| -2       | 1       | 3       | 16      | 65       | 20       | 5       | 4       | 5       | 6       | 5       | 5       | -2       | -2       | 1       | 1        | -1       | -1      | 0      | 3       |
| 2        | 17      | 33      | 0       | 2        | 5        | 0       | 2       | 3       | 3       | 94      | 94      | -4       | 1        | 2       | 30       | 9        | 3       | 47     | 53      |
| -3       | -1      | -1      | 26      | 67       | 13       | 5       | 3       | 6       | 4       | 4       | 8       | -4       | -1       | -2      | 0        | -4       | 1       | -4     | 1       |
| -2<br>-1 | -1<br>0 | 1<br>4  | 0       | 39<br>8  | 37<br>6  | -4<br>1 | -2<br>2 | -4<br>4 | -1<br>2 | 3<br>1  | 3<br>0  | 31       | -1<br>-1 | 1<br>1  | -1<br>-1 | 2<br>1   | 4<br>0  | 4<br>2 | 2<br>3  |
| 39       | 48      | 44      | 3       | 2        | 1        | 2       | 2       | 3       | 2       | 22      | 24      | -2       | -1       | 3       | 11       | 12       | 7       | 24     | 33      |
| -2       | 3       | 3       | 8       | 12       | 8        | 4       | 3       | 5       | 6       | 5       | 6       | 3        | 1        | 2       | 2        | 4        | 2       | 1      | 5       |
| 4        | 8       | 7       | 5       | 3        | 2        | 2       | 1       | 1       | 2       | 30      | 28      | -1       | 0        | 22      | 96       | 62       | 24      | 39     | 22      |
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| 0        | -1      | 2       | 3       | 74       | 33       | 1       | 1       | 2       | 1       | 6       | 5       | -5       | -2       | 0       | 0        | 1        | 3       | 0      | 1       |
| 3        | 3       | 6       | -2      | 2        | 3        | 0       | 2       | 3       | 3       | 68      | 54      | -1       | 1        | 7       | 92       | 52       | 36      | 8      | 8       |
| 2        | 11      | 5       | 4       | 6        | 1        | 3       | 1       | 0       | 3       | 8       | 7       | -1       | 1        | 4       | 3        | 5        | 1       | 1      | 6       |
| -4<br>-2 | 0       | 3       | 5<br>1  | 17       | 17<br>7  | 1       | 2       | 2       | 4       | 5       | 7       | -2       | 2        | 2       | 1        | 2        | 19<br>1 | 1      | 2       |
| -2       |         | - 1     |         | 15<br>6  | 7        | 3       |         | 6       |         | 5       | 5       | -2<br>-1 | -1<br>4  |         | 0        | 2        | 7       | 2      | 4       |
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| 2        | 3       | 4       | 1       | 4        | 1        | 0       | 1       | 0       | Ó       | 0       | 1       | -3       | 1        | -1      | 2        | 0        | 4       | 3      | 1       |
| 2        | 9       | 5       | 4       | 6        | 3        | 5       | 1       | 4       | 4       | 10      | 8       | 1        | 0        | 5       | 2        | 10       | 10      | 8      | 10      |
| -1       | 9       | 8       | 8       | 9        | 9        | 6       | 3       | 10      | 7       | 14      | 11      | 1        | -1       | 2       | 1        | 3        | 5       | 4      | 7       |
| -1       | -1      | 5       | 3       | 12       | 12       | 2       | 3       | 5       | 4       | 4       | 4       | -2       | -2       | 1       | 0        | 0        | 1       | -1     | 3       |
| -3       | -5      | 0       | 4       | 54       | 28       | 4       | 3       | 4       | 4       | 10      | 4       | -2       | -1       | -2      | 1        | -4       | 0       | -4     | 1       |
| 6        | 36      | 7       | 3       | 7        | 0        | 4       | 2       | 2       | 3       | 7       | 5       | -3       | -2       | 4       | 3        | 6        | 5       | 3      | 6       |
| 1        | 6       | 3       | 60      | 91       | 69       | 3       | 2       | 7       | 6       | 18      | 31      | -3       | 4        | 1       | 1        | 4        | 7       | 4      | 6       |
| -2       | 0       | 2       | 2       | 3        | -1       | 1       | 0       | 1       | 0       | 2       | 3       | -2       | 1        | 1       | 1        | -2       | -1      | 1      | 4       |
| -2       | 1       | 3       | 3       | 58       | 48       | 3       | 2       | 3       | 2<br>2  | 4       | 3       | -4       | -1       | 1       | 1        | 2        | 1       | 2      | 5       |
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| -1<br>-4 | -2<br>1 | 1<br>5  | 2<br>10 | -1<br>17 | 2<br>11  | -3<br>5 | -1<br>3 | -1<br>5 | -1<br>3 | 0<br>6  | 0<br>7  | -1<br>-3 | 0<br>-5  | 0<br>2  | 0<br>-2  | 0<br>0   | 1<br>2  | 0<br>2 | 2<br>8  |
| 0        | 4       | ა<br>3  | 2       | 17       | 3        | 5<br>3  | 2       | ე<br>1  | 2       | 6       | 7       | -3<br>-2 | -5<br>-1 | 1       | -2<br>-1 | 0        | 0       | 2<br>5 | 6       |
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| 0        | 0       | 4       | 2       | 8        | 4        | 2       | 2       | 3       | -1      | 6       | 4       | -4       | -1       | 1       | 0        | 2        | 1       | 4      | 7       |
| 0        | -2      | 8       | 6       | 23       | 5        | 5       | 6       | 6       | 4       | 12      | 12      | -2       | -1       | 1       | 5        | 7        | 8       | 2      | 5       |
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| -1       | 7       | 5       | 5       | 4        | 1        | 3       | 1       | 3       | 3       | 9       | 10      | -1       | -1       | 4       | 1        | 12       | 9       | 10     | 11      |

| -3   | 3<br>4<br>62<br>6<br>-2<br>5<br>5<br>7<br>61<br>-1<br>4<br>0<br>3<br>-2<br>40<br>78 |
|--|---|
| -1   | 62<br>6<br>-2<br>5<br>5<br>7<br>61<br>-1<br>4<br>0<br>3<br>-2<br>40                 |
| -2   | 6<br>-2<br>5<br>5<br>7<br>61<br>-1<br>4<br>0<br>3<br>-2<br>40                       |
| 2  | -2<br>5<br>5<br>7<br>61<br>-1<br>4<br>0<br>3<br>-2<br>40                            |
| -3   | 5<br>5<br>7<br>61<br>-1<br>4<br>0<br>3<br>-2<br>40                                  |
| 0  3  2  24  81  51  3  3  5  7  4  5  4  3  3  0  4  2  1 1  4  6  8  8  9  0  0  -2  1  15  15  -1  1  3  1  6  6  6 17  29  37  2  -1  1  -2  -1  1  0  90  89  1  -1  1  3  2  4  54 2  -6  -2  5  12  5  1  2  2  4  6  7  8  -11  1  6  18  63  -2 5  40  9  6  9  8  4  3  4  1  30  24  -5  -2  1  1  2  4  -1 1  -5  2  3  5  0  2  2  2  4  2  3  3  -5  -1  1  1  0  -3  3  3 0  2   5  20  74  52  3  3  4  2  22  33  -5  -1  1  1  0  0  0  2 17  31  58  26  17  13  20  14  7  4  26  18  1  9  9  52  29  21  36 0  7   7  6  7  4  3  5  5  3  70  76  2  1  64  96  54  33  82 5  8   3  2  6  2  1  1  1  1  1  49  41  -1  4  0  0  1  7  1 3  38  11  2  5  9  0  1  4  5  8  7  1  1  2  2  2  1  0 49  51  53  11  16  11  43  14  7  8  90  89  5  2  19  35  70  61  54 2  2  1  11  3  3  4  3  6  5  2  3  1  1  1  3  1  4  0 0  -1  5  7  80  79  6  4  6  4  6  4  6  4  -4  0  -2  2  2  2  2   2  1 1  2  5  82  86  69  6  3  15  9  20  41  -2  1  3  2  5  8  5 -1  4  6  74  8  79  6  4  6  4  6  4  6  4  -4  0  -2  2  2  2  2  2  2  2  2  2  2  2  2 | 5<br>7<br>61<br>-1<br>4<br>0<br>3<br>-2<br>40                                       |
| 1       4       6       8       8       9       0       0       -2       1       15       15       -1       1       3       1       6       6       6         17       29       37       2       -1       1       -2       -1       1       0       90       89       1       -1       1       3       2       4       54         2       -6       -2       5       12       5       1       2       2       4       6       7       8       -11       1       6       18       63       -2         5       40       9       6       9       8       4       3       4       1       30       24       -5       -2       1       1       2       4       -1         -1       -5       2       20       74       52       3       3       4       2       22       33       5       -1       1       1       3       4       1       2       2       -1       1       0       0       2       1       1       1       0       0       2       1       1       1       1 <t< td=""><td>7<br/>61<br/>-1<br/>4<br/>0<br/>3<br/>-2<br/>40</td></t<>   | 7<br>61<br>-1<br>4<br>0<br>3<br>-2<br>40  |
| 17       29       37       2       -1       1       -2       -1       1       0       90       89       1       -1       1       3       2       4       54         2       -6       -2       5       12       5       1       2       2       4       6       7       8       -11       1       6       18       63       -2         5       40       9       6       9       8       4       3       4       1       30       24       -5       -2       1       1       2       4       -1         -1       -5       2       3       5       0       2       2       4       2       3       2       -2       -1       -1       0       -3       3       -3       -3         0       2       5       20       74       52       3       3       4       2       22       33       -5       -1       1       1       0       0       2       2       1       1       1       1       0       9       9       52       29       21       36       3       3       2       -3  | 61<br>-1<br>4<br>0<br>3<br>-2<br>40   |
| 2  | -1<br>4<br>0<br>3<br>-2<br>40   |
| 5       40       9       6       9       8       4       3       4       1       30       24       -5       -2       1       1       2       4       -1         -1       -5       2       3       5       0       2       2       4       2       3       2       -2       -1       -1       0       -3       3       -3         0       2       5       20       74       52       3       3       4       2       22       33       -5       -1       1       1       3       4       1         -1       3       4       6       3       2       2       2       2       2       5       5       -3       -2       -1       1       0       0       2         17       31       58       26       17       13       20       14       7       4       26       18       1       9       9       52       29       21       36         5       8       3       2       6       2       1       1       1       1       4       96       54       33       82  | 4<br>0<br>3<br>-2<br>40   |
| -1   | 0<br>3<br>-2<br>40  |
| 0 2 5 20 74 52 3 3 4 4 2 22 33 -5 -1 1 1 1 3 4 1 1 3 4 1 1 1 3 4 1 1 3 4 6 3 2 2 2 2 2 2 2 5 5 5 -3 -2 -1 1 0 0 0 2 2 1 1 3 1 58 26 17 13 20 14 7 4 26 18 1 9 9 52 29 21 36 0 7 7 7 6 7 4 3 5 5 5 3 70 76 2 1 64 96 54 33 82 5 8 3 2 6 2 1 1 1 1 1 49 41 -1 4 0 0 1 7 7 1 3 3 -1 1 -3 9 4 -2 0 2 3 3 3 2 -3 -1 -1 1 1 2 3 -3 -3 -2 -1 3 65 87 75 -1 1 1 1 1 3 5 5 -3 0 0 1 1 0 -1 -4 3 38 11 2 5 9 0 1 4 5 8 7 1 1 2 2 2 2 1 0 4 1 4 5 8 7 1 1 2 2 2 2 1 0 4 1 4 5 8 7 1 1 2 2 2 2 1 1 0 4 1 4 5 8 7 1 1 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1   | 3<br>-2<br>40   |
| -1       3       4       6       3       2       2       2       2       2       5       5       -3       -2       -1       1       0       0       2         17       31       58       26       17       13       20       14       7       4       26       18       1       9       9       52       29       21       36         0       7       7       6       7       4       3       5       5       3       70       76       2       1       64       96       54       33       82         5       8       3       2       6       2       1       1       1       49       41       -1       4       0       0       1       7       1         -3       -1       1       -3       9       4       -2       0       2       3       3       2       -3       -1       -1       1       2       3       -3       -3       -1       -1       1       2       3       -3       -3       -3       -1       -1       1       2       2       2       1       0       0  | -2<br>40  |
| 17       31       58       26       17       13       20       14       7       4       26       18       1       9       9       52       29       21       36         0       7       7       6       7       4       3       5       5       3       70       76       2       1       64       96       54       33       82         5       8       3       2       6       2       1       1       1       49       41       -1       4       0       0       1       7       1         -3       -1       1       -3       9       4       -2       0       2       3       3       2       -3       -1       -1       1       2       3       -3       -3       -1       -1       1       2       3       -3       -3       0       0       1       0       -1       -4       3       3       2       -3       -1       -1       1       2       2       2       1       0       0       -1       -4       0       0       1       0       0       1       4       0       0  | 40  |
| 0       7       7       6       7       4       3       5       5       3       70       76       2       1       64       96       54       33       82         5       8       3       2       6       2       1       1       1       49       41       -1       4       0       0       1       7       1         -3       -1       1       -3       9       4       -2       0       2       3       3       2       -3       -1       -1       1       1       2       3       -3       -2       -1       1       1       2       3       3       2       -3       -1       -1       1       2       3       -3       -3       -3       -1       -1       1       2       3       -3       -3       -3       -3       -3       -3       -3       -3       -1       -1       1       1       2       3       -3       -3       -3       -3       -3       -3       -3       -3       -3       -3       -3       -3       -3       -3       -3       -3       -1       1       1       3       3   |   |
| 5       8       3       2       6       2       1       1       1       49       41       -1       4       0       0       1       7       1         -3       -1       1       -3       9       4       -2       0       2       3       3       2       -3       -1       -1       1       2       3       -3         -2       -1       3       65       87       75       -1       1       1       1       3       5       -3       0       0       1       0       -1       -4         3       38       11       2       5       9       0       1       4       5       8       7       1       1       2       2       2       1       0         49       51       53       11       16       11       43       14       7       8       90       89       5       2       19       35       70       61       54         -2       2       1       11       37       13       4       3       6       5       2       3       1       1       1       3       3   |   |
| -3 -1 1 -3 9 4 -2 0 2 3 3 2 -3 -1 -1 1 1 2 3 -3<br>-2 -1 3 65 87 75 -1 1 1 1 1 3 5 -3 0 0 1 0 -1 -4<br>3 38 11 2 5 9 0 1 4 5 8 7 1 1 2 2 2 1 0 0<br>49 51 53 11 16 11 43 14 7 8 90 89 5 2 19 35 70 61 54<br>-2 2 1 11 37 13 4 3 6 5 2 3 1 1 1 1 3 1 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  | 1   |
| -2       -1       3       65       87       75       -1       1       1       1       3       5       -3       0       0       1       0       -1       -4         3       38       11       2       5       9       0       1       4       5       8       7       1       1       2       2       2       1       0       -1       -5       9       0       1       4       5       8       7       1       1       2       2       2       1       0       -1       -5       7       8       90       89       5       2       19       35       70       61       54         -2       2       1       11       37       13       4       3       6       5       2       3       1       1       1       3       1       4       0         0       -1       5       7       80       79       6       4       6       4       -4       -4       0       -2       2       2       2       -1         -1       2       5       82       86       69       6       3 <t< td=""><td>0</td></t<>   | 0   |
| 3       38       11       2       5       9       0       1       4       5       8       7       1       1       2       2       2       1       0         49       51       53       11       16       11       43       14       7       8       90       89       5       2       19       35       70       61       54         -2       2       1       11       37       13       4       3       6       5       2       3       1       1       1       3       1       4       0         0       -1       5       7       80       79       6       4       6       4       -4       0       -2       2       2       2       2       -1         -1       2       5       82       86       69       6       3       15       9       20       41       -2       1       3       2       5       8       5         -1       4       5       7       40       33       4       3       3       4       8       8       8       51       4       1       0   | -3  |
| 49       51       53       11       16       11       43       14       7       8       90       89       5       2       19       35       70       61       54         -2       2       1       11       37       13       4       3       6       5       2       3       1       1       1       3       1       4       0         0       -1       5       7       80       79       6       4       6       4       6       4       -4       0       -2       2       2       2       -1         -1       2       5       82       86       69       6       3       15       9       20       41       -2       1       3       2       5       8       5         -1       4       5       7       40       33       4       3       3       4       8       8       8       51       4       1       0       48       3         -1       -1       3       3       -20       2       2       4       1       2       8       8       -4       -2       2       3  | 1   |
| -2       2       1       11       37       13       4       3       6       5       2       3       1       1       1       3       1       4       0         0       -1       5       7       80       79       6       4       6       4       -4       0       -2       2       2       -2       2       -1         -1       2       5       82       86       69       6       3       15       9       20       41       -2       1       3       2       5       8       5         -1       4       5       7       40       33       4       3       3       4       8       8       8       51       4       1       0       48       3         -1       -1       3       3       -20       2       2       4       1       2       8       8       -4       -2       2       3       7       9       6         2       25       7       4       8       7       4       3       5       0       15       15       -2       0       1       0       2 <td< td=""><td>72</td></td<>   | 72  |
| 0       -1       5       7       80       79       6       4       6       4       -4       0       -2       2       -2       2       -1       -1       2       5       82       86       69       6       3       15       9       20       41       -2       1       3       2       5       8       5         -1       4       5       7       40       33       4       3       3       4       8       8       8       51       4       1       0       48       3         -1       -1       3       3       -20       2       2       4       1       2       8       8       -4       -2       2       3       7       9       6         2       25       7       4       8       7       4       3       5       0       15       15       -2       0       1       0       2       2       8         -3       -1       4       6       74       15       4       4       7       6       3       2       -3       0       0       -1       -6       -1       -2 </td <td>6</td>   | 6   |
| -1       2       5       82       86       69       6       3       15       9       20       41       -2       1       3       2       5       8       5         -1       4       5       7       40       33       4       3       3       4       8       8       8       51       4       1       0       48       3         -1       -1       3       3       -20       2       2       4       1       2       8       8       -4       -2       2       3       7       9       6         2       25       7       4       8       7       4       3       5       0       15       15       -2       0       1       0       2       2       8         -3       -1       4       6       74       15       4       4       7       6       3       2       -3       0       0       -1       -6       -1       -2         -1       4       4       12       59       9       3       3       5       4       7       6       -2       1       3       4       <  | 4   |
| -1       4       5       7       40       33       4       3       3       4       8       8       8       51       4       1       0       48       3         -1       -1       3       3       -20       2       2       4       1       2       8       8       -4       -2       2       3       7       9       6         2       25       7       4       8       7       4       3       5       0       15       15       -2       0       1       0       2       2       8         -3       -1       4       6       74       15       4       4       7       6       3       2       -3       0       0       -1       -6       -1       -2         -1       4       4       12       59       9       3       3       5       4       7       6       -2       1       3       4       6       1       2         42       4       5       20       30       38       15       18       6       5       17       15       34       49       5       27   | 8   |
| -1       -1       3       3       -20       2       2       4       1       2       8       8       -4       -2       2       3       7       9       6         2       25       7       4       8       7       4       3       5       0       15       15       -2       0       1       0       2       2       8         -3       -1       4       6       74       15       4       4       7       6       3       2       -3       0       0       -1       -6       -1       -2         -1       4       4       12       59       9       3       3       5       4       7       6       -2       1       3       4       6       1       2         42       4       5       20       30       38       15       18       6       5       17       15       34       49       5       27       62       89       2         2       1       3       2       4       2       2       1       2       2       1       1       -4       1       2       44  | 5   |
| 2       25       7       4       8       7       4       3       5       0       15       15       -2       0       1       0       2       2       8         -3       -1       4       6       74       15       4       4       7       6       3       2       -3       0       0       -1       -6       -1       -2         -1       4       4       12       59       9       3       3       5       4       7       6       -2       1       3       4       6       1       2         42       4       5       20       30       38       15       18       6       5       17       15       34       49       5       27       62       89       2         2       1       3       2       4       2       2       1       2       2       1       1       -4       1       2       44       3       3       2         0       2       3       6       15       15       6       3       6       6       13       9       -1       -1       2       1   | 7   |
| -3     -1     4     6     74     15     4     4     7     6     3     2     -3     0     0     -1     -6     -1     -2       -1     4     4     12     59     9     3     3     5     4     7     6     -2     1     3     4     6     1     2       42     4     5     20     30     38     15     18     6     5     17     15     34     49     5     27     62     89     2       2     1     3     2     4     2     2     1     2     2     1     -1     -4     1     2     44     3     3     2       0     2     3     6     15     15     6     3     6     6     13     9     -1     -1     2     1     0     4     18   | 11  |
| -1     4     4     12     59     9     3     3     5     4     7     6     -2     1     3     4     6     1     2       42     4     5     20     30     38     15     18     6     5     17     15     34     49     5     27     62     89     2       2     1     3     2     4     2     2     1     2     1     -4     1     2     44     3     3     2       0     2     3     6     15     15     6     3     6     6     13     9     -1     -1     2     1     0     4     18   | 3   |
| 42       4       5       20       30       38       15       18       6       5       17       15       34       49       5       27       62       89       2         2       1       3       2       4       2       2       1       2       2       1       1       -4       1       2       44       3       3       2         0       2       3       6       15       15       6       3       6       6       13       9       -1       -1       2       1       0       4       18   | 5   |
| 2 1 3 2 4 2 2 1 2 2 1 1 -4 1 2 44 3 3 2<br>0 2 3 6 15 15 6 3 6 6 13 9 -1 -1 2 1 0 4 18   | 2   |
| 0 2 3 6 15 15 6 3 6 6 13 9 <mark>-1 -1</mark> 2 <u>1</u> 0 4 18  | 4   |
|  | 29  |
| 0 1 7 0 0 1 0 2 0 2 20 21 2 2 0 0 0 22 17 71   | 63  |
| 77 49 26 8 9 8 6 2 3 4 43 35 1 2 7 2 29 24 13  | 16  |
| 2 2 4 4 6 1 2 2 3 4 <mark>52 42 -4 -2</mark> 7 10 14 4 <mark>51</mark>   | 69  |
| 5 24 10 7 11 6 6 4 6 5 33 28 -1 0 2 2 1 3 4  | 6   |
| 0 3 6 89 9 9 2 2 15 6 5 7 1 5 13 88 74 75 77   | 87  |
| 6 4 8 22 11 8 3 1 5 7 6 15 7 18 4 20 21 23 26  | 43  |
| 1 10 7 9 37 9 1 1 2 2 3 5 -1 -2 1 1 -1 2 1   | 5   |
| 4 27 7 3 14 17 7 11 4 3 9 14 1 17 2 -3 34 84 0   | 2   |
| 50 81 71 4 12 3 23 5 4 3 83 79 -3 1 32 74 79 76 57   | 72  |
| 0 3 8 5 8 4 4 3 4 1 13 13 <mark>-3 -1</mark> 1 7 6 3 40  | 34  |
| 4 6 11 <mark>85</mark> 8 8 8 6 29 11 28 17 12 13 7 <mark>89 60 57 71</mark>  | 92  |
| 3 5 6 5 29 5 0 0 -3 -3 5 6 -1 1 1 3 2 6 7  | 5   |
| 0 -1 2 10 37 14 4 2 5 9 5 6 3 1 2 0 5 -2 3   | 7   |
| -2 2 1 1 <mark>79 79</mark> 0 3 <mark>0 1 3 4 0</mark> 6 2 1 4 <u>10</u> 2   | 3   |
| 17 0 2 4 20 33 18 45 <mark>-2 -1</mark> 6 5 22 44 0 1 22 <mark>77</mark> 2   | 1   |
| 3 5 7 81 89 73 6 2 11 15 45 67 -2 2 2 2 8 4 3  | 5   |
| -3 -2 -1 4 11 1 3 2 3 2 1 3 -2 1 -2 <u>0</u> 5 6 -3  | 0   |
| -2 18 26 84 12 14 5 <u>3</u> 30 13 9 10 13 25 22 <mark>94</mark> 82 85 <u>82</u>   | 82  |
| 26 7 8 21 <u>37 39</u> 29 <mark>52</mark> 2 3 18 17 29 49 2 2 37 <mark>78</mark> 3   | 4   |
| -5 2 4 21 <u>56 62</u> 2 3 8 5 5 4 -3 0 0 -1 3 4 1   | 4   |
| -2 -5 0 2 2 3 -2 -1 0 1 4 4 -4 -2 -1 -2 -1 -1  | -3  |
| -2 1 2 0 12 1 0 1 1 1 <u>1 0 -1 0 -3 3 6 0 4</u>   | 7   |
| 1 -1 1 -1 1 1 -1 0 3 2 78 76 -1 3 1 <u>2</u> 13 8 4  | 5   |
| 0 8 12 <mark>91</mark> 17 14 7 3 37 10 3 4 8 28 22 <mark>94</mark> 79 84 82  | 02  |
| -1 2 8 <mark>82 74</mark> 45 6 6 9 8 <mark>68 76 -2 0 2 3 4</mark> 14 <u>2</u>   | 83  |
| 17 11 20 5 8 7 2 1 3 1 10 12 1 <mark>-4</mark> 7 44 <mark>58</mark> 49 <mark>74</mark>   | 3<br>58   |

| 11 | 3  | 11 | 4  | 6  | 6  | 2  | 5  | 5  | 3  | 7  | 6  | -3 | -1 | 3   | 51 | 10 | 3  | 59 | 60 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|
| 51 | 51 | 46 | 9  | 13 | 7  | 38 | 15 | 5  | 6  | 83 | 84 | -2 | 2  | 14  | 20 | 42 | 43 | 50 | 58 |
| 17 | 2  | 7  | 14 | 43 | 41 | 19 | 37 | 7  | 4  | 10 | 11 | 19 | 62 | -31 | 3  | 37 | 78 | 2  | 7  |
| -1 | -4 | 1  | 3  | 88 | 49 | -3 | -1 | 1  | 1  | 3  | 2  | 0  | -1 | 1   | 12 | 8  | 8  | 5  | 4  |
| 11 | 2  | 6  | -1 | -4 | 0  | 2  | 0  | 1  | 3  | 91 | 90 | -1 | -1 | 3   | 39 | 16 | 10 | 71 | 78 |
| 95 | 69 | 65 | 20 | 23 | 15 | 5  | 5  | 31 | 15 | 63 | 65 | -3 | 1  | 9   | 64 | 35 | 12 | 45 | 74 |

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| CMGC   | Other   | Other  | Lipid  | Lipid   | Lipid   | Lipid   | Lipid  |
|--|---|--|--|---|---|---|--|
| 7 6 -2 4 4 2 -2 2 4 3 7 2 6 2 5 -1 3 3 5 10 -2 3 4 3 4 | 7 4 0 3 7 -2 11 1 1 4 12 3 13 4 -4 1 3 8 19 2 0 7 9 | YLL     16       6     -1       8     0       0     4       52     2       2     5       9     6       15     10       33     8       10     33       8     10       43     70       36     9       14 | ν-y-εld 3 1 3 3 2 6 0 1 4 6 6 1 0 2 4 8 2 1 40 27 2 14 1 2 3 | Q-Y-SId 10 1 1 1 2 1 4 5 0 2 2 5 1 1 0 2 3 2 2 0 1 5 1 7 5 4 30 4 5 | 8-Y-Fld 2 0 7 5 -2 0 2 3 -1 2 10 -2 3 2 4 2 3 -1 1 -12 -3 2 0 1 0 | 1) HdS -3 -2 0 2 -1 0 2 4 -3 -2 -2 -3 4 -1 0 0 1 -4 -1 2 -2 1 3 -7 -1 | O 0 0 1 -2 1 0 1 1 -2 -2 0 4 1 20 -1 0 1 1 0 |
| 7  | 10  | 16   | 3  | 10  | 2   | -3  | 0  |
| 6  | 1   | 6  | 1  | 1   | 0   | -2  | 0  |
| - <u>-</u> 2   | 0   | - ا<br>8   | ა<br>ვ   | 11<br>21  | ,<br>5  | 2   | 1  |
| 4  | 3   | 0  | 2  | 4   | -2  | -1  | -2   |
| 2  | 7   | 0  | 6  | 5   | 0   | 0   | 1  |
| -2   | -2  | 4  | 0  | 0   | 2   | 2   | 0  |
| 2  | 11  | 52   | 1  | 2   | 3   | 4   | 1  |
| 4  | 1   | 2  | 4  | 2   | -1  | -3  | 0  |
| 3<br>7   | 1   | 5<br>0   | 6  | 5<br>11   | 10  | -2<br>-2  | 1  |
| 2  | 12  | 9  | -1   | 0   | -2  | -3  | -2   |
| 6  | 3   | 6  | 0  | 2   | 3   | 4   | -2   |
| 2  | 13  | 15   | 2  | 3   | 2   | -1  | 0  |
| 5  | 4   | 10   | 4  | 2   | 4   | 0   | 4  |
| -1   | -4  | 33   | 8  | 2   | 2   | 0   | 1  |
| 3  | 1   | 8  | 2  | 0   | 3   | 1   | 20   |
| 3  | 3   | 8<br>10  | -1<br>40   | 1<br>51   | -1<br>-1  | -4<br>1   | -1<br>2                                      |
| 10   | 0<br>19   | 10<br>43   | 40<br>27   | סו<br>75  | -12   | 2   | 0  |
| -2   | 2   | 70   | 2  | 4   | -3  | -2  | -1   |
| 3  | 0   | 30   | 14   | 30  | 2   | 1   | 0  |
| 4  | 7   | 36   | 1  | 4   | 0   | 3   | 1  |
| 3  | 9   | 9  | 2  |   | 1   | -7  | 1  |
|  | 8   |  |  | 2   |   |   |  |
| 6  | 22  | 9<br>10  | 2  | -2<br>-1  | -2<br>2   | -2<br>-3  | 1<br>1                                       |
| 3  | 9<br>3  | 0  | 2<br>2   | 6   | _1  | -3<br>0   | 1  |
| -1<br>-1<br>5  |   | 39   | 2  | 4   | -1<br>1   | 3   |  |
| 5  | 2<br>5  | 11   | 4  | 3   | -1  | 0   | -2   |
| 2  | 4   | 6  | 4<br>1<br>4  | 4<br>3<br>-5<br>3   | -1<br>1<br>-3   | 1   | -5<br>-2<br>0                                |
| 5  | 6   | 10   |  | 3   | -3  | 0   | 0  |
| 6  | 12  | 3  | 70   | 71  | 27  | 7   | 2  |
| 2<br>5<br>6<br>-1<br>2<br>3                            | 4<br>6<br>12<br>0<br>1<br>12                        | 19<br>1  | -2   | 4   | -1<br>1   | 0   | 1  |
| 3  | 12  | 8  | 2  | 1   | 4   | 8   | 0  |
| 1  | 2   | 1<br>8<br>-5   | 70<br>-2<br>6<br>2<br>4<br>-3<br>6                           | 71<br>0<br>4<br>1<br>4<br>-1<br>5                                   | 27<br>-1<br>1<br>4<br>-3<br>1<br>-2<br>-1                         | 0<br>7<br>0<br>-2<br>8<br>2<br>3                                      | 2<br>1<br>0<br>0<br>-2<br>-7                 |
| 1<br>2<br>14<br>-3                                     | 2<br>10<br>47                                       | 9  | -3   | -1  | 1   | 3   | -7   |
| 14   | 47  | 9  | 6  | 5   | -2  | 0   | 0  |
| -3   | 1   | 0  | 3  | 7<br>2<br>6   | -1  | 0<br>-4<br>-3<br>1  | 0  |
| 4<br>10  | 30  | 10   | 2<br>3   | 2   | 9<br>-4   | -3  | 0  |
| 10   | 5   | 4  | 3  | 6   | -4  | 1   | -2   |

| 5   | 3   | 14  | 5   | 5  | -1   | -1  | -9  |
|---|---|---|---|--|--|---|---|
|   | 3 4 75 5 7 8 2 -2 -2 12 0 0 3 5 0 -1 4 35 0 -1 8 6 0 6 43 5 2 0 14 7 13 3 2 5 4 | 3   | 5   | 5 4 14 2 0 2 1 4 3 2 8 6 2 2 5 6 20 4 4 3 4 4 2 2 1 8 1 3 4 6 3 2 3 5 2 2 14 | -1<br>-10<br>-1<br>5<br>-4<br>1<br>1<br>3<br>-5<br>0<br>0<br>16<br>1<br>1<br>2<br>-5<br>3<br>3<br>1<br>2<br>-3<br>0<br>-1<br>0<br>0<br>2<br>2<br>4<br>-1<br>0<br>0<br>2<br>2<br>4<br>-1<br>0<br>0<br>2<br>2<br>4<br>-1<br>0<br>0<br>2<br>2<br>4<br>-1<br>0<br>1<br>7<br>-1<br>0<br>1<br>7<br>-1<br>0<br>1<br>7<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1 | -1 -5 2 -5 -1 -7 4 -1 0 -4 -2 -1 -2 -3 0 2 -2 -1 -2 -3 0 -2 -2 -1 3 -2 -1 -2 -5 -3 0 4 -2 | -9 -1 -3 -2 -1 0 0 0 0 1 2 9 3 2 1 -1 0 0 0 0 2 1 -3 -2 -1 1 -1 0 1 0 |
| 59<br>7<br>4<br>5<br>3<br>4<br>4<br>-1<br>4<br>3<br>4<br>2<br>4<br>5<br>3<br>1<br>1<br>4<br>3<br>4<br>0<br>3<br>4<br>1<br>1<br>7<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>0<br>1<br>5<br>1<br>5 | 75  | 3 50 9 3 12 8 1 -4 1 10 11 15 3 11 12 13 -10 5 4 7 14 10 3 1 39 19 48 0 4 10 10 | 5 5 4 3 6 2 5 2 3 10 3 3 -4 1 7 7 44 2 5 0 3 1 -3 0 2 7 1 2 3 2 4 -1 4 8 0 5 19 | 14   | -1   | 2   | -3  |
| 4   | 5   | 9   | 4   | 2  | 5  | -5  | -2  |
| 5   | 7   | 3   | 3   | 0  | -4   | -1  | -1  |
| 3   | 8   | 12  | 6   | 2  | 1  | -7  | 0   |
| 4   | 2   | 8   | 2   | 1  | 1  | 4   | 1   |
| 4   | -2  | 1   | 5   | 4  | 3  | -1  | 0   |
| -1  | -2  | -4  | 2   | 3  | -5   | 0   | 0   |
| 4   | 12  | 1   | 3   | 2  | 0  | -4  | 0   |
| 3   | 0   | 10  | 10  | 8  | 0  | -2  | 1   |
| 27  | 0   | 11  | ა<br>ე  | 0  | 16   | -1  | 2   |
| 37  | 5<br>5  | - I I   | ى<br>م  | 2  | 1  | -2  | 3   |
| 3   | 0   | 3   | 1   | 2  | 2  | -2  | 2   |
|   | -1  | 11  | 7   | 5  | -5   | 0   | 1   |
| 2   | 4   | 12  | 7   | 6  | 3  | 2   | -1  |
| 45  | 35  | 13  | 44  | 20   | 31   | -2  | 0   |
| 3   | 0   | -10   | 2   | 4  | -3   | -1  | 0   |
| 1   | -1  | 5   | 5   | 4  | 1  | -2  | 0   |
| 1   | 0   | 14  | 0   | 3  | 2  | 7   | 0   |
| 4   | 7   | 7   | 3   | 4  | -3   | -1  | 0   |
| 3   | -1  | -1  | 1   | 4  | 0  | -2  | 2   |
| 0   | 8   | 10  | -3  | -2   | -1   | -3  | 0   |
| 4   | 6   | 5   | 0   | 2  | 0  | 0   | 0   |
| 0   | 0   | 4   | 2   | 1  | 0  | -2  | 2   |
| 3   | 6   | 7   | 7   | 8  | -2   | -2  | 1   |
| 4   | 43  | 14  | 1   | -1   | 1  | -2  | -3  |
| 1   | 5   | 10  | 2   | 3  | 0  | -1  | -2  |
| 2   | 2   | 3   | 3   | 4  | 0  | 3   | -1  |
| -3  | 0   | 1   | 2   | 6  | 2  | -2  | 1   |
| 11  | 14  | 39  | 4   | 3  | 2  | -1  | -3  |
| 1   | 12  | 19  | -1  | -2   | 4  | -2  | -1  |
| /<br>E  | 13  | 48  | 4   | 5  | -10  | -5<br>2   | 1   |
| 0   | ა<br>ე  | 4   | 0   | ე<br>ე   | - I  | -S  | -1  |
| 1   | 5   | 10  | 5   | 2  | -S<br>1  | 4   | 1   |
| 5   | <i>1</i>  | 10  | 10  | 1/1  | 7  | -2  | 0   |
| 10  | 24  | 79  | -1  |  | 0  | 1   | 0   |
| 5   | 9   | 11  | 23  | 2<br>5   | -3   | 4   | -1  |
| 3   | 2   | 26  | 31  | 54   | -1   | 1   | 0   |
| 0   | -1  | 1   | -1  | 0  | 0  | 2   | 1   |
| 3   | -1<br>14<br>9<br>-2<br>-1<br>22   | 1<br>45   | -1<br>2   | 0  | 0<br>-2<br>0<br>-2<br>6<br>1   | -4  | 0<br>1<br>-3<br>-2<br>1<br>1  |
| 25  | 9   | 31  | 7   | 5  | 0  | -8<br>-3  | -2  |
| 3   | -2  | 3   | 2   | 2  | -2   | -3  | 1   |
| -2  | -1  | 3   | 3   | 2<br>-1<br>-3<br>0   | 6  | 1<br>-2   | 1   |
| 4   | 22  | 77  | 4   | -3   | 1  | -2  | 0   |
| -2  | 3   | 4   | 1<br>8  | 0  | -5   | 11  | 0   |
| 25<br>3<br>-2<br>4<br>-2<br>4   | 8<br>7  | 4<br>4<br>4   |   | 6  | 3  | -2  | 0   |
| 3   | 7   | 4   | 1<br>4  | 3  | 1  | 11<br>-2<br>-3<br>-3<br>-2  | 0   |
| 4   | 0   | 7   | 4   | 6  | 3  | -3  | 0   |
| 4   | 11  | 13  | 27  | 16   | 1  | -2  | -2<br>-10<br>-1   |
| 3   | 2   | 13  | 3   | 5  | -1   | -3  | -10   |
| 6   | 10  | 48  | 0   | 0  | 1  | 1<br>0<br>1   | -1  |
| 2   | -5  | 6   | 2   | 2  | -4<br>2  | 0   | 0   |
| 6   | 9   | 8   | 5   | 3  | 2  | 1   | 1   |
| 2   | -4  | 8   | 3   | 3  | -2   | -3  | -1  |
| 8   | 23  | 35  | 2   | 4  | 2  | 0   | -1  |

| _  | _   |  | _  |   | _   |  |  |
|--|---|--|--|---|---|--|--|
| 3  | 8   | 12   | 3  | 0   | 8   | 1  | 0  |
| 18   | 14  | 0  | -1   | 0   | 0   | 0  | 0  |
| -1   | -1  | 10   | - I  | 2   | 4   | 4  | 1  |
| 0  | 10  | 10   | 0  | 6   | 5   | -1   | -1   |
| 0  |   | 10   | 3  | 7   | 0   | -3   | 0  |
| 1  | -6  | 6  | 1  | 3   | -1  | -2   | 0  |
| 6  | 3   | 9  | 2  | 2   | 2   | 0  | -1   |
| -4   | 1   | 6  | 4-   | 9   | 2   | -1   | 0  |
| 0  | 3   | 6  | 17   | 12  | 1   | -6   | -1   |
| 2  | 3   | 14   | 3  | 4   | 2   | -1   | -3   |
| 1  | 2   | 6  | 4  | 4   | 3   | 0  | -1   |
| 3  | 4   | 7  | 5  | 3   | 0   | -4   | 0  |
| 0  | 1   | 4  | 4  | 3   | -2  | -2   | 0  |
| 6  | 5   | 8  | 4  | 2   | 0   | 0  | 0  |
| 14   | 23  | 19   | 8  | 6   | 3   | 2  | 0  |
| 2  | 4   | 26   | -1   | 2   | 1   | 0  | 0  |
| 5  | 5   | 11   | 1  | 2   | 1   | 1  | 0  |
| 2  | 9   | 9  | 2  | 5   | 3   | -3   | -3   |
| -1   | 4   | 4  | 7  | -1  | 9   | -1   | 2  |
| 18<br>-1<br>5<br>0<br>1<br>6<br>-4<br>0<br>2<br>1<br>3<br>0<br>6<br>14<br>2<br>5<br>2<br>-1<br>1<br>1<br>6<br>1<br>1<br>3<br>1<br>5<br>4<br>-2<br>5<br>2<br>5<br>8<br>3<br>5<br>4<br>-2<br>5<br>4<br>-2<br>5<br>2<br>5<br>4<br>-2<br>5<br>5<br>4<br>-2<br>5<br>5<br>4<br>-2<br>5<br>5<br>2<br>5<br>5<br>7<br>-2<br>5<br>7<br>-2<br>5<br>7<br>-2<br>5<br>7<br>-2<br>5<br>7<br>-2<br>5<br>7<br>-2<br>5<br>7<br>-2<br>5<br>7<br>-2<br>7<br>-2 | 14<br>-1<br>10<br>2<br>-6<br>3<br>1<br>3<br>2<br>4<br>1<br>5<br>2<br>3<br>4<br>5<br>9<br>4<br>1<br>2<br>0<br>4<br>6<br>2<br>6<br>6<br>4<br>7<br>3<br>5<br>4<br>8<br>1<br>7<br>8<br>7<br>8<br>7<br>8<br>7<br>8<br>7<br>8<br>7<br>8<br>7<br>8<br>7<br>8<br>7<br>8 | 0<br>1<br>10<br>6<br>9<br>6<br>6<br>14<br>6<br>7<br>4<br>8<br>19<br>26<br>11<br>9<br>4<br>5<br>17<br>14<br>23<br>6<br>15<br>16<br>5<br>2<br>3<br>12<br>3<br>13<br>14<br>15<br>16<br>16<br>17<br>17<br>17<br>17<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18<br>18 | 3<br>-1<br>-1<br>5<br>3<br>1<br>2<br>7<br>17<br>3<br>4<br>5<br>4<br>4<br>8<br>-1<br>1<br>2<br>7<br>0<br>7<br>2<br>7<br>0<br>11<br>4<br>4<br>2<br>7<br>0<br>11<br>11<br>11<br>11<br>11<br>11<br>11<br>11<br>11<br>11<br>11<br>11<br>1 | 7<br>3<br>2<br>9<br>12<br>4<br>4<br>3<br>3<br>2<br>6<br>2<br>2<br>5<br>-1<br>4<br>6<br>5<br>4<br>1<br>8 | 8<br>0<br>4<br>5<br>0<br>-1<br>2<br>2<br>1<br>2<br>3<br>0<br>-2<br>0<br>3<br>1<br>1<br>3<br>9<br>-2<br>3<br>2<br>4<br>3<br>5<br>-1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | 1 0 4 -1 -3 -2 0 -1 -6 -1 0 -4 -2 0 2 0 1 -3 -1 0 -2 1 8 -2 -2 -2 12 -1 1 -1 0 2 -2 5 1 3 -3 | 0<br>1<br>-1<br>0<br>0<br>-1<br>0<br>-1<br>-3<br>-1<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>-3<br>2<br>1<br>-2<br>3<br>0<br>1<br>1<br>0<br>1<br>1<br>0<br>1<br>1<br>0<br>1<br>1<br>0<br>0<br>1<br>1<br>1<br>0<br>0<br>1<br>1<br>1<br>0<br>1<br>1<br>1<br>0<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 |
| 16   | 20  | 17   | 7  | 6   | 3   | -2   | -2   |
| 1  | 4   | 14   | 2  | 5   | 2   | 1  | 3  |
| 4  | 6   | 23   | 7  | 4   | 4   | 8  | 0  |
| 1  | 2   | 6  | 0  | 1   | 3   | -2   | 1  |
| 3  | 6   | 15   | 11   | 8   | -15   | -2   | 0  |
| 3  | 6   | 16   | 4  | 2<br>6  | -4  | -2   | 1  |
| 5  | 4   | 5  | 4  | 6   | 3   | 12   | 1  |
| 4  | 13  | 2  | 2  | 2   | 5   | -1   | -2   |
| -2   | 4   | 3  | 3  | 5   | -1  | 1  | 1  |
| 2  | 7   | 12   | 4  | 2<br>5<br>3   | -1  | -1   | -1   |
| 5  | 35  | 53   | 0  | 2   | 1   | -1   | 0  |
| 8  | 4   | 13   | 3  | 2<br>2<br>0<br>3<br>5   | 3   | 0  | 0  |
| 3  | 8   | 9  | 2  | 0   | 0   | 2  | 1  |
| 3  | 1   | 8  | 4  | 3   | -2  | -2   | 0  |
| 6  | 5   | 16   | 7  | 5   | -3  | 5  | 7  |
| 1  | 2   | 3  | 4  | 2   | 0   | 1  | 1  |
| 3  | -1  | 2  | 2<br>4<br>7<br>4<br>6  | 6   | -1  | 3  | 1  |
| -2   | 14  | 3  | -2   | 7   | 3   | -3   | 0  |
| 6  | 15  | 9  | -2   | -1  | 1   | -3   | 0  |
| 6<br>4   | 6   | 9  | 4  | 4   | 1<br>-2   | -3<br>-1<br>0  | 0  |
|  | 16  | 7  | -2   | -2  | 1   | 0  | 0  |
| 1<br>1<br>8  | 1   | 4  | -1   | 1   | 0   | 0  | 0  |
| 8  | 3   | 13   | 6  | 1<br>3  | -14   | -1   | 1  |
| 2  | 13  | 11   | 19   |   | -4  | -1<br>0  | -3   |
| 2<br>4<br>-2<br>-1<br>5<br>4<br>8<br>8<br>4<br>5   | 3   | 8  | -2<br>-1<br>6<br>19<br>3<br>-4<br>4<br>29<br>5<br>3<br>1<br>4  | -1<br>3   | 0<br>-14<br>-4<br>3   | -2   | -3<br>0  |
| -2   | 10  | -4   | -4   | -6  | -2  | -2   | -1   |
| -1   | 0   | 2  | 4  | 9   | -4  | 3  | 0  |
| 5  | -1  | 10   | 29   | 17  | 0   | -1   | -3   |
| 4  | -2  | -4   | 5  | -6<br>9<br>17<br>3  | 5   | -1   | 0  |
| 8  | 10<br>0<br>-1<br>-2<br>4<br>13<br>0<br>7  | -4<br>2<br>10<br>-4<br>8<br>69<br>17<br>5  | 3  | 3   | -2<br>-4<br>0<br>5<br>6<br>0<br>-3<br>-8<br>4<br>-4<br>0  | -1   | -1<br>0<br>-3<br>0<br>-1<br>0<br>-2  |
| 8  | 13  | 69   | 1  | 0   | 0   | 0  | 0  |
| 4  | 0   | 17   | 4  | 5   | -3  | 2  | -2   |
| 5  | 7   | 5  | 13   | 9   | _Q  | _5   | 0  |
| 2  | 7   | 1  | 1  | 1   | 1   | 2  |  |
| 1  | 7   | 1<br>8   | 1<br>8   | 4<br>10   | -4  | 1  | 0  |
| 2<br>1<br>5  | 6   | 7  | 7  | 5   | -4  | 4  | 0  |
| 2  | 5   | 7<br>10  | 5  | 5<br>4  | 0   | -2<br>-2<br>3<br>-1<br>-1<br>-1<br>0<br>2<br>-5<br>2<br>4<br>-3<br>1<br>-2                   | 0  |
| 1  | 5<br>9  | 6  | 5<br>2   | 0   | 0<br>1  | 1  | 0  |
|  | 9   | U  |  | U   |   |  | U  |

| 20  | 1  | -6   | 8  | 10   | 0  | 2  | 2  |
|---|--|--|--|--|--|--|--|
| 20  | 2  |  |  |  |  | -3 -3 2 -3 -4 -3 0 -1 -2 -2 1 -5 1 -4 -2 -1 10 4 -1 -2 0 -3 -3 -3 -1 0 -2 -2 0 | 2  |
| 20<br>14<br>1<br>1<br>1<br>3<br>3<br>2<br>4<br>5<br>16<br>3<br>18<br>-2<br>2<br>10<br>-1<br>5<br>2<br>3<br>7<br>2<br>5<br>7<br>7<br>5<br>7<br>5<br>7<br>7<br>5<br>7<br>7<br>7<br>7<br>7<br>7<br>7<br>7<br>7 | 4  | 5<br>0<br>6<br>16<br>7<br>6<br>8<br>4<br>11<br>10<br>71<br>8<br>7<br>6<br>6<br>8<br>8<br>53<br>10<br>11<br>10<br>9<br>10<br>-19<br>8<br>18<br>12<br>-1<br>13<br>14<br>8<br>2<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1 | 4<br>-1<br>2<br>4<br>4<br>4<br>3<br>1<br>5<br>4<br>5<br>4<br>2<br>3<br>3<br>2<br>4<br>0<br>0<br>6<br>13<br>1<br>5<br>2<br>1<br>3<br>4<br>6<br>1<br>1<br>4<br>6<br>1<br>1<br>3<br>4<br>6<br>1<br>1<br>3<br>4<br>6<br>1<br>1<br>3<br>4<br>6<br>1<br>6<br>1<br>7<br>1<br>7<br>1<br>7<br>1<br>7<br>1<br>7<br>1<br>7<br>1<br>7<br>1<br>7<br>1 | 2<br>3<br>15<br>6<br>-2<br>8<br>1<br>7<br>0<br>2<br>2<br>4<br>5<br>17<br>4<br>0<br>-1<br>6<br>10<br>2<br>3<br>6<br>2<br>0<br>1<br>2<br>0<br>1<br>2<br>3<br>6<br>1<br>2<br>3<br>6<br>1<br>2<br>3<br>6<br>1<br>2<br>3<br>6<br>1<br>2<br>3<br>6<br>1<br>2<br>3<br>6<br>2<br>3<br>6<br>1<br>2<br>3<br>6<br>2<br>3<br>3<br>6<br>2<br>3<br>3<br>6<br>2<br>3<br>3<br>6<br>2<br>3<br>3<br>6<br>2<br>3<br>3<br>3<br>3 | -6<br>-1<br>-5<br>4<br>1<br>-2<br>-2<br>2<br>-1<br>1<br>-5<br>-2<br>0<br>-1<br>-3<br>4<br>-2<br>2<br>-1<br>0<br>1<br>4<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1<br>-1 | 2  | 0<br>0<br>0<br>-3<br>1<br>-2<br>0<br>0<br>0<br>-1<br>0<br>0<br>-3<br>0<br>-2<br>1<br>1<br>1<br>-2<br>-1<br>1<br>1<br>4<br>-2<br>-2<br>-2<br>-2<br>-2<br>-2<br>-2<br>-2<br>-2<br>-2<br>-2<br>-2<br>-2 |
| 1   | 5  | 6  | 2  | 3  | -5   | -3   | -3   |
| 14  | 14   | 16   | 4  | 15   | 4  | -4   | 1  |
| 1   | 2  | 7  | 4  | 6  | 1  | -3   | -2   |
| 3   | 11   | 6  | -4   | -2   | -2   | 0  | 0  |
| 3   | 5<br>14<br>2<br>11<br>2<br>3<br>6<br>6<br>2<br>1<br>8<br>2<br>9<br>2<br>1<br>4<br>2<br>15<br>5<br>5<br>3<br>4<br>9<br>9<br>9<br>15<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10 | 8  | 3  | 8  | -2   | -1   | 0  |
| 2   | 3  | 4  | 1  | 1  | 2  | -2   | -1   |
| 4   | 6  | 11   | 5  | 7  | -1   | -2   | 0  |
| 5   | 6  | 10   | 4  | 0  | 1  | 1  | 0  |
| 16  | 21   | 71   | 5  | 2  | -5   | -3   | -3   |
| 3   | 8  | 8  | 4  | 2  | -2   | -1   | 0  |
| 18  | 29   | 7  | 2  | 4  | 0  | 1  | -2   |
| -2  | 2  | 6  | 3  | 5  | -1   | 5  | 1  |
| 2   | 1  | 6  | 32   | 17   | -3   | -2   | 1  |
| 10  | 4  | 8  | 4  | 4  | 4  | -1   | -1   |
| -1  | 2  | -8   | 0  | 0  | -2   | -2   | -2   |
| 52  | 15<br>-  | 53   | 0  | -1   | 2  | 1  | -1   |
| 3   | 5  | 10   | 12   | 10   | -10  | -5   | 1  |
| 2   | 2  | 11   | 13   | 10   | 1  | 1  | 14   |
| 2   | ა<br>⊿   | 0  | - I<br>- E   | 2  | 1  | - <del>4</del>   | -2   |
| 7   | 9  | 10   | 5  | 6  | -1   | -2<br>-1   | 0  |
| 25  | 30   | -10  | 2  | 2  | -1<br>-2   | 10   | -2   |
| 7   | 2  | 8  | 1  | 0  | 4  | 4  | -2   |
| 7   | 15   | 18   | 3  | 1  | 3  | -1   | -2   |
| 5   | 10   | 12   | 3  | 2  | -3   | -2   | -2   |
| 4   | 9  | 12   | 4  | 3  | 6  | 0  | -5   |
| 5   | 15   | -1   | 8  | 6  | -4   | -3   | 0  |
| 5   | 11   | 13   | 3  | 0  | -1   | -3   | -1   |
| 3   | 11   | 14   | 4  | 1  | 1  | -3   | -2   |
| 5   | 10   | 8  | 6  | 1<br>3   | 1  | -3   | -3   |
| 0   | 2  | 2  | 11   | 9  | -1   | -1   | -2   |
| 4   | 14   | -16  | 4  | 9<br>1<br>21<br>0<br>5   | 1  | 0  | 0  |
| 0   | -2   | 5  | 29   | 21   | 0  | -2   | 0  |
| -4  | -2   | -6   | -4   | 0  | -3   | -2   | 1  |
|   |  |  |  |  |  |  |  |
| 1   | 1  | 7  | 3  | 2  | -1   | 1  | 0  |
| 2   | 6  | 9  | 0  | 2  | 11<br>18   | -2   | 0  |
| 9   | 4  | 10   | 3  | 1  | 18   | 3  | -1<br>0  |
| 33  | 19<br>-5   | 71   | 5  | 2  | -1<br>-1   | -1   | 0  |
| 1<br>2<br>3<br>1<br>1<br>9  | -5   | 8<br>2<br>13<br>5<br>8<br>12   | 2<br>1<br>2<br>5   | 1<br>2<br>1<br>2<br>2<br>7<br>2<br>6   | -1   | -1<br>-4<br>2<br>-1<br>-7<br>2<br>1<br>2<br>-1<br>-3<br>-3<br>-1<br>-1         | -2<br>0<br>0<br>1<br>-2<br>0   |
| 2   | 0<br>4   | 2  | 1  | 2  | 1<br>4   | -4   | 0  |
| 3   | 4  | 13   | 2  | 2  | 4  | 2  | 0  |
| 1   | 1<br>2   | 0  | 2  | 7  | 0  | -T   | T  |
| 0   | 3  | 0  | 3<br>9   | 2  | -5<br>3<br>-1<br>1<br>3  | 2  | -2   |
| 0   | 3  | 8  | 1  |  | J<br>_1  | 1  | 2  |
| 5   | _1   | Q  | 1<br>2<br>3  | 2<br>3<br>3  | 1  | 2  | 2<br>0<br>0  |
| 2   | -5   | 8<br>4   | 3  | 3  | 3  | -1   | 0  |
| 2 3   | 3<br>-1<br>-5<br>-2  | 10   | 3  | 3  | 1  | -3   | 1  |
| 9   | 12   | 15   | 4  | 1  | 1<br>-12   | -3   | 1<br>-2<br>-1<br>0   |
| 5   | 12<br>13<br>-5   | 8  | 20   | 1<br>33  | 7  | -1   | -1   |
| 0   | -5   | 21   | 1  | 7  | -3   | -1   | 0  |
| 8   | 18   | 13   | 23   | -38  | 33   | 1  | 3  |
| 0   | 7  | 2  | 5  |  | -2   | 11   | -2   |
| 1   | 8  | 34   | -1   | 7<br>0   | -3   | 1  | -2<br>0  |

| -1  | 24   | 0  | 25  | -22   | 72   | 0   | 0                        |
|---|--|--|---|---|--|---|--------------------------|
| 5   | 9  |  | 3   | -23<br>-2   | 72<br>-1<br>-6<br>-6<br>-4<br>1<br>-5<br>4<br>-7<br>-1<br>0<br>-1<br>-4<br>2<br>0<br>4<br>8<br>-3<br>0<br>0<br>-1<br>-1<br>3<br>-2<br>-2<br>0<br>-3<br>0<br>-1<br>-2<br>-3<br>-6<br>-6<br>-6<br>-6<br>-7<br>-7<br>-7<br>-7<br>-7<br>-7<br>-7<br>-7<br>-7<br>-7<br>-7<br>-7<br>-7 | 0   | 0                        |
| 5<br>12<br>2<br>1<br>-1<br>19<br>1<br>17<br>6<br>1<br>-1<br>4<br>10<br>3<br>8<br>11<br>1<br>2<br>4<br>5<br>1<br>1<br>1<br>3<br>1<br>4<br>6<br>2<br>3<br>1<br>4<br>6<br>2<br>3<br>1<br>4<br>6<br>2<br>3<br>1<br>4<br>6<br>3<br>1<br>4<br>6<br>3<br>1<br>4<br>6<br>3<br>1<br>4<br>6<br>3<br>4<br>6<br>3<br>4<br>4<br>6<br>3<br>4<br>4<br>6<br>3<br>4<br>4<br>6<br>3<br>4<br>6<br>4<br>6 | 9 23 -5 20 9 16 2 11 16 7 2 7 4 2 3 5 5 42 8 -2 8 43 4 3 -1 0 2 18 11 15 2 15 -4 4 0 3 4 | 1 9 9 3 11 11 6 10 82 6 4 2 21 8 9 6 3 11 5 12 4 8 7 1 10 6 6 13 8 9 10 7 2 6 9 8 14 | 3 -2 -1 -2 -3 19 0 5 3 2 1 0 7 1 6 1 -1 16 10 8 3 5 3 3 4 -2 3 5 3 5 10 1 0 9 2 9 | -2<br>2<br>1<br>0<br>0<br>17<br>-1<br>6<br>3<br>1<br>0<br>6<br>8<br>-1<br>7<br>1<br>2<br>1<br>8<br>3<br>1<br>2<br>0<br>2<br>7<br>1<br>1<br>0<br>6<br>1<br>1<br>0<br>1<br>0<br>1<br>0<br>1<br>0<br>1<br>0<br>1<br>0<br>1<br>0<br>1 | -6   | -2  | -2                       |
| 2   | -5   | 9  | -1  | 1   | -6   | -1  | -2                       |
| 1   | 20   | 3  | -2  | 0   | -4   | 0   | 5                        |
| -1  | 9  | 11   | -3  | 0   | 1  | 1   | 0                        |
| 19  | 16   | 11   | 19  | 17  | -5   | -1  | 0                        |
| 1   | 2  | 6  | 0   | -1  | 4  | 3   | -2                       |
| 17  | 11   | 10   | 5   | 6   | -7   | -2  | 0                        |
| 6   | 16   | 82   | 3   | 3   | -1   | 6   | 1                        |
| 1   | 7  | 6  | 2   | 1   | 0  | 0   | 2                        |
| -1  | 2  | 4  | 1   | 0   | -1   | 1   | 0                        |
| 4   | 7  | 2  | 0   | 6   | -4   | 2   | 0                        |
| 10  | 4  | 21   | 7   | 8   | 2  | 0   | 1                        |
| 3   | 2  | 8  | 1   | -1  | 0  | 1   | 1                        |
| 8   | 3  | 9  | 6   | 7   | 4  | 3   | 0                        |
| 11  | 5  | 6  | 1   | 1   | 8  | 1   | 0                        |
| 1   | 5  | 3  | -1  | 2   | -3   | -4  | -1                       |
| 24  | 42   | 11   | 16  | 18  | 0  | -4  | -3                       |
|   | 8  | 5  | 10  | ئ<br>40   | 0  | -2  | 1                        |
| 5<br>4  | -2   | 12   | Ö   | 0   | -1   | 3   | -1                       |
| 1<br>12   | 0<br>42  | 4<br>0   | 5   | 27  | - 1  | - I   | -1                       |
| 13  | 43<br>1  | 7  | 3   | 21  | -2   | -5<br>-6  | 1                        |
| 6   | 3  | 1  | 3   | 2   | -2   | 2   | 0                        |
| 2   | -1   | 10   | 4   | 5   | 0  | 0   | 0                        |
| -3  | 0  | -6   | -2  | -1  | -3   | -3  | 2                        |
| 0   | 2  | 6  | 3   | 2   | 0  | -3  | 0                        |
| 5   | 18   | 13   | 5   | 5   | 3  | -2  | 0                        |
| 4   | 11   | 8  | 3   | 1   | -2   | -3  | 1                        |
| 6   | 15   | 9  | 5   | 10  | -5   | 2   | 0                        |
| 2   | 2  | 10   | 10  | 6   | -4   | 1   | 5                        |
| 3   | 15   | 7  | 1   | 1   | 0  | 8   | 0                        |
| 1   | -4   | 2  | 0   | 3   | -1   | -3  | -1                       |
| 0   | 4  | 6  | 9   | 9   | -2   | -2  | -1                       |
| 3   | 0  | 9  | 2   | 3   | -3   | 2   | 0                        |
| 4   | 3  | 8  | 9   | 7   | -6   | -4  | 2                        |
|   |  |  | 7   | 7   |  |   |                          |
| 8   | 11   | 10   | 3   | 3   | -7   | -8  | 0                        |
| 4   | 0  | 9  | 2   | 3   | 0  | -5  | 1                        |
| 0   | -9   | 3  | 1   | 1   | -2   | -2  | -1                       |
| 4   | 10   | 19   | 5   | 1<br>4  | -2   | 0   | -1                       |
| 5   | 10   | 11   | 6   |   | -2<br>-15<br>1<br>0<br>-1<br>-3<br>1<br>0  | -5<br>2   | -1<br>-1<br>2<br>0<br>0  |
| 1 3   | 4  | 8  | 2<br>2<br>4   | 3<br>4  | 1  | 3<br>-4<br>-3<br>-1<br>-1<br>-2<br>-1<br>1<br>0 | 2                        |
| 3   | 5  | 0<br>12<br>5   | 4   |   | 1  | -4  | 0                        |
| 3<br>4  | 0<br>6   | 1Z<br>5  | 3   | 2<br>5  | - 1  | -3<br>-1  | _1                       |
| 0   | 2  | 2  | 0   |   | 1  | _1  | 0                        |
| 3   |  | 2<br>9<br>-2   | 2   | -1<br>3   | 0  | -2  | 0                        |
| -2  | 0<br>0   | -2   | 0   | 0   | -3   | -1  | -1                       |
| 0<br>3<br>-2<br>-3<br>4<br>2<br>-1<br>3   |  | 1  | 2<br>0<br>-1<br>4<br>7<br>-1  | 2   | 2  | 1   | -1<br>0<br>0<br>-1<br>-2 |
| 4   | 1<br>5   | 1<br>9   | 4   | 2   | 2<br>0   | 0   | 4                        |
| 2   | 1  | 0  | 7   | 8   | -2   | 0   | 0                        |
| -1  | 1  | 4  | -1  | 1   | -2<br>-2   | -5  | 2                        |
| 3   | 0  | 6  |   | 3   | 7  | -2  | -1                       |
| 6   | 6  | 13   | 1<br>4  | 4   | -1   | 0   | 0                        |
| 0   | 1  | 11   | 2   | 4   |  | -2  |                          |
| 2   | 9  | 6  | 4   | 6   | 1<br>0   | 0   | -1<br>1                  |

| 4                                   | 0  | 19  | 7   | 10                                     | -1   | 0  | 0   |
|-------------------------------------|--|---|---|--|--|--|---|
| 1                                   | 2  | 7   | 4   |  | -3   |  | 0   |
| 19                                  | 47   | 25  | 71<br>9   | 7<br>-8<br>9<br>4                      |  | -1<br>-3<br>-4<br>3<br>1<br>-4<br>5<br>5<br>-1<br>-2<br>5<br>1<br>0                        | 0   |
| 5                                   | 1  | 32  | 9   | 9                                      | 87<br>5<br>1<br>5<br>-6<br>-1<br>-1<br>-3<br>3<br>4<br>0                             | -4   | 0<br>-1<br>-1<br>0                        |
| 4                                   | 3  | 8   | 3   | 4                                      | 1  | 3  | -1  |
| 0                                   | 6  | 6   | 6   | 8<br>2                                 | 5  | 1  | 0   |
| 4                                   | 10   | -1<br>2<br>2  | 4   | 2                                      | -6   | -4   | 0   |
| 0                                   | 4  | 2   | -1  | -2                                     | -1   | 5  | 1   |
| 2<br>4                              | 0  | 2   | -2  | 0                                      | -1   | 5  | -2  |
| 4                                   | 21   | 7   | 9   | 13                                     | -3   | -1   | 0   |
| 4<br>1<br>3                         | 2  | 10  | 4   | 4                                      | ა<br>ვ   | -2<br>5  | 1<br>-2<br>0<br>0<br>0<br>-1              |
| ા<br>વ                              | -2   | 11<br>15  | ۱ ۱<br>۲  | 1                                      | ⊿  | 1  | -1  |
| 1                                   | 1  | 2   | 0   | 4                                      | 0  | 1  | 0   |
| 33                                  | 6<br>10<br>4<br>0<br>21<br>2<br>3<br>-2<br>1<br>7                                | 60  | 6   | -2<br>0<br>13<br>4<br>9<br>4<br>4<br>4 | 21   | 0  | 2   |
| 1<br>33<br>13<br>2<br>-2<br>-3<br>3 | 55   | 2<br>60<br>22<br>-1<br>5<br>12<br>8<br>19<br>10<br>17<br>12<br>19<br>3<br>3<br>9<br>8<br>15 | 4<br>-1<br>-2<br>9<br>4<br>11<br>3<br>0<br>6<br>6<br>69<br>1<br>2<br>4<br>0 | 25                                     | 21<br>81<br>2<br>-1<br>-1<br>0<br>2<br>-1<br>0<br>4<br>-2<br>2<br>-3<br>2<br>-1<br>6 | -2   | 2<br>1<br>0<br>-1                         |
| 2                                   | 55<br>0<br>-1<br>4<br>9  | -1  | 1   | 1                                      | 2  | -2<br>-2<br>-2<br>0<br>0<br>-3<br>-2<br>1<br>-1<br>3<br>-2<br>0<br>0<br>0<br>-1<br>-1<br>2 | 0   |
| -2                                  | -1   | 5   | 2   | 4                                      | -1   | -2   | -1  |
| -3                                  | 4  | 12  | 4   | 6                                      | -1   | 0  | 0   |
| 3                                   | 9  | 8   | 0   | -1                                     | 0  | 0  | 2   |
| 59<br>4<br>3<br>5<br>4              | 60<br>12<br>4<br>4<br>5<br>-1<br>1<br>5<br>-1<br>17<br>-9<br>3<br>15<br>10<br>-1 | 19  | 7<br>4<br>14<br>6<br>8<br>1<br>10<br>20                                     | 1<br>4<br>6<br>-1<br>10                | 2  | -3   | 0   |
| 4                                   | 12   | 10  | 4   | 3                                      | -1   | -2   | 0   |
| 3                                   | 4  | 17  | 14  | 14<br>6                                | 0  | 1  | 0   |
| 5                                   | 4  | 12  | 6   | 6                                      | 4  | -1   | 0   |
| 4                                   | 5  | 19  | 8   | 8<br>4<br>11<br>18<br>16               | -2   | 3  | 0   |
| 3                                   | -1   | 3   | 1   | 4                                      | 2  | -2   | 1<br>0<br>-1<br>0                         |
| 3                                   | 1  | 3   | 10  | 11                                     | -3   | 0  | 0   |
| 2                                   | 5  | 9   | 20  | 18                                     | 2  | 0  | -1  |
| 6<br>6                              | -1   | 8   | 8   | 16                                     | -1   | 0  | 0   |
| 6                                   | 17   | 15  | 8<br>21<br>3<br>7   | 22                                     | б  | -1   | 0<br>1<br>-2<br>-2<br>-1<br>0<br>-1<br>-1 |
| 2<br>4<br>16                        | -9   | 25  | 3<br>7  | 3<br>5<br>-4                           | 2  | - 1  | 1<br>2                                    |
| 16                                  | 3<br>15  | 11<br>7<br>13<br>8<br>7   | 55  | -∆                                     | 4<br>78  | 0  | -2<br>-2                                  |
| 9                                   | 10   | 13  | 3   | 3                                      | 4  | 0  | -1  |
| 9<br>10                             | -1   | 8   | 3   | 3<br>2                                 | -4   | 4  | 0   |
| 5                                   | 6  | 7   | 4   | 4                                      | 1  |  | -1  |
| 5<br>36                             | 6<br>55  | 86  | 55<br>3<br>3<br>4<br>1<br>15  | 4<br>3                                 | 4<br>-4<br>1<br>-2<br>0  | 0<br>0   | -1  |
| 29                                  | 16   | 35  | 15  | 10                                     | 0  | -2   | 0   |
| 0                                   | 3  | 11  | 3   | 2                                      | 7  |  | 0   |
| 3                                   | 2  | 6   | 5   | 3                                      | 3  | 1  | 1   |
| 66                                  | 62   | 12  | 20  | 16                                     | 6  | 1  | 1   |
| 5                                   | 5  | 8   | 8   | 8                                      | 9  | -4   | 0   |
| 44                                  | 72   | 71  | 20  | 18                                     | 0  | -2<br>1<br>1<br>-4<br>1<br>-2<br>1<br>0<br>2   | 0   |
| -1<br>3                             | -5   | 1<br>10   | 0   | 3                                      | -1   | -2   | -2  |
| 3                                   | 9<br>5   | 10  | 2<br>-1<br>0  | 1<br>1                                 | 2<br>-5<br>8   | 1  | -1<br>-2                                  |
| 0<br>-1<br>3                        | 5  | 7   | -1  | 1                                      | -5   | 0  | -2  |
| -1                                  | 0  | 8   | 0   | 0                                      | 8  | 2  | 0   |
| 3                                   | -3<br>2  | 6   | 1   | 5                                      | 2  | 1  | 0   |
| 2<br>49                             | 2  | 4   | 5   | 3                                      | 1  | 2  | 1<br>0                                    |
| 49                                  | 70   | 83  | 3   | 13                                     | -9<br>11   | -2   | 4.0                                       |
| 3 2                                 | 6  | 21  | 1   | 2                                      | 11   | -1   | 12  |
|                                     | 3<br>-1  | 14  | 9   | 3<br>1                                 | 2<br>-1  | -5<br>4  | 0   |
| -5<br>4                             | 5  | 3<br>3  | 0<br>2  | 1                                      | 4  | 1<br>2<br>-2<br>-1<br>-5<br>-4<br>-2   | -1<br>0                                   |
| -1                                  | ე<br>1   | 3<br>2  | -3  | -3                                     | 3  |  | -2  |
| 82                                  | 66   | 80  | -3<br>6   | 10                                     |  | 3<br>4   | -2<br>-1                                  |
| 6                                   | 4  | 11  | 5   | 2                                      | -2   | 0  | 0   |
| 8                                   | 18   | 10  | 1   | 2                                      | -1<br>-2<br>1  | 0  | 0   |
|                                     |  |   |   |  |  |  |   |

| 14 | 4  | 9  | 4  | 2  | 5  | 0  | -4 |
|----|----|----|----|----|----|----|----|
| 58 | 44 | 11 | 4  | 3  | 0  | 0  | -1 |
| 3  | 5  | 18 | 5  | 5  | 1  | -6 | 2  |
| 2  | 18 | -2 | 1  | 7  | -2 | 5  | 2  |
| 0  | 4  | 5  | -4 | 1  | -2 | 1  | 0  |
| 29 | 28 | 62 | 7  | 13 | 1  | 0  | -1 |