

Olmsteadite, $K_2Fe_2^{2+}[Fe_2^{2+}(Nb,Ta)_2^{5+}O_4(H_2O)_4(PO_4)_4]$, a new species, its crystal structure and relation to vauxite and montgomeryite

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Abstract

Olmsteadite, $K_2Fe_2^{2+}[Fe_2^{2+}(Nb,Ta)_2^{5+}O_4(H_2O)_4(PO_4)_4]$, a 7.512(1), b 10.000(3), c 6.492(2)Å, $Z = 1$, space group $Pb2_1m$, occurs as lustrous deep brown to black thick prismatic crystals at the Hesnard pegmatite and as thin prismatic crystals at the Big Chief pegmatite, Black Hills, South Dakota. Hardness = 4; specific gravity 3.36(1) (Hesnard), 3.31(1) (Ta-poor: Big Chief); streak olive-green, cleavages good parallel to {100} and {001}. Variable Ta content (to $Nb_{0.71}Ta_{0.29}$) is noted for Big Chief material. Crystals show $c\{001\}$, $a\{100\}$, $p\{111\}$, $p'\{1\bar{1}1\}$ (Big Chief) and additional $m\{110\}$, $g\{10i\}$ (Hesnard). Biaxial (+): α 1.725(5), β 1.755(5), γ 1.815(5); $2V \sim 60^\circ$; X blue-green, Y yellow, Z brown; absorption $X \gg Z > Y$, $X||c$, $Y||a$, $Z||b$ (Big Chief); α 1.765(4), β 1.775(4), γ 1.835(4), X dark blue, Y light brown, Z dark brown (Hesnard).

Olmsteadite contains the same kind of structural unit as found in montgomeryite and vauxite. It consists of corner-linked octahedral chains of composition $[Fe_2^{2+}(Nb,Ta)_2^{5+}O_4(H_2O)_4(PO_4)_4]^{6-}$ which are oriented parallel to [010]. These chains are in a *cis*-configuration across the *oxo*-bridges. Average interatomic distances are Nb⁵⁺-O 1.98, Fe²⁺-O 2.12, P(1)-O 1.53 and P(2)-O 1.55Å. The K⁺ cation occurs in a distorted cube of oxygen atoms affording an average of K-O 3.02Å.

Introduction

In 1973, Mr. W. L. Roberts of Rapid City, South Dakota, sent us thick prismatic crystals of a deep brown to black phosphate culled from the Hesnard pegmatite near Custer, Custer County, South Dakota, which he noted qualitatively contained potassium, niobium, iron, and phosphorus. Preliminary X-ray powder and single crystal study suggested a species new to scientific intelligence. Several months later, Mr. Roberts submitted thin tabular crystals of an unknown brown phosphate collected by Mr. M. Olmstead from the Big Chief pegmatite, near Glandale, Pennington County, South Dakota, which qualitatively revealed the presence of potassium, iron, and phosphorus. Mutual identity of the two materials was not suspected until we compared their X-ray photographs. In this study, we propose the Big Chief crystals as the type since the crystal structure analysis was performed on that material.

Owing to the peculiar chemistry of the new mineral, here named *olmsteadite*, a complete three-dimensional crystal structure analysis was undertaken, the results of which establish the ideal formula

$K_2Fe_2^{2+}[Fe_2^{2+}(Nb,Ta)_2^{5+}O_4(H_2O)_4(PO_4)_4]$. To our knowledge, this is the first known example of a secondary transition-metal phosphate containing essential niobium.

Descriptive mineralogy

Physical properties

Olmsteadite is a product of hydrothermal leaching and corrosion of primary triphylite-lithiophilite and, presumably, columbite-tantalite. Columbite-tantalite occurs in a paragenesis similar to the primary giant phosphate phases and many occurrences show the two in close contact. Although columbite-tantalite is more resistant to corrosion than triphylite-lithiophilite, many examples are known of partly to extensively altered crystals. It was not possible to locate such examples at either of the localities but columbite-tantalite and triphylite do occur at both.

Olmsteadite occurs early in the sequence of late stage products, its crystals being embedded in minerals later in the sequence. At the Hesnard pegmatite, it is embedded in dense aggregates of red-brown botryoidal-platy rockbridgeite. The crystals are thick

| H | K | L | FO | FC | ALPH | H | K | L | FO | FC | ALPH | H | K | L | FO | FC | ALPH |
|----|-----|---|-------|-------|-------|----|-----|---|------|------|-------|-----|-----|----|------|------|-------|
| 0 | -14 | 0 | 21.3 | 21.6 | 260.7 | 4 | 6 | 0 | 7.2 | 6.7 | 2.8 | 9 | 8 | 0 | 33.5 | 35.1 | 137.3 |
| 0 | -12 | 0 | 84.3 | 85.9 | 45.6 | 4 | 7 | 0 | 42.9 | 44.2 | 116.6 | -10 | -6 | 0 | 4.3 | 6.6 | -59.4 |
| 0 | -10 | 0 | 51.4 | 49.2 | -75.3 | 4 | 8 | 0 | 80.4 | 80.7 | -20.3 | -10 | -5 | 0 | 59.1 | 59.8 | 244.0 |
| 0 | -8 | 0 | 132.1 | 131.8 | 15.5 | 4 | 9 | 0 | 32.6 | 32.8 | 8.1 | -10 | -4 | 0 | 7.9 | 9.3 | 2.2 |
| 0 | -6 | 0 | 59.5 | 55.4 | 205.3 | 4 | 10 | 0 | 22.3 | 20.8 | 69.6 | -10 | -3 | 0 | 29.0 | 30.0 | -28.2 |
| 0 | -4 | 0 | 130.2 | 138.5 | 27.0 | 4 | 11 | 0 | 17.2 | 19.4 | 79.9 | -10 | -2 | 0 | 9.1 | 6.4 | 51.8 |
| 0 | -2 | 0 | 14.8 | 18.3 | 41.2 | 4 | 12 | 0 | 45.1 | 45.9 | -27.8 | -10 | -1 | 0 | 46.8 | 50.0 | 208.7 |
| 0 | 2 | 0 | 15.2 | 19.0 | -46.7 | 4 | 13 | 0 | 8.0 | 10.0 | -63.6 | 10 | 0 | 0 | 5.6 | 7.4 | 0.6 |
| 0 | 4 | 0 | 128.0 | 135.3 | -20.2 | -5 | -13 | 0 | 6.0 | 5.1 | -45.3 | 10 | 1 | 0 | 48.7 | 51.7 | 161.9 |
| 0 | 6 | 0 | 62.5 | 57.6 | 157.9 | -5 | -12 | 0 | 14.4 | 16.6 | -52.4 | 10 | 2 | 0 | 2.7 | 4.9 | -34.5 |
| 0 | 8 | 0 | 134.9 | 134.0 | -9.3 | -5 | -11 | 0 | 47.5 | 45.5 | 240.9 | 10 | 3 | 0 | 31.6 | 31.8 | 42.9 |
| 0 | 10 | 0 | 48.6 | 47.4 | 81.6 | -5 | -10 | 0 | 38.2 | 43.3 | 33.4 | 10 | 4 | 0 | 8.4 | 8.9 | -0.8 |
| 0 | 12 | 0 | 82.3 | 83.9 | -37.3 | -5 | -9 | 0 | 18.6 | 15.6 | -5.2 | 10 | 5 | 0 | 57.5 | 57.6 | 125.9 |
| 0 | 14 | 0 | 23.7 | 23.8 | 113.8 | -5 | -8 | 0 | 23.1 | 21.4 | -66.6 | 10 | 6 | 0 | 8.5 | 8.6 | 64.3 |
| -1 | -14 | 0 | 24.1 | 24.6 | 2.2 | -5 | -7 | 0 | 43.5 | 45.0 | 232.7 | -11 | -3 | 0 | 22.4 | 23.4 | 259.0 |
| -1 | -13 | 0 | 42.2 | 43.1 | 72.0 | -5 | -6 | 0 | 56.4 | 55.9 | 2.3 | -11 | -2 | 0 | 34.2 | 37.0 | 200.5 |
| -1 | -12 | 0 | 23.7 | 25.3 | -20.0 | -5 | -5 | 0 | 26.3 | 26.9 | -2.0 | -11 | -1 | 0 | 15.3 | 18.3 | 268.5 |
| -1 | -11 | 0 | 54.4 | 54.9 | 223.0 | -5 | -4 | 0 | 20.6 | 21.9 | -60.2 | 11 | 0 | 0 | 31.5 | 32.4 | 7.2 |
| -1 | -10 | 0 | 39.7 | 40.3 | 2.1 | -5 | -3 | 0 | 48.7 | 49.3 | 231.3 | 11 | 1 | 0 | 14.9 | 18.9 | 104.7 |
| -1 | -9 | 0 | 77.0 | 77.4 | 28.1 | -5 | -2 | 0 | 77.0 | 80.2 | 4.8 | 11 | 2 | 0 | 34.6 | 36.4 | 170.4 |
| -1 | -8 | 0 | 69.3 | 68.1 | -6.9 | -5 | -1 | 0 | 36.1 | 36.8 | -25.3 | 11 | 3 | 0 | 24.9 | 24.7 | 110.4 |
| -1 | -7 | 0 | 82.1 | 83.4 | 231.3 | 5 | 0 | 0 | 10.9 | 10.0 | 183.5 | 0 | -14 | -1 | 12.5 | 14.3 | 258.3 |
| -1 | -6 | 0 | 60.5 | 61.2 | -5.0 | 5 | 1 | 0 | 35.9 | 37.7 | 36.3 | 0 | -12 | -1 | 44.4 | 42.7 | 49.9 |
| -1 | -5 | 0 | 88.7 | 89.4 | 14.6 | 5 | 2 | 0 | 77.5 | 80.4 | 2.2 | 0 | -10 | -1 | 46.4 | 47.0 | 261.5 |
| -1 | -4 | 0 | 15.4 | 14.9 | 8.2 | 5 | 3 | 0 | 48.6 | 47.8 | 137.8 | 0 | -8 | -1 | 16.6 | 16.4 | -55.4 |
| -1 | -3 | 0 | 162.8 | 159.7 | 191.6 | 5 | 4 | 0 | 17.3 | 20.5 | 64.3 | 0 | -6 | -1 | 72.0 | 75.3 | 212.4 |
| -1 | -2 | 0 | 74.5 | 72.3 | -11.8 | 5 | 5 | 0 | 25.4 | 27.0 | 14.3 | 0 | -4 | -1 | 27.3 | 24.6 | 36.0 |
| -1 | -1 | 0 | 112.3 | 115.0 | 16.2 | 5 | 6 | 0 | 59.7 | 58.3 | 7.1 | 0 | -2 | -1 | 54.0 | 55.8 | 168.1 |
| 1 | 0 | 0 | 67.1 | 65.0 | 1.9 | 5 | 7 | 0 | 44.4 | 44.7 | 138.2 | 0 | 0 | 1 | 83.7 | 84.6 | 2.9 |
| 1 | 1 | 0 | 111.6 | 113.0 | -11.6 | 5 | 8 | 0 | 20.7 | 20.6 | 74.2 | 0 | 2 | 1 | 57.9 | 59.6 | 200.3 |
| 1 | 2 | 0 | 77.2 | 73.7 | 17.0 | 5 | 9 | 0 | 17.9 | 17.0 | 19.1 | 6 | 4 | 1 | 25.1 | 23.2 | -16.6 |
| 1 | 3 | 0 | 165.3 | 160.8 | 172.0 | 5 | 10 | 0 | 57.5 | 42.7 | -22.4 | 0 | 6 | 1 | 72.6 | 75.1 | 154.7 |
| 1 | 4 | 0 | 12.3 | 14.0 | 11.0 | 5 | 11 | 0 | 46.9 | 46.1 | 129.8 | 0 | 8 | 1 | 24.1 | 24.2 | 57.5 |
| 1 | 5 | 0 | 90.2 | 89.9 | -9.0 | 5 | 12 | 0 | 12.8 | 15.1 | 65.5 | 0 | 10 | 1 | 43.0 | 43.1 | 107.8 |
| 1 | 6 | 0 | 62.3 | 62.1 | 11.5 | 5 | 13 | 0 | 8.0 | 8.4 | 52.9 | 0 | 12 | 1 | 43.0 | 42.8 | -39.3 |
| 1 | 7 | 0 | 81.0 | 81.1 | 135.1 | -6 | -12 | 0 | 24.9 | 24.6 | -16.2 | 0 | 14 | 1 | 13.6 | 14.1 | 129.9 |
| 1 | 8 | 0 | 67.7 | 67.8 | 11.2 | -6 | -11 | 0 | 15.1 | 17.8 | 8.5 | -1 | -14 | -1 | 7.7 | 8.4 | 78.2 |
| 1 | 9 | 0 | 78.9 | 78.5 | -21.9 | -6 | -10 | 0 | 38.7 | 37.9 | 15.7 | -1 | -13 | -1 | 29.8 | 29.4 | 77.8 |
| 1 | 10 | 0 | 41.9 | 40.9 | 6.7 | -6 | -9 | 0 | 36.0 | 36.8 | 249.2 | -1 | -12 | -1 | 7.0 | 5.9 | 202.9 |
| 1 | 11 | 0 | 56.3 | 56.4 | 145.9 | -6 | -8 | 0 | 19.0 | 19.2 | -88.2 | -1 | -11 | -1 | 26.0 | 24.5 | 235.1 |
| 1 | 12 | 0 | 23.6 | 26.2 | 30.0 | -6 | -7 | 0 | 38.5 | 39.2 | -6.2 | -1 | -10 | -1 | 17.9 | 17.4 | 68.7 |
| 1 | 13 | 0 | 41.3 | 41.3 | -62.2 | -6 | -6 | 0 | 38.4 | 38.0 | 19.9 | -1 | -9 | -1 | 43.3 | 44.6 | 35.1 |
| 1 | 14 | 0 | 24.6 | 25.4 | 9.7 | -6 | -5 | 0 | 67.5 | 68.1 | 248.6 | -1 | -8 | -1 | 6.2 | 8.2 | 66.3 |
| -2 | -14 | 0 | 53.1 | 52.4 | 36.8 | -6 | -4 | 0 | 26.4 | 28.5 | 25.1 | -1 | -7 | -1 | 39.3 | 41.0 | 239.5 |
| -2 | -13 | 0 | 16.4 | 17.5 | -79.8 | -6 | -3 | 0 | 47.9 | 51.7 | -39.4 | -1 | -6 | -1 | 35.5 | 37.4 | 38.2 |
| -2 | -12 | 0 | 30.2 | 32.8 | 249.8 | -6 | -2 | 0 | 67.3 | 69.7 | 33.0 | -1 | -5 | -1 | 40.3 | 42.5 | 3.9 |
| -2 | -11 | 0 | 11.5 | 11.7 | -40.0 | -6 | -1 | 0 | 55.8 | 55.4 | 232.9 | -1 | -4 | -1 | 29.2 | 30.3 | 67.5 |
| -2 | -10 | 0 | 78.3 | 80.9 | 41.9 | 6 | 0 | 0 | 14.0 | 13.6 | -1.3 | -1 | -3 | -1 | 61.4 | 62.7 | 205.7 |
| -2 | -9 | 0 | 15.9 | 16.4 | 245.2 | 6 | 10 | 0 | 39.8 | 39.9 | -4.3 | -1 | -2 | -1 | 42.6 | 46.6 | -0.6 |
| -2 | -8 | 0 | 18.9 | 18.9 | 237.2 | 6 | 1 | 0 | 54.6 | 54.3 | 135.5 | -1 | -1 | -1 | 53.3 | 52.2 | 42.3 |
| -2 | -7 | 0 | 12.3 | 9.6 | 103.3 | 6 | 2 | 0 | 64.0 | 65.8 | -25.1 | 1 | 0 | 1 | 25.4 | 25.6 | 180.4 |
| -2 | -6 | 0 | 177.8 | 174.5 | 19.9 | 6 | 3 | 0 | 52.5 | 53.7 | 47.0 | 1 | 1 | 1 | 49.1 | 47.4 | -33.9 |
| -2 | -5 | 0 | 33.0 | 31.8 | 224.9 | 6 | 4 | 0 | 26.9 | 27.9 | -27.9 | 1 | 2 | 1 | 43.5 | 47.0 | 3.7 |
| -2 | -4 | 0 | 49.5 | 49.3 | -63.1 | 6 | 5 | 0 | 64.7 | 66.0 | 118.4 | 1 | 3 | 1 | 62.8 | 61.4 | 162.6 |
| -2 | -3 | 0 | 59.0 | 57.1 | -29.5 | 6 | 6 | 0 | 38.9 | 38.4 | -6.5 | 1 | 4 | 1 | 31.0 | 30.5 | -67.7 |
| -2 | -2 | 0 | 193.0 | 191.6 | 3.5 | 6 | 7 | 0 | 39.8 | 39.3 | 14.5 | 1 | 5 | 1 | 43.1 | 45.4 | 6.4 |
| -2 | -1 | 0 | 58.8 | 60.9 | -76.6 | 6 | 8 | 0 | 21.0 | 18.8 | 97.2 | 1 | 6 | 1 | 34.8 | 37.1 | -34.4 |
| 2 | 0 | 0 | 35.3 | 29.0 | 182.0 | 6 | 9 | 0 | 37.0 | 36.3 | 123.9 | 1 | 7 | 1 | 38.0 | 38.0 | 131.8 |
| 2 | 1 | 0 | 54.2 | 58.3 | 78.5 | 6 | 11 | 0 | 17.1 | 18.3 | 4.5 | 1 | 8 | 1 | 8.2 | 8.8 | -67.7 |
| 2 | 2 | 0 | 196.8 | 192.6 | 1.3 | 6 | 12 | 0 | 21.1 | 21.4 | 20.1 | 1 | 9 | 1 | 46.2 | 45.5 | -24.5 |
| 2 | 3 | 0 | 59.8 | 57.2 | 32.5 | -7 | -11 | 0 | 2.8 | 6.9 | -35.6 | 1 | 10 | 1 | 15.0 | 17.0 | -62.6 |
| 2 | 4 | 0 | 49.0 | 46.8 | 64.7 | -7 | -10 | 0 | 19.2 | 21.3 | 244.3 | 1 | 11 | 1 | 25.2 | 24.5 | 142.4 |

| | | | | | | | | | | | | | | | | | |
|----|-----|---|-------|-------|-------|----|-----|---|------|------|-------|----|-----|----|------|------|-------|
| 2 | 5 | 0 | 32.6 | 32.4 | 140.3 | -7 | -9 | 0 | 22.9 | 23.7 | -84.5 | 1 | 12 | 1 | 7.1 | 6.3 | 166.3 |
| 2 | 6 | 0 | 179.4 | 174.2 | -14.9 | -7 | -8 | 0 | 41.4 | 42.9 | 36.2 | 1 | 13 | 1 | 27.4 | 27.6 | -63.2 |
| 2 | 7 | 0 | 7.4 | 7.8 | 251.0 | -7 | -7 | 0 | 21.3 | 22.1 | -88.8 | 1 | 14 | 1 | 8.6 | 8.0 | -69.8 |
| 2 | 8 | 0 | 21.4 | 20.4 | 133.9 | -7 | -6 | 0 | 25.0 | 22.8 | 245.9 | -2 | -14 | -1 | 20.0 | 20.7 | 52.7 |
| 2 | 9 | 0 | 17.2 | 16.3 | 126.5 | -7 | -5 | 0 | 43.0 | 43.2 | 247.4 | -2 | -13 | -1 | 17.8 | 17.2 | 263.2 |
| 2 | 10 | 0 | 76.8 | 78.8 | -32.8 | -7 | -4 | 0 | 69.8 | 73.7 | 7.3 | -2 | -12 | -1 | 32.3 | 33.4 | 238.2 |
| 2 | 11 | 0 | 12.1 | 12.7 | 45.2 | -7 | -3 | 0 | 25.5 | 27.7 | 269.8 | -2 | -11 | -1 | 3.9 | 7.6 | 1.1 |
| 2 | 12 | 0 | 33.2 | 34.7 | 119.3 | -7 | -2 | 0 | 23.0 | 22.7 | 224.8 | -2 | -10 | -1 | 26.7 | 27.1 | 51.2 |
| 2 | 13 | 0 | 14.7 | 16.3 | 89.6 | -7 | -1 | 0 | 19.1 | 18.9 | 220.8 | -2 | -9 | -1 | 35.1 | 35.5 | 197.9 |
| 2 | 14 | 0 | 55.2 | 53.6 | -25.8 | 7 | 0 | 0 | 51.2 | 52.3 | 5.7 | -2 | -8 | -1 | 44.0 | 45.5 | 217.5 |
| -3 | -14 | 0 | 28.7 | 27.6 | -5.5 | 7 | 1 | 0 | 20.6 | 19.9 | 157.0 | -2 | -7 | -1 | 37.0 | 34.8 | 75.1 |
| -3 | -13 | 0 | 50.3 | 48.6 | 245.4 | 7 | 2 | 0 | 21.2 | 21.3 | 144.3 | -2 | -6 | -1 | 55.2 | 54.6 | 24.5 |
| -3 | -12 | 0 | 38.1 | 39.5 | 3.8 | 7 | 3 | 0 | 28.2 | 31.4 | 95.7 | -2 | -5 | -1 | 29.3 | 28.7 | 168.5 |
| -3 | -11 | 0 | 35.3 | 34.6 | 21.9 | 7 | 4 | 0 | 71.8 | 74.9 | 0.5 | -2 | -4 | -1 | 65.9 | 69.2 | 234.9 |
| -3 | -10 | 0 | 32.0 | 33.7 | -46.5 | 7 | 5 | 0 | 42.2 | 41.9 | 122.2 | -2 | -3 | -1 | 31.0 | 31.9 | 11.5 |
| -3 | -9 | 0 | 61.4 | 62.2 | 234.6 | 7 | 6 | 0 | 21.9 | 21.8 | 124.4 | -2 | -2 | -1 | 32.3 | 29.6 | -48.6 |
| -3 | -8 | 0 | 45.6 | 47.5 | 5.6 | 7 | 7 | 0 | 22.9 | 25.5 | 93.7 | -2 | -1 | -1 | 33.4 | 33.5 | 217.3 |
| -3 | -7 | 0 | 23.5 | 26.2 | 42.4 | 7 | 8 | 0 | 41.4 | 41.7 | -23.7 | 2 | 0 | 1 | 82.0 | 88.7 | 183.0 |
| -3 | -6 | 0 | 24.0 | 24.2 | -31.3 | 7 | 9 | 0 | 21.0 | 20.9 | 101.0 | 2 | 1 | 1 | 31.2 | 32.1 | 146.8 |
| -3 | -5 | 0 | 87.7 | 89.6 | 209.1 | 7 | 10 | 0 | 19.9 | 22.0 | 127.8 | 2 | 2 | 1 | 38.3 | 36.4 | 55.9 |
| -3 | -4 | 0 | 73.0 | 73.1 | 11.0 | 7 | 11 | 0 | 5.9 | 8.2 | 52.3 | 2 | 3 | 1 | 32.0 | 32.2 | -6.2 |
| -3 | -3 | 0 | 134.3 | 130.8 | -1.6 | -8 | -10 | 0 | 10.7 | 9.4 | 10.2 | 2 | 4 | 1 | 64.0 | 64.6 | 131.6 |
| -3 | -2 | 0 | 41.6 | 41.9 | -39.8 | -8 | -9 | 0 | 17.2 | 18.2 | -18.8 | 2 | 5 | 1 | 32.6 | 30.0 | 196.3 |
| -3 | -1 | 0 | 37.1 | 40.2 | 194.9 | -8 | -8 | 0 | 22.3 | 20.4 | 43.9 | 2 | 6 | 1 | 55.7 | 54.8 | -15.9 |
| 3 | 0 | 0 | 73.9 | 75.7 | 3.4 | -8 | -7 | 0 | 45.8 | 48.5 | 235.3 | 2 | 7 | 1 | 34.2 | 33.4 | -71.6 |
| 3 | 1 | 0 | 38.3 | 41.6 | 177.5 | -8 | -6 | 0 | 17.8 | 22.0 | 5.0 | 2 | 8 | 1 | 46.1 | 46.2 | 152.6 |
| 3 | 2 | 0 | 41.7 | 43.0 | 42.3 | -8 | -5 | 0 | 47.0 | 49.7 | -3.9 | 2 | 9 | 1 | 36.8 | 36.4 | 166.7 |
| 3 | 3 | 0 | 135.5 | 131.1 | 5.1 | -8 | -4 | 0 | 24.6 | 27.2 | -7.4 | 2 | 10 | 1 | 25.6 | 26.6 | -34.8 |
| 3 | 4 | 0 | 74.1 | 72.9 | -4.4 | -8 | -3 | 0 | 46.7 | 46.7 | 241.9 | 2 | 11 | 1 | 10.2 | 9.1 | 8.6 |
| 3 | 5 | 0 | 90.0 | 90.5 | 156.8 | -8 | -2 | 0 | 15.7 | 14.2 | -41.3 | 2 | 12 | 1 | 33.8 | 33.6 | 134.7 |
| 3 | 6 | 0 | 20.9 | 23.7 | 37.9 | -8 | -1 | 0 | 69.8 | 70.4 | -36.9 | 2 | 13 | 1 | 16.5 | 16.3 | 105.0 |
| 3 | 7 | 0 | 21.7 | 23.9 | -27.5 | 8 | 0 | 0 | 10.1 | 6.5 | 26.2 | 2 | 14 | 1 | 21.8 | 22.1 | -34.6 |
| 3 | 8 | 0 | 48.0 | 48.4 | 3.7 | 8 | 1 | 0 | 73.0 | 71.8 | 44.1 | -3 | -14 | -1 | 9.0 | 8.0 | 233.6 |
| 3 | 9 | 0 | 61.0 | 61.6 | 134.1 | 8 | 2 | 0 | 13.6 | 13.4 | 41.7 | -3 | -13 | -1 | 29.1 | 27.8 | 248.1 |
| 3 | 10 | 0 | 31.7 | 34.2 | 53.3 | 8 | 3 | 0 | 44.5 | 44.6 | 129.8 | -3 | -12 | -1 | 29.4 | 28.5 | 37.2 |
| 3 | 11 | 0 | 26.3 | 36.3 | -12.7 | 8 | 4 | 0 | 27.8 | 29.2 | 18.6 | -3 | -11 | -1 | 22.9 | 24.9 | 46.3 |
| 3 | 12 | 0 | 40.5 | 41.7 | 5.9 | 8 | 5 | 0 | 47.0 | 48.8 | 12.6 | -3 | -10 | -1 | 25.7 | 26.2 | 224.2 |
| 3 | 13 | 0 | 49.9 | 48.7 | 124.8 | 8 | 6 | 0 | 18.1 | 20.7 | -5.0 | -3 | -9 | -1 | 39.3 | 41.0 | 233.5 |
| 3 | 14 | 0 | 25.7 | 25.7 | 12.7 | 8 | 7 | 0 | 47.5 | 49.0 | 136.2 | -3 | -8 | -1 | 31.6 | 31.3 | 38.0 |
| -4 | -13 | 0 | 7.8 | 11.5 | 73.3 | 8 | 8 | 0 | 21.6 | 19.0 | -28.8 | -3 | -7 | -1 | 48.6 | 50.1 | 29.1 |
| -4 | -12 | 0 | 45.4 | 46.1 | 39.9 | 8 | 9 | 0 | 23.1 | 20.8 | 33.3 | -3 | -6 | -1 | 34.1 | 32.6 | 190.8 |
| -4 | -11 | 0 | 21.6 | 23.0 | -68.4 | 8 | 10 | 0 | 11.0 | 7.6 | -12.1 | -3 | -5 | -1 | 33.7 | 33.7 | 219.4 |
| -4 | -10 | 0 | 24.5 | 23.0 | -60.4 | -9 | -8 | 0 | 34.7 | 35.5 | 232.5 | -3 | -4 | -1 | 60.4 | 63.1 | 35.5 |
| -4 | -9 | 0 | 31.2 | 32.7 | -1.3 | -9 | -7 | 0 | 17.9 | 18.9 | 258.5 | -3 | -3 | -1 | 66.5 | 66.5 | 0.6 |
| -4 | -8 | 0 | 81.2 | 81.3 | 28.6 | -9 | -6 | 0 | 35.4 | 37.2 | 24.3 | -3 | -2 | -1 | 11.2 | 9.1 | 185.8 |
| -4 | -7 | 0 | 44.1 | 45.0 | 251.4 | -9 | -5 | 0 | 7.5 | 9.1 | -79.6 | -3 | -1 | -1 | 56.9 | 59.6 | 193.3 |
| -4 | -6 | 0 | 10.6 | 9.5 | -8.3 | -9 | -4 | 0 | 27.5 | 29.7 | 190.4 | 3 | 0 | 1 | 56.3 | 60.0 | 2.7 |
| -4 | -5 | 0 | 34.5 | 34.9 | -74.7 | -9 | -3 | 0 | 19.9 | 23.9 | -86.7 | 3 | 1 | 1 | 57.8 | 59.5 | 174.6 |
| -4 | -4 | 0 | 103.1 | 105.1 | 11.3 | -9 | -2 | 0 | 58.9 | 63.1 | 22.7 | 3 | 2 | 1 | 8.5 | 9.3 | 192.3 |
| -4 | -3 | 0 | 60.6 | 60.5 | 242.9 | -9 | -1 | 0 | 29.7 | 32.3 | 260.9 | 3 | 3 | 1 | 66.8 | 68.1 | 6.3 |
| -4 | -2 | 0 | 15.0 | 16.6 | -58.7 | 9 | 0 | 0 | 18.4 | 22.0 | 187.1 | 3 | 4 | 1 | 60.1 | 62.2 | -31.1 |
| -4 | -1 | 0 | 66.0 | 65.0 | -35.0 | 9 | 1 | 0 | 32.8 | 35.3 | 105.5 | 3 | 5 | 1 | 32.2 | 32.6 | 154.1 |
| 4 | 0 | 0 | 138.8 | 143.6 | 2.7 | 9 | 2 | 0 | 58.8 | 61.3 | -13.6 | 3 | 6 | 1 | 36.2 | 33.3 | 175.2 |
| 4 | 1 | 0 | 66.8 | 65.2 | 39.7 | 9 | 3 | 0 | 21.5 | 22.1 | 98.8 | 3 | 7 | 1 | 48.5 | 50.4 | -20.0 |
| 4 | 2 | 0 | 13.7 | 14.8 | 59.1 | 9 | 4 | 0 | 30.4 | 31.1 | 180.2 | 3 | 8 | 1 | 30.9 | 31.2 | -30.4 |
| 4 | 3 | 0 | 57.6 | 59.0 | 123.1 | 9 | 5 | 0 | 4.4 | 10.8 | 99.4 | 3 | 9 | 1 | 40.3 | 39.9 | 136.9 |
| 4 | 4 | 0 | 103.8 | 105.7 | -4.1 | 9 | 6 | 0 | 35.0 | 37.7 | -10.5 | 3 | 10 | 1 | 25.7 | 26.4 | 142.9 |
| 4 | 5 | 0 | 39.9 | 38.7 | 79.3 | 9 | 7 | 0 | 18.6 | 18.7 | 118.2 | 3 | 11 | 1 | 25.4 | 25.7 | -29.9 |

3

4

| H | K | L | FO | FC | ALPH | H | K | L | FO | FC | ALPH | H | K | L | FO | FC | ALPH |
|----|-----|----|------|------|-------|-----|-----|----|-------|-------|-------|----|-----|----|-------|-------|-------|
| 3 | 12 | 1 | 30.4 | 29.5 | -29.5 | 8 | 5 | 1 | 37.2 | 37.1 | -32.9 | -3 | -8 | -2 | 40.9 | 41.6 | 202.7 |
| 3 | 13 | 1 | 28.3 | 27.2 | 126.0 | 8 | 6 | 1 | 18.3 | 18.2 | 152.5 | -3 | -7 | -2 | 56.5 | 56.4 | 49.1 |
| 3 | 14 | 1 | 7.9 | 8.6 | 145.7 | 8 | 7 | 1 | 38.1 | 37.5 | 167.4 | -3 | -6 | -2 | 69.1 | 72.9 | 194.8 |
| -4 | -13 | -1 | 28.2 | 25.7 | 71.2 | 8 | 8 | 1 | 31.5 | 32.1 | -34.5 | -3 | -5 | -2 | 55.1 | 57.1 | 172.9 |
| -4 | -12 | -1 | 26.5 | 26.7 | 54.1 | 8 | 9 | 1 | 13.5 | 14.0 | -31.7 | -3 | -4 | -2 | 77.2 | 79.2 | 172.3 |
| -4 | -11 | -1 | 23.9 | 24.5 | 219.4 | 8 | 10 | 1 | 20.2 | 19.4 | 160.8 | -3 | -3 | -2 | 76.4 | 76.5 | 40.6 |
| -4 | -10 | -1 | 33.8 | 34.2 | 230.8 | -9 | -8 | -1 | 32.9 | 31.0 | 227.5 | -3 | -2 | -2 | 63.5 | 65.9 | 183.1 |
| -4 | -9 | -1 | 38.1 | 37.3 | 41.8 | -9 | -7 | -1 | 21.8 | 21.7 | 208.6 | -3 | -1 | -2 | 71.5 | 72.7 | 148.9 |
| -4 | -8 | -1 | 40.5 | 40.4 | 35.4 | -9 | -6 | -1 | 20.1 | 21.7 | 42.7 | 3 | 0 | 2 | 67.0 | 68.8 | 181.2 |
| -4 | -7 | -1 | 31.7 | 32.7 | 214.3 | -9 | -5 | -1 | 23.8 | 23.0 | 32.8 | 3 | 1 | 2 | 74.4 | 75.7 | 217.4 |
| -4 | -6 | -1 | 42.6 | 44.0 | 219.8 | -9 | -4 | -1 | 32.1 | 32.6 | 192.5 | 3 | 2 | 2 | 65.1 | 66.5 | 185.4 |
| -4 | -5 | -1 | 20.4 | 21.5 | 6.3 | -9 | -3 | -1 | 15.4 | 14.9 | 228.0 | 3 | 3 | 2 | 75.2 | 75.3 | -33.7 |
| -4 | -4 | -1 | 45.6 | 46.6 | 5.8 | -9 | -2 | -1 | 36.0 | 36.8 | 23.1 | 3 | 4 | 2 | 77.1 | 78.8 | 190.2 |
| -4 | -3 | -1 | 77.7 | 78.8 | 186.5 | -9 | -1 | -1 | 25.5 | 26.6 | -30.7 | 3 | 5 | 2 | 57.9 | 58.8 | 194.7 |
| -4 | -2 | -1 | 73.1 | 75.3 | 187.1 | 9 | 0 | 1 | 25.1 | 22.6 | 189.0 | 3 | 6 | 2 | 71.0 | 73.0 | 172.5 |
| -4 | -1 | -1 | 42.6 | 43.3 | 40.6 | 9 | 1 | 1 | 27.1 | 27.7 | 36.1 | 3 | 7 | 2 | 56.8 | 56.2 | -39.8 |
| 4 | 0 | 1 | 39.4 | 41.2 | 5.0 | 9 | 2 | 1 | 36.0 | 35.9 | -11.2 | 3 | 8 | 2 | 39.0 | 39.6 | 160.6 |
| 4 | 1 | 1 | 38.6 | 41.1 | -34.4 | 9 | 3 | 1 | 14.3 | 14.2 | 141.3 | 3 | 9 | 2 | 32.2 | 32.4 | 160.4 |
| 4 | 2 | 1 | 74.7 | 76.2 | 178.9 | 9 | 4 | 1 | 30.5 | 33.7 | 180.1 | 3 | 10 | 2 | 34.9 | 32.7 | 154.6 |
| 4 | 3 | 1 | 78.5 | 79.1 | 177.6 | 9 | 5 | 1 | 21.8 | 22.2 | -26.3 | 3 | 11 | 2 | 40.9 | 38.8 | -55.6 |
| 4 | 4 | 1 | 48.2 | 48.2 | 2.9 | 9 | 6 | 1 | 19.7 | 20.7 | -24.1 | 3 | 12 | 2 | 14.8 | 12.8 | 184.8 |
| 4 | 5 | 1 | 22.0 | 23.1 | 4.7 | 9 | 7 | 1 | 22.0 | 22.1 | 157.6 | 3 | 13 | 2 | 34.0 | 34.3 | 151.1 |
| 4 | 6 | 1 | 42.5 | 43.2 | 149.9 | 9 | 8 | 1 | 32.3 | 30.3 | 145.8 | 3 | 14 | 2 | 17.5 | 18.4 | 195.3 |
| 4 | 7 | 1 | 32.3 | 32.7 | 154.8 | -10 | -6 | -1 | 8.9 | 10.9 | 35.3 | -4 | -13 | -2 | 26.7 | 26.4 | 106.3 |
| 4 | 8 | 1 | 39.1 | 40.4 | -25.3 | -10 | -5 | -1 | 33.4 | 34.2 | 218.4 | -4 | -12 | -2 | 24.2 | 24.0 | 112.3 |
| 4 | 9 | 1 | 38.0 | 37.1 | -34.6 | -10 | -4 | -1 | 2.9 | 8.3 | 207.7 | -4 | -11 | -2 | 20.6 | 19.3 | 72.7 |
| 4 | 10 | 1 | 32.2 | 34.1 | 140.7 | -10 | -3 | -1 | 23.6 | 21.9 | 46.4 | -4 | -10 | -2 | 59.5 | 57.2 | 195.8 |
| 4 | 11 | 1 | 25.9 | 25.2 | 151.1 | -10 | -2 | -1 | 11.4 | 12.8 | -6.6 | -4 | -9 | -2 | 43.9 | 43.6 | 55.0 |
| 4 | 12 | 1 | 27.3 | 26.8 | -40.1 | -10 | -1 | -1 | 31.8 | 29.9 | 170.3 | -4 | -8 | -2 | 30.9 | 34.4 | 109.2 |
| 4 | 13 | 1 | 25.9 | 25.0 | -62.0 | 10 | 0 | 1 | 6.1 | 9.1 | 183.6 | -4 | -7 | -2 | 9.0 | 8.3 | 44.6 |
| -5 | -13 | -1 | 23.9 | 23.8 | 46.2 | 10 | 1 | 1 | 32.6 | 32.2 | 202.9 | -4 | -6 | -2 | 53.9 | 57.1 | 191.7 |
| -5 | -12 | -1 | 30.8 | 29.8 | 219.1 | 10 | 2 | 1 | 10.4 | 13.3 | 12.7 | -4 | -5 | -2 | 9.9 | 9.7 | 198.5 |
| -5 | -11 | -1 | 38.6 | 38.0 | 230.7 | 10 | 3 | 1 | 19.5 | 19.1 | -28.9 | -4 | -4 | -2 | 27.8 | 29.5 | 255.0 |
| -5 | -10 | -1 | 40.8 | 39.5 | 62.4 | 10 | 4 | 1 | 7.8 | 8.2 | 160.2 | -4 | -3 | -2 | 24.4 | 25.3 | 165.7 |
| -5 | -9 | -1 | 35.8 | 37.8 | 38.5 | 10 | 5 | 1 | 32.3 | 32.9 | 154.3 | -4 | -2 | -2 | 102.4 | 103.4 | 185.4 |
| -5 | -8 | -1 | 24.7 | 23.6 | 207.8 | 10 | 6 | 1 | 10.8 | 10.7 | -27.9 | -4 | -1 | -2 | 45.9 | 45.3 | 79.3 |
| -5 | -7 | -1 | 34.4 | 35.7 | 217.7 | -11 | -2 | -1 | 34.1 | 33.0 | 207.7 | 4 | 0 | 2 | 26.5 | 24.1 | 177.0 |
| -5 | -6 | -1 | 42.6 | 44.7 | 15.6 | -11 | -1 | -1 | 7.7 | 6.9 | 245.9 | 4 | 1 | 2 | 41.5 | 41.8 | -73.9 |
| -5 | -5 | -1 | 59.6 | 60.7 | 15.9 | 11 | 0 | 1 | 14.2 | 14.1 | 13.8 | 4 | 2 | 2 | 103.1 | 104.0 | 181.4 |
| -5 | -4 | -1 | 37.1 | 39.3 | 207.5 | 11 | 1 | 1 | 9.7 | 7.1 | 118.3 | 4 | 3 | 2 | 25.7 | 25.3 | 204.9 |
| -5 | -3 | -1 | 47.3 | 49.5 | 220.7 | 11 | 2 | 1 | 34.2 | 31.6 | 165.0 | 4 | 4 | 2 | 30.4 | 30.8 | -19.3 |
| -5 | -2 | -1 | 58.8 | 60.6 | 8.3 | 0 | -14 | -2 | 44.6 | 43.8 | 214.0 | 4 | 5 | 2 | 10.4 | 9.0 | 125.8 |
| -5 | -1 | -1 | 50.4 | 52.0 | -2.4 | 0 | -12 | -2 | 44.2 | 42.9 | 94.3 | 4 | 6 | 2 | 55.7 | 58.6 | 179.7 |
| 5 | 0 | 1 | 38.1 | 37.4 | 184.3 | 0 | -10 | -2 | 83.5 | 82.7 | 208.4 | 4 | 7 | 2 | 9.8 | 10.9 | -55.4 |
| 5 | 1 | 1 | 49.7 | 52.3 | 10.3 | 0 | -8 | -2 | 22.5 | 25.8 | 100.4 | 4 | 8 | 2 | 29.4 | 32.1 | 257.5 |
| 5 | 2 | 1 | 59.0 | 60.8 | -2.1 | 0 | -6 | -2 | 118.4 | 118.1 | 191.4 | 4 | 9 | 2 | 44.8 | 43.9 | -46.5 |
| 5 | 3 | 1 | 47.4 | 47.5 | 146.6 | 0 | -4 | -2 | 30.9 | 34.3 | 85.4 | 4 | 10 | 2 | 61.0 | 58.7 | 170.4 |
| 5 | 4 | 1 | 35.5 | 38.8 | 160.2 | 0 | -2 | -2 | 138.4 | 131.8 | 174.8 | 4 | 11 | 2 | 23.1 | 21.5 | -74.8 |
| 5 | 5 | 1 | 60.5 | 61.2 | -9.2 | 0 | 0 | 2 | 78.0 | 83.4 | 1.5 | 4 | 12 | 2 | 23.4 | 22.8 | 260.0 |
| 5 | 6 | 1 | 45.2 | 46.2 | -7.5 | 0 | 2 | 2 | 142.0 | 134.7 | 191.6 | 4 | 13 | 2 | 23.6 | 23.3 | 265.5 |
| 5 | 7 | 1 | 35.6 | 35.6 | 152.6 | 0 | 4 | 2 | 27.4 | 31.7 | -78.5 | -5 | -13 | -2 | 19.1 | 22.7 | 77.1 |
| 5 | 8 | 1 | 25.9 | 24.4 | 164.2 | 0 | 6 | 2 | 120.6 | 119.4 | 175.7 | -5 | -12 | -2 | 32.4 | 31.7 | 215.6 |
| 5 | 9 | 1 | 37.2 | 38.0 | -29.0 | 0 | 8 | 2 | 21.9 | 23.7 | -88.9 | -5 | -11 | -2 | 21.5 | 20.2 | 208.6 |
| 5 | 10 | 1 | 39.2 | 38.1 | -54.2 | 0 | 10 | 2 | 84.7 | 83.0 | 160.6 | -5 | -10 | -2 | 29.9 | 28.0 | 154.5 |
| 5 | 11 | 1 | 39.0 | 38.3 | 138.5 | 0 | 12 | 2 | 45.3 | 42.5 | -85.4 | -5 | -9 | -2 | 43.8 | 42.7 | 74.6 |
| 5 | 12 | 1 | 31.3 | 31.0 | 150.3 | 0 | 14 | 2 | 47.4 | 45.3 | 159.5 | -5 | -8 | -2 | 43.4 | 43.7 | 189.1 |
| 5 | 13 | 1 | 24.9 | 24.9 | -32.9 | -1 | -14 | -2 | 25.4 | 22.3 | 195.7 | -5 | -7 | -2 | 47.2 | 47.7 | 163.2 |
| -6 | -12 | -1 | 24.0 | 24.2 | 250.3 | -1 | -13 | -2 | 45.3 | 43.8 | 66.8 | -5 | -6 | -2 | 15.5 | 15.0 | 173.0 |
| -6 | -11 | -1 | 22.1 | 22.0 | 54.0 | -1 | -12 | -2 | 36.9 | 35.3 | 201.6 | -5 | -5 | -2 | 53.0 | 53.1 | 67.9 |
| -6 | -10 | -1 | 39.1 | 38.1 | 23.2 | -1 | -11 | -2 | 32.4 | 33.6 | 235.2 | -5 | -4 | -2 | 46.6 | 47.3 | 214.5 |
| -6 | -9 | -1 | 39.3 | 39.3 | 212.3 | -1 | -10 | -2 | 39.0 | 39.5 | 189.6 | -5 | -3 | -2 | 24.8 | 23.4 | 127.5 |
| -6 | -8 | -1 | 42.1 | 42.5 | 229.2 | -1 | -9 | -2 | 62.5 | 61.1 | 36.9 | -5 | -2 | -2 | 37.4 | 38.5 | 211.4 |

| | | | | | | | | | | | | | | | | | |
|----|-----|----|------|------|-------|----|-----|----|-------|-------|-------|----|-----|----|------|------|-------|
| -6 | -7 | -1 | 38.9 | 38.6 | 40.8 | -1 | -8 | -2 | 24.6 | 26.3 | 193.9 | -5 | -1 | -2 | 71.7 | 75.1 | 49.3 |
| -6 | -6 | -1 | 25.8 | 27.6 | 31.5 | -1 | -7 | -2 | 78.7 | 77.2 | 204.4 | 5 | 0 | 2 | 91.1 | 94.4 | 183.3 |
| -6 | -5 | -1 | 45.0 | 44.7 | 200.2 | -1 | -6 | -2 | 60.8 | 61.0 | 189.5 | 5 | 1 | 2 | 71.3 | 73.5 | -43.3 |
| -6 | -4 | -1 | 56.1 | 57.8 | 184.7 | -1 | -5 | -2 | 54.8 | 54.3 | 33.4 | 5 | 2 | 2 | 37.5 | 38.1 | 142.2 |
| -6 | -3 | -1 | 38.0 | 39.0 | 32.7 | -1 | -4 | -2 | 104.4 | 105.2 | 183.3 | 5 | 3 | 2 | 28.0 | 27.4 | 245.1 |
| -6 | -2 | -1 | 54.5 | 56.4 | 35.2 | -1 | -3 | -2 | 38.7 | 41.8 | 192.9 | 5 | 4 | 2 | 43.2 | 44.3 | 157.7 |
| -6 | -1 | -1 | 40.9 | 44.7 | 180.1 | -1 | -2 | -2 | 111.1 | 112.9 | 194.9 | 5 | 5 | 2 | 51.7 | 50.9 | -58.9 |
| 6 | 0 | 1 | 33.0 | 32.4 | 185.1 | -1 | -1 | -2 | 121.3 | 120.2 | 22.2 | 5 | 6 | 2 | 12.0 | 13.0 | 187.0 |
| 6 | 1 | 1 | 43.9 | 45.4 | 188.4 | 1 | 0 | 2 | 98.6 | 103.3 | 182.4 | 5 | 7 | 2 | 48.1 | 49.2 | 203.6 |
| 6 | 2 | 1 | 53.0 | 54.1 | -29.3 | 1 | 1 | 2 | 121.1 | 119.0 | -17.7 | 5 | 8 | 2 | 46.9 | 46.1 | 181.9 |
| 6 | 3 | 1 | 37.0 | 38.5 | -23.3 | 1 | 2 | 2 | 111.6 | 111.7 | 168.2 | 5 | 9 | 2 | 42.4 | 41.2 | -63.9 |
| 6 | 4 | 1 | 56.0 | 59.2 | 181.0 | 1 | 3 | 2 | 38.9 | 41.8 | 180.3 | 5 | 10 | 2 | 26.4 | 25.4 | 209.7 |
| 6 | 5 | 1 | 44.0 | 44.0 | 168.5 | 1 | 4 | 2 | 106.0 | 106.0 | 181.0 | 5 | 11 | 2 | 20.6 | 20.0 | 164.3 |
| 6 | 6 | 1 | 24.9 | 27.4 | -20.1 | 1 | 5 | 2 | 55.0 | 53.7 | -23.6 | 5 | 12 | 2 | 34.0 | 31.8 | 158.3 |
| 6 | 7 | 1 | 36.9 | 38.1 | -31.9 | 1 | 6 | 2 | 60.2 | 60.5 | 175.5 | 5 | 13 | 2 | 19.9 | 22.4 | -58.0 |
| 6 | 8 | 1 | 42.2 | 41.7 | 138.6 | 1 | 7 | 2 | 80.9 | 78.0 | 162.0 | -6 | -12 | -2 | 16.7 | 18.4 | 228.3 |
| 6 | 9 | 1 | 40.8 | 40.2 | 157.1 | 1 | 8 | 2 | 26.0 | 26.6 | 180.9 | -6 | -11 | -2 | 29.7 | 30.7 | 60.7 |
| 6 | 10 | 1 | 40.9 | 39.6 | -15.5 | 1 | 9 | 2 | 64.3 | 62.3 | -28.4 | -6 | -10 | -2 | 8.5 | 8.2 | 48.6 |
| 6 | 11 | 1 | 22.4 | 21.8 | -39.7 | 1 | 10 | 2 | 37.3 | 38.7 | 177.1 | -6 | -9 | -2 | 15.1 | 15.7 | 168.9 |
| 6 | 12 | 1 | 25.3 | 23.4 | 121.3 | 1 | 11 | 2 | 33.5 | 32.5 | 137.9 | -6 | -8 | -2 | 46.9 | 47.7 | 208.6 |
| -7 | -11 | -1 | 35.8 | 35.2 | 50.7 | 1 | 12 | 2 | 36.0 | 34.7 | 167.7 | -6 | -7 | -2 | 45.8 | 44.6 | 69.2 |
| -7 | -10 | -1 | 23.8 | 26.2 | 217.3 | 1 | 13 | 2 | 45.4 | 43.3 | -55.8 | -6 | -6 | -2 | 23.8 | 26.0 | 138.3 |
| -7 | -9 | -1 | 21.1 | 21.7 | 250.7 | 1 | 14 | 2 | 20.3 | 21.0 | 174.2 | -6 | -5 | -2 | 23.4 | 22.9 | 144.6 |
| -7 | -8 | -1 | 34.2 | 36.1 | 40.7 | -2 | -14 | -2 | 29.0 | 29.7 | 118.6 | -6 | -4 | -2 | 55.7 | 55.5 | 176.9 |
| -7 | -7 | -1 | 34.6 | 35.1 | 5.9 | -2 | -13 | -2 | 5.5 | 7.4 | 14.1 | -6 | -3 | -2 | 46.9 | 49.1 | 44.0 |
| -7 | -6 | -1 | 38.2 | 38.0 | 217.3 | -2 | -12 | -2 | 69.8 | 68.2 | 202.6 | -6 | -2 | -2 | 21.5 | 22.7 | 86.8 |
| -7 | -5 | -1 | 39.0 | 40.5 | 214.4 | -2 | -11 | -2 | 9.4 | 6.4 | 11.1 | -6 | -1 | -2 | 16.8 | 17.2 | 143.0 |
| -7 | -4 | -1 | 37.9 | 38.8 | 16.8 | -2 | -10 | -2 | 34.4 | 36.9 | 89.1 | 6 | 0 | 2 | 41.7 | 44.5 | 185.8 |
| -7 | -3 | -1 | 31.9 | 31.6 | 0.3 | -2 | -9 | -2 | 4.5 | 7.5 | 132.6 | 6 | 1 | 2 | 18.6 | 19.7 | 236.8 |
| -7 | -2 | -1 | 32.3 | 33.9 | 195.1 | -2 | -8 | -2 | 74.2 | 73.8 | 195.6 | 6 | 2 | 2 | 21.1 | 21.3 | -83.4 |
| -7 | -1 | -1 | 45.5 | 48.5 | 192.6 | -2 | -7 | -2 | 37.1 | 36.1 | 123.9 | 6 | 3 | 2 | 46.4 | 48.8 | -34.5 |
| 7 | 0 | 1 | 46.1 | 48.4 | 4.4 | -2 | -6 | -2 | 44.3 | 47.0 | 80.2 | 6 | 4 | 2 | 57.9 | 57.8 | 192.1 |
| 7 | 1 | 1 | 47.5 | 48.5 | 173.5 | -2 | -5 | -2 | 27.8 | 29.4 | 104.3 | 6 | 5 | 2 | 27.6 | 25.3 | 227.1 |
| 7 | 2 | 1 | 32.4 | 33.9 | 176.5 | -2 | -4 | -2 | 144.7 | 142.7 | 194.0 | 6 | 6 | 2 | 22.5 | 23.9 | 224.4 |
| 7 | 3 | 1 | 30.8 | 32.3 | 8.1 | -2 | -3 | -2 | 37.3 | 36.8 | 20.9 | 6 | 7 | 2 | 44.4 | 42.6 | -58.2 |
| 7 | 4 | 1 | 40.7 | 39.4 | -6.1 | -2 | -2 | -2 | 14.5 | 15.4 | -13.8 | 6 | 8 | 2 | 46.0 | 47.2 | 161.7 |
| 7 | 5 | 1 | 38.7 | 40.4 | 152.7 | -2 | -1 | -2 | 48.8 | 47.4 | -29.7 | 6 | 9 | 2 | 14.8 | 17.1 | 205.2 |
| 7 | 6 | 1 | 37.1 | 37.2 | 152.6 | 2 | 0 | 2 | 67.9 | 71.7 | 185.9 | 6 | 10 | 2 | 10.1 | 10.4 | -34.2 |
| 7 | 7 | 1 | 35.1 | 35.6 | 1.7 | 2 | 1 | 2 | 47.8 | 47.2 | 27.0 | 6 | 11 | 2 | 30.6 | 31.8 | -45.7 |
| 7 | 8 | 1 | 35.7 | 35.8 | -29.7 | 2 | 2 | 2 | 16.4 | 17.8 | 23.3 | 6 | 12 | 2 | 15.9 | 17.5 | 153.4 |
| 7 | 9 | 1 | 18.8 | 20.2 | 120.0 | 2 | 3 | 2 | 37.8 | 37.7 | -16.2 | -7 | -11 | -2 | 32.7 | 34.0 | 86.8 |
| 7 | 10 | 1 | 26.0 | 27.4 | 155.9 | 2 | 4 | 2 | 146.4 | 142.2 | 171.6 | -7 | -10 | -2 | 34.5 | 33.1 | 211.5 |
| 7 | 11 | 1 | 35.3 | 35.0 | -43.1 | 2 | 5 | 2 | 31.4 | 30.9 | 258.0 | -7 | -9 | -2 | 9.7 | 11.3 | 121.9 |
| -8 | -10 | -1 | 19.1 | 18.6 | 208.8 | 2 | 6 | 2 | 44.0 | 45.4 | -74.4 | -7 | -8 | -2 | 8.5 | 10.1 | 100.0 |
| -8 | -9 | -1 | 12.2 | 14.6 | 56.9 | 2 | 7 | 2 | 33.0 | 33.0 | 238.2 | -7 | -7 | -2 | 29.6 | 29.8 | 73.6 |
| -8 | -8 | -1 | 29.8 | 32.4 | 41.3 | 2 | 8 | 2 | 76.1 | 75.4 | 174.3 | -7 | -6 | -2 | 57.4 | 58.4 | 208.7 |
| -8 | -7 | -1 | 33.4 | 36.4 | 203.9 | 2 | 9 | 2 | 11.5 | 8.8 | 235.3 | -7 | -5 | -2 | 34.4 | 31.6 | 140.7 |
| -8 | -6 | -1 | 17.2 | 18.5 | 217.8 | 2 | 10 | 2 | 36.7 | 36.8 | -79.8 | -7 | -4 | -2 | 14.4 | 14.2 | 48.9 |
| -8 | -5 | -1 | 39.0 | 39.0 | 43.2 | 2 | 11 | 2 | 7.8 | 8.9 | 1.1 | -7 | -3 | -2 | 39.5 | 39.9 | 94.7 |
| -8 | -4 | -1 | 31.3 | 31.4 | 4.8 | 2 | 12 | 2 | 72.6 | 70.5 | 166.7 | -7 | -2 | -2 | 51.0 | 52.7 | 184.3 |
| -8 | -3 | -1 | 24.8 | 23.7 | 175.2 | 2 | 13 | 2 | 5.3 | 7.2 | -21.6 | -7 | -1 | -2 | 53.6 | 53.6 | 129.3 |
| -8 | -2 | -1 | 34.7 | 36.5 | 196.8 | 2 | 14 | 2 | 29.4 | 28.0 | 253.4 | 7 | 0 | 2 | 7.1 | 6.0 | 16.2 |
| -8 | -1 | -1 | 43.9 | 45.4 | 1.1 | -3 | -14 | -2 | 12.3 | 15.5 | 181.3 | 7 | 1 | 2 | 52.9 | 54.4 | 237.7 |
| 8 | 0 | 1 | 16.1 | 22.0 | 4.8 | -3 | -13 | -2 | 32.8 | 33.2 | 218.6 | 7 | 2 | 2 | 52.8 | 54.0 | 186.9 |
| 8 | 1 | 1 | 43.5 | 46.4 | 8.0 | -3 | -12 | -2 | 16.3 | 14.8 | 184.6 | 7 | 3 | 2 | 36.6 | 36.3 | -86.2 |
| 8 | 2 | 1 | 34.6 | 36.4 | 169.2 | -3 | -11 | -2 | 39.6 | 39.7 | 68.1 | 7 | 4 | 2 | 13.2 | 13.5 | -34.0 |
| 8 | 3 | 1 | 27.5 | 26.7 | 200.1 | -3 | -10 | -2 | 36.1 | 34.0 | 218.0 | 7 | 5 | 2 | 35.4 | 32.6 | 228.3 |
| 8 | 4 | 1 | 30.2 | 32.2 | 2.1 | -3 | -9 | -2 | 31.9 | 32.8 | 211.7 | 7 | 6 | 2 | 57.4 | 57.3 | 160.9 |

5

| H | K | L | FO | FC | ALPH | H | K | L | FO | FC | ALPH | H | K | L | FO | FC | ALPH |
|-----|-----|----|------|------|-------|----|-----|----|------|------|-------|-----|-----|----|-------|-------|-------|
| 7 | 7 | 2 | 29.0 | 29.0 | -60.4 | 2 | 6 | 3 | 41.3 | 40.8 | -10.6 | 7 | 0 | 3 | 50.1 | 52.7 | 3.6 |
| 7 | 8 | 2 | 7.6 | 7.8 | -76.7 | 2 | 7 | 3 | 36.4 | 36.4 | -71.3 | 7 | 1 | 3 | 34.6 | 36.1 | 186.8 |
| 7 | 9 | 2 | 14.0 | 13.5 | 250.1 | 2 | 8 | 3 | 57.9 | 58.6 | 147.8 | 7 | 2 | 3 | 39.3 | 39.2 | 187.3 |
| 7 | 10 | 2 | 34.6 | 33.8 | 163.2 | 2 | 9 | 3 | 38.9 | 39.5 | 162.1 | 7 | 3 | 3 | 26.3 | 25.9 | 1.0 |
| 7 | 11 | 2 | 31.5 | 32.6 | -75.2 | 2 | 10 | 3 | 30.2 | 31.1 | -42.9 | 7 | 4 | 3 | 34.2 | 31.6 | -17.1 |
| -8 | -10 | -2 | 17.3 | 17.8 | 187.1 | 2 | 11 | 3 | 13.2 | 13.4 | -6.5 | 7 | 5 | 3 | 29.6 | 31.2 | 158.7 |
| -8 | -9 | -2 | 41.1 | 42.8 | 69.8 | 2 | 12 | 3 | 34.3 | 34.3 | 146.8 | 7 | 6 | 3 | 47.7 | 48.0 | 153.8 |
| -8 | -8 | -2 | 12.3 | 13.5 | 128.2 | 2 | 13 | 3 | 11.4 | 15.3 | 103.1 | 7 | 7 | 3 | 27.4 | 28.6 | -3.7 |
| -8 | -7 | -2 | 20.4 | 22.3 | 162.2 | -3 | -13 | -3 | 30.4 | 30.8 | 242.6 | 7 | 8 | 3 | 31.6 | 33.8 | -23.7 |
| -8 | -6 | -2 | 16.4 | 17.1 | 217.2 | -3 | -12 | -3 | 29.2 | 29.6 | 49.1 | 7 | 9 | 3 | 10.1 | 10.9 | 127.4 |
| -8 | -5 | -2 | 54.6 | 55.3 | 42.1 | -3 | -11 | -3 | 27.0 | 29.6 | 57.6 | 7 | 10 | 3 | 23.7 | 26.3 | 153.8 |
| -8 | -4 | -2 | 8.4 | 6.2 | 2.4 | -3 | -10 | -3 | 30.1 | 31.3 | 223.2 | -8 | -9 | -3 | 24.9 | 23.1 | 62.2 |
| -8 | -3 | -2 | 31.5 | 34.3 | 158.1 | -3 | -9 | -3 | 32.3 | 32.3 | 224.5 | -8 | -8 | -3 | 26.4 | 24.5 | 43.0 |
| -8 | -2 | -2 | 32.2 | 33.5 | 185.8 | -3 | -8 | -3 | 27.2 | 28.2 | 34.0 | -8 | -7 | -3 | 29.1 | 29.7 | 203.0 |
| -8 | -1 | -2 | 48.9 | 48.7 | 34.1 | -3 | -7 | -3 | 54.0 | 54.4 | 30.4 | -8 | -6 | -3 | 15.3 | 16.0 | 211.7 |
| 8 | 0 | 2 | 21.4 | 24.1 | 179.7 | -3 | -6 | -3 | 56.6 | 55.4 | 196.7 | -8 | -5 | -3 | 36.9 | 37.7 | 40.9 |
| 8 | 1 | 2 | 47.8 | 49.0 | -23.7 | -3 | -5 | -3 | 44.0 | 45.1 | 224.3 | -8 | -4 | -3 | 17.6 | 17.7 | 3.0 |
| 8 | 2 | 2 | 33.4 | 34.1 | 184.2 | -3 | -4 | -3 | 54.6 | 53.9 | 46.6 | -8 | -3 | -3 | 30.3 | 30.8 | 173.1 |
| 8 | 3 | 2 | 33.2 | 35.3 | 213.7 | -3 | -3 | -3 | 59.0 | 58.8 | 2.3 | -8 | -2 | -3 | 27.8 | 30.1 | 198.1 |
| 8 | 4 | 2 | 8.3 | 6.9 | 1.9 | -3 | -2 | -3 | 35.3 | 35.2 | 168.8 | -8 | -1 | -3 | 41.7 | 41.3 | 16.4 |
| 8 | 5 | 2 | 54.8 | 56.4 | -32.0 | -3 | -1 | -3 | 63.6 | 63.3 | 173.1 | 8 | 0 | 3 | 11.4 | 14.2 | 6.1 |
| 8 | 6 | 2 | 14.9 | 15.8 | 160.3 | 3 | 0 | 3 | 66.5 | 67.8 | 1.8 | 8 | 1 | 3 | 41.9 | 41.3 | -6.1 |
| 8 | 7 | 2 | 24.1 | 24.2 | 211.9 | 3 | 1 | 3 | 64.5 | 65.4 | 193.7 | 8 | 2 | 3 | 26.8 | 29.9 | 170.1 |
| 8 | 8 | 2 | 13.1 | 12.3 | 238.3 | 3 | 2 | 3 | 37.2 | 36.3 | 197.5 | 8 | 3 | 3 | 32.9 | 32.8 | 199.0 |
| 8 | 9 | 2 | 41.1 | 41.4 | -56.7 | 3 | 3 | 3 | 61.0 | 60.8 | 5.4 | 8 | 4 | 3 | 18.6 | 18.7 | 7.1 |
| 8 | 10 | 2 | 17.5 | 19.6 | 186.6 | 3 | 4 | 3 | 53.8 | 52.9 | -42.8 | 8 | 5 | 3 | 35.4 | 37.0 | -29.7 |
| -9 | -8 | -2 | 44.3 | 46.8 | 209.5 | 3 | 5 | 3 | 41.9 | 42.6 | 145.0 | 8 | 6 | 3 | 14.0 | 15.9 | 161.7 |
| -9 | -7 | -2 | 26.4 | 25.6 | 121.4 | 3 | 6 | 3 | 56.9 | 55.5 | 168.0 | 8 | 7 | 3 | 31.1 | 30.3 | 169.9 |
| -9 | -6 | -2 | 23.2 | 26.1 | 44.7 | 3 | 7 | 3 | 55.1 | 54.9 | -22.0 | 8 | 8 | 3 | 25.1 | 24.4 | -35.1 |
| -9 | -5 | -2 | 35.6 | 33.5 | 85.5 | 3 | 8 | 3 | 29.2 | 28.9 | -27.7 | 8 | 9 | 3 | 18.1 | 21.9 | -45.4 |
| -9 | -4 | -2 | 44.4 | 45.3 | 195.1 | 3 | 9 | 3 | 31.4 | 32.2 | 148.0 | -9 | -7 | -3 | 10.7 | 12.2 | 198.2 |
| -9 | -3 | -2 | 24.9 | 24.2 | 114.7 | 3 | 10 | 3 | 29.9 | 31.0 | 144.1 | -9 | -6 | -3 | 23.5 | 23.4 | 44.9 |
| -9 | -2 | -2 | 33.6 | 34.1 | 22.1 | 3 | 11 | 3 | 28.7 | 29.1 | -43.2 | -9 | -5 | -3 | 19.7 | 18.9 | 44.8 |
| -9 | -1 | -2 | 30.4 | 30.8 | 90.1 | 3 | 12 | 3 | 31.6 | 30.3 | -42.8 | -9 | -4 | -3 | 28.4 | 29.1 | 199.0 |
| 9 | 0 | 2 | 47.8 | 52.1 | 185.2 | 3 | 13 | 3 | 31.0 | 30.5 | 129.3 | -9 | -3 | -3 | 9.8 | 9.2 | 205.7 |
| 9 | 1 | 2 | 29.9 | 29.2 | -80.3 | -4 | -13 | -3 | 28.2 | 27.7 | 76.1 | -9 | -2 | -3 | 29.5 | 29.4 | 17.5 |
| 9 | 2 | 2 | 33.2 | 33.7 | -12.0 | -4 | -12 | -3 | 19.6 | 19.4 | 60.2 | -9 | -1 | -3 | 14.7 | 14.2 | -26.0 |
| 9 | 3 | 2 | 25.2 | 24.7 | 256.5 | -4 | -11 | -3 | 25.3 | 27.3 | 207.6 | 9 | 0 | 3 | 26.1 | 28.7 | 187.3 |
| 9 | 4 | 2 | 44.6 | 45.7 | 176.9 | -4 | -10 | -3 | 39.0 | 39.6 | 223.6 | 9 | 1 | 3 | 15.9 | 15.9 | 33.9 |
| 9 | 5 | 2 | 32.9 | 32.7 | -75.7 | -4 | -9 | -3 | 49.6 | 48.8 | 46.4 | 9 | 2 | 3 | 28.1 | 29.4 | -3.7 |
| 9 | 6 | 2 | 23.3 | 25.6 | -32.2 | -4 | -8 | -3 | 37.9 | 37.7 | 48.5 | 9 | 3 | 3 | 10.3 | 8.7 | 167.5 |
| 9 | 7 | 2 | 26.0 | 25.9 | 247.4 | -4 | -7 | -3 | 31.4 | 32.2 | 217.9 | 9 | 4 | 3 | 30.2 | 29.5 | 175.8 |
| 9 | 8 | 2 | 46.8 | 47.3 | 161.3 | -4 | -6 | -3 | 41.2 | 42.0 | 208.4 | 9 | 5 | 3 | 18.2 | 18.3 | -35.9 |
| -10 | -6 | -2 | 2.9 | 2.4 | 138.4 | -4 | -5 | -3 | 29.2 | 31.1 | 5.4 | 9 | 6 | 3 | 22.4 | 22.3 | -28.9 |
| -10 | -5 | -2 | 30.3 | 32.2 | 185.8 | -4 | -4 | -3 | 36.9 | 37.3 | 0.6 | 9 | 7 | 3 | 9.9 | 12.3 | 171.1 |
| -10 | -4 | -2 | 11.8 | 11.0 | 216.8 | -4 | -3 | -3 | 89.8 | 90.9 | 186.2 | -10 | -5 | -3 | 25.3 | 27.1 | 206.2 |
| -10 | -3 | -2 | 43.5 | 45.7 | 51.3 | -4 | -2 | -3 | 80.4 | 80.8 | 196.9 | -10 | -4 | -3 | 2.8 | 4.0 | 257.2 |
| -10 | -2 | -2 | 8.0 | 6.1 | 227.5 | -4 | -1 | -3 | 57.3 | 54.5 | 46.2 | -10 | -3 | -3 | 25.7 | 25.8 | 51.2 |
| -10 | -1 | -2 | 47.5 | 49.8 | 157.5 | 4 | 0 | 3 | 28.8 | 27.4 | 6.3 | -10 | -2 | -3 | 7.2 | 6.6 | -38.5 |
| 10 | 0 | 2 | 15.3 | 13.9 | 185.0 | 4 | 1 | 3 | 54.6 | 52.3 | -41.3 | -10 | -1 | -3 | 27.6 | 24.8 | 166.0 |
| 10 | 1 | 2 | 46.2 | 50.0 | 212.6 | 4 | 2 | 3 | 79.6 | 80.0 | 169.4 | 10 | 0 | 3 | 4.5 | 9.9 | 184.1 |
| 10 | 2 | 2 | 6.9 | 5.7 | 133.9 | 4 | 3 | 3 | 88.9 | 90.7 | 177.3 | 10 | 1 | 3 | 28.5 | 27.0 | 209.6 |
| 10 | 3 | 2 | 41.8 | 44.6 | -39.9 | 4 | 4 | 3 | 39.2 | 39.5 | 8.1 | 10 | 2 | 3 | 4.0 | 7.5 | 44.5 |
| 10 | 4 | 2 | 9.7 | 10.1 | 154.8 | 4 | 5 | 3 | 33.3 | 33.1 | 2.2 | 10 | 3 | 3 | 23.7 | 23.0 | -36.2 |
| 10 | 5 | 2 | 29.9 | 31.0 | 186.9 | 4 | 6 | 3 | 42.9 | 42.2 | 162.7 | 10 | 4 | 3 | 2.8 | 2.8 | 114.9 |
| 10 | 6 | 2 | 2.9 | 2.4 | 233.6 | 4 | 7 | 3 | 31.7 | 31.5 | 150.7 | 10 | 5 | 3 | 25.7 | 26.8 | 168.9 |
| 11 | 0 | 2 | 29.4 | 32.5 | 6.0 | 4 | 8 | 3 | 38.2 | 36.8 | -39.0 | 0 | -12 | -4 | 66.3 | 67.4 | 43.8 |
| 0 | -14 | -3 | 19.6 | 20.0 | 252.2 | 4 | 9 | 3 | 49.3 | 48.6 | -40.6 | 0 | -10 | -4 | 39.7 | 38.0 | -80.9 |
| 0 | -12 | -3 | 33.9 | 35.1 | 52.4 | 4 | 10 | 3 | 38.6 | 39.8 | 147.1 | 0 | -8 | -4 | 94.3 | 93.7 | 18.4 |
| 0 | -10 | -3 | 55.0 | 56.3 | 244.0 | 4 | 11 | 3 | 26.9 | 28.4 | 160.6 | 0 | -6 | -4 | 32.0 | 31.5 | 209.7 |
| 0 | -8 | -3 | 9.7 | 9.9 | 40.2 | 4 | 12 | 3 | 20.5 | 19.6 | -43.0 | 0 | -4 | -4 | 104.5 | 103.9 | 22.2 |
| 0 | -6 | -3 | 74.1 | 76.3 | 202.0 | 4 | 13 | 3 | 27.4 | 26.8 | -67.0 | 0 | -2 | -4 | 6.1 | 9.0 | 7.4 |
| 0 | -4 | -3 | 49.0 | 46.8 | 64.7 | -7 | -10 | -3 | 19.2 | 21.3 | 244.3 | 1 | 11 | 1 | 25.2 | 24.5 | 142.4 |

6

| | | | | | | | | | | | | | | | | | |
|----|-----|----|------|------|-------|----|-----|----|------|------|-------|----|-----|----|-------|-------|-------|
| 0 | -4 | -3 | 37.2 | 34.7 | 15.7 | -5 | -12 | -3 | 37.3 | 38.4 | 227.4 | 0 | 0 | 4 | 233.2 | 233.0 | 2.0 |
| 0 | -2 | -3 | 94.5 | 94.1 | 197.5 | -5 | -11 | -3 | 35.2 | 33.6 | 229.5 | 0 | 2 | 4 | 8.5 | 8.8 | -22.2 |
| 0 | 0 | 3 | 62.9 | 66.0 | 3.2 | -5 | -10 | -3 | 36.4 | 36.9 | 72.4 | 0 | 4 | 4 | 104.1 | 102.5 | -13.6 |
| 0 | 2 | 3 | 94.0 | 92.8 | 168.7 | -5 | -9 | -3 | 33.8 | 32.2 | 40.8 | 0 | 6 | 4 | 34.4 | 33.4 | 156.7 |
| 0 | 4 | 3 | 38.3 | 35.8 | -4.7 | -5 | -8 | -3 | 33.4 | 34.4 | 195.8 | 0 | 8 | 4 | 95.8 | 95.4 | -10.2 |
| 0 | 6 | 3 | 74.9 | 77.4 | 165.5 | -5 | -7 | -3 | 28.8 | 30.5 | 208.5 | 0 | 10 | 4 | 38.2 | 36.6 | 88.9 |
| 0 | 8 | 3 | 10.0 | 11.2 | -3.8 | -5 | -6 | -3 | 50.6 | 50.7 | 22.9 | 0 | 12 | 4 | 66.6 | 66.1 | -33.7 |
| 0 | 10 | 3 | 51.7 | 53.8 | 124.8 | -5 | -5 | -3 | 58.0 | 58.0 | 28.1 | -1 | -13 | -4 | 37.3 | 36.8 | 69.6 |
| 0 | 12 | 3 | 36.5 | 35.7 | -40.9 | -5 | -4 | -3 | 46.9 | 48.1 | 212.1 | -1 | -12 | -4 | 20.4 | 21.0 | -17.9 |
| 0 | 14 | 3 | 17.0 | 19.3 | 128.9 | -5 | -3 | -3 | 36.1 | 36.1 | 210.1 | -1 | -11 | -4 | 42.9 | 42.3 | 228.8 |
| -1 | -14 | -3 | 9.3 | 8.0 | 98.1 | -5 | -2 | -3 | 53.8 | 53.0 | -0.9 | -1 | -10 | -4 | 29.3 | 29.6 | 2.8 |
| -1 | -13 | -3 | 37.0 | 37.1 | 70.8 | -5 | -1 | -3 | 44.1 | 45.3 | -3.8 | -1 | -9 | -4 | 57.7 | 56.5 | 26.7 |
| -1 | -12 | -3 | 12.9 | 13.2 | 206.3 | 5 | 0 | 3 | 65.6 | 67.0 | 192.8 | -1 | -8 | -4 | 53.4 | 51.3 | -2.5 |
| -1 | -11 | -3 | 27.5 | 30.8 | 242.3 | 5 | 1 | 3 | 45.0 | 46.5 | 12.3 | -1 | -7 | -4 | 65.6 | 64.5 | 226.9 |
| -1 | -10 | -3 | 15.1 | 15.5 | 93.3 | 5 | 2 | 3 | 55.0 | 54.1 | 6.6 | -1 | -6 | -4 | 43.1 | 44.1 | -3.3 |
| -1 | -9 | -3 | 39.9 | 40.8 | 30.0 | 5 | 3 | 3 | 33.0 | 34.8 | 159.7 | -1 | -5 | -4 | 57.0 | 58.3 | 18.6 |
| -1 | -8 | -3 | 11.2 | 11.4 | 151.1 | 5 | 4 | 3 | 46.8 | 46.7 | 155.1 | -1 | -4 | -4 | 26.5 | 24.3 | -0.7 |
| -1 | -7 | -3 | 48.0 | 49.5 | 225.2 | 5 | 5 | 3 | 58.8 | 57.7 | -21.0 | -1 | -3 | -4 | 83.9 | 85.1 | 194.1 |
| -1 | -6 | -3 | 28.8 | 30.6 | 46.6 | 5 | 6 | 3 | 51.2 | 51.6 | -16.7 | -1 | -2 | -4 | 45.3 | 44.8 | -11.7 |
| -1 | -5 | -3 | 59.4 | 59.4 | 30.5 | 5 | 7 | 3 | 30.2 | 30.8 | 162.7 | -1 | -1 | -4 | 71.7 | 71.8 | 10.4 |
| -1 | -4 | -3 | 17.0 | 15.9 | 120.5 | 5 | 8 | 3 | 35.4 | 35.9 | 173.2 | 1 | 0 | 4 | 43.8 | 43.1 | 2.7 |
| -1 | -3 | -3 | 61.8 | 61.2 | 194.1 | 5 | 9 | 3 | 34.7 | 32.7 | -29.3 | 1 | 1 | 4 | 71.1 | 71.0 | -3.3 |
| -1 | -2 | -3 | 24.2 | 26.7 | -8.8 | 5 | 10 | 3 | 35.7 | 35.2 | -64.8 | 1 | 2 | 4 | 47.2 | 46.3 | 19.5 |
| -1 | -1 | -3 | 68.7 | 66.9 | 5.1 | 5 | 11 | 3 | 33.5 | 33.6 | 140.0 | 1 | 3 | 4 | 84.5 | 85.9 | 172.3 |
| 1 | 0 | 3 | 48.7 | 45.8 | 181.1 | 5 | 12 | 3 | 38.0 | 38.8 | 145.7 | 1 | 4 | 4 | 26.3 | 23.9 | 11.3 |
| 1 | 1 | 3 | 70.6 | 67.6 | 2.2 | -6 | -11 | -3 | 26.5 | 26.7 | 47.6 | 1 | 5 | 4 | 57.6 | 58.4 | -10.4 |
| 1 | 2 | 3 | 26.6 | 27.2 | 11.0 | -6 | -10 | -3 | 30.9 | 30.1 | 25.9 | 1 | 6 | 4 | 45.4 | 44.9 | 11.5 |
| 1 | 3 | 3 | 62.1 | 61.6 | 174.1 | -6 | -9 | -3 | 44.8 | 44.0 | 212.6 | 1 | 7 | 4 | 64.7 | 63.2 | 141.2 |
| 1 | 4 | 3 | 20.4 | 17.4 | 242.0 | -6 | -8 | -3 | 42.3 | 41.7 | 227.1 | 1 | 8 | 4 | 50.8 | 50.8 | 7.5 |
| 1 | 5 | 3 | 58.6 | 58.4 | -22.5 | -6 | -7 | -3 | 41.9 | 41.0 | 52.2 | 1 | 9 | 4 | 60.0 | 57.9 | -18.6 |
| 1 | 6 | 3 | 29.6 | 30.8 | -44.0 | -6 | -6 | -3 | 16.0 | 16.1 | 33.1 | 1 | 10 | 4 | 30.0 | 30.3 | 8.0 |
| 1 | 7 | 3 | 47.6 | 48.3 | 144.2 | -6 | -5 | -3 | 44.8 | 45.7 | 185.5 | 1 | 11 | 4 | 44.4 | 43.0 | 142.3 |
| 1 | 8 | 3 | 14.3 | 12.4 | 216.0 | -6 | -4 | -3 | 49.4 | 52.4 | 181.9 | 1 | 12 | 4 | 18.8 | 21.6 | 28.9 |
| 1 | 9 | 3 | 42.5 | 42.6 | -18.8 | -6 | -3 | -3 | 54.1 | 55.9 | 31.9 | 1 | 13 | 4 | 37.3 | 35.4 | -58.4 |
| 1 | 10 | 3 | 13.6 | 15.4 | -88.1 | -6 | -2 | -3 | 45.6 | 45.5 | 45.9 | -2 | -13 | -4 | 14.1 | 13.4 | -69.2 |
| 1 | 11 | 3 | 28.4 | 29.5 | 131.3 | -6 | -1 | -3 | 43.6 | 43.8 | 184.0 | -2 | -12 | -4 | 22.9 | 24.4 | 249.7 |
| 1 | 12 | 3 | 13.2 | 13.1 | 162.0 | 6 | 0 | 3 | 32.0 | 32.1 | 185.8 | -2 | -11 | -4 | 10.9 | 11.1 | -54.0 |
| 1 | 13 | 3 | 34.8 | 36.0 | -59.2 | 6 | 1 | 3 | 42.4 | 43.2 | 184.7 | -2 | -10 | -4 | 66.3 | 67.3 | 39.9 |
| 1 | 14 | 3 | 2.8 | 8.1 | 269.4 | 6 | 2 | 3 | 43.2 | 42.8 | -40.2 | -2 | -9 | -4 | 11.0 | 12.8 | 247.9 |
| -2 | -13 | -3 | 12.5 | 16.3 | 264.4 | 6 | 3 | 3 | 53.9 | 55.1 | -25.1 | -2 | -8 | -4 | 16.9 | 16.3 | 254.5 |
| -2 | -12 | -3 | 31.2 | 33.2 | 226.6 | 6 | 4 | 3 | 51.6 | 54.1 | 185.1 | -2 | -7 | -4 | 13.2 | 9.9 | 142.9 |
| -2 | -11 | -3 | 12.2 | 12.0 | 14.4 | 6 | 5 | 3 | 44.9 | 46.8 | 182.3 | -2 | -6 | -4 | 120.0 | 118.1 | 19.8 |
| -2 | -10 | -3 | 29.1 | 31.5 | 55.3 | 6 | 6 | 3 | 15.9 | 16.3 | -16.5 | -2 | -5 | -4 | 12.8 | 11.3 | 226.9 |
| -2 | -9 | -3 | 37.7 | 39.1 | 201.9 | 6 | 7 | 3 | 40.4 | 39.8 | -43.3 | -2 | -4 | -4 | 27.4 | 26.8 | -78.4 |
| -2 | -8 | -3 | 57.6 | 59.3 | 220.7 | 6 | 8 | 3 | 41.4 | 40.6 | 141.5 | -2 | -3 | -4 | 33.0 | 32.6 | -30.4 |
| -2 | -7 | -3 | 37.8 | 37.8 | 74.9 | 6 | 9 | 3 | 44.0 | 44.3 | 155.3 | -2 | -2 | -4 | 125.5 | 124.8 | 6.7 |
| -2 | -6 | -3 | 40.1 | 39.6 | 20.4 | 6 | 10 | 3 | 32.4 | 31.7 | -17.6 | -2 | -1 | -4 | 44.7 | 42.4 | -68.6 |
| -2 | -5 | -3 | 36.2 | 34.5 | 164.3 | 6 | 11 | 3 | 26.9 | 27.6 | -35.4 | 2 | 0 | 4 | 2.3 | 2.9 | 204.3 |
| -2 | -4 | -3 | 75.7 | 76.8 | 212.3 | -7 | -10 | -3 | 22.5 | 25.7 | 220.6 | 2 | 1 | 4 | 38.5 | 39.7 | 70.5 |
| -2 | -3 | -3 | 49.7 | 49.5 | 17.0 | -7 | -9 | -3 | 9.8 | 12.5 | 248.8 | 2 | 2 | 4 | 125.4 | 125.2 | 0.2 |
| -2 | -2 | -3 | 32.9 | 31.3 | 21.5 | -7 | -8 | -3 | 31.6 | 33.0 | 34.4 | 2 | 3 | 4 | 34.3 | 33.0 | 35.3 |
| -2 | -1 | -3 | 39.8 | 36.8 | 212.6 | -7 | -7 | -3 | 25.9 | 26.9 | 13.7 | 2 | 4 | 4 | 25.4 | 24.5 | 82.7 |
| 2 | 0 | 3 | 90.7 | 93.7 | 183.2 | -7 | -6 | -3 | 48.5 | 48.9 | 214.4 | 2 | 5 | 4 | 11.8 | 11.9 | 146.6 |
| 2 | 1 | 3 | 37.2 | 35.3 | 150.9 | -7 | -5 | -3 | 30.1 | 31.6 | 209.6 | 2 | 6 | 4 | 119.7 | 118.1 | -12.9 |
| 2 | 2 | 3 | 32.7 | 30.3 | -9.3 | -7 | -4 | -3 | 34.5 | 32.2 | 28.8 | 2 | 7 | 4 | 10.5 | 9.1 | 206.8 |
| 2 | 3 | 3 | 51.1 | 49.8 | -13.5 | -7 | -3 | -3 | 24.5 | 25.0 | 9.5 | 2 | 8 | 4 | 16.9 | 16.5 | 119.9 |
| 2 | 4 | 3 | 74.5 | 75.0 | 155.0 | -7 | -2 | -3 | 37.8 | 38.0 | 183.5 | 2 | 9 | 4 | 12.4 | 12.7 | 126.2 |
| 2 | 5 | 3 | 37.6 | 35.6 | 199.6 | -7 | -1 | -3 | 35.4 | 35.9 | 181.1 | 2 | 10 | 4 | 66.3 | 65.9 | -29.6 |

7

| H | K | L | FO | FC | ALPH | H | K | L | FO | FC | ALPH | H | K | L | FO | FC | ALPH |
|----|-----|----|------|------|-------|-----|-----|----|------|------|-------|----|-----|----|------|------|-------|
| 2 | 11 | 4 | 11.3 | 12.2 | 57.7 | -8 | -8 | -4 | 21.3 | 20.2 | 41.2 | 3 | 8 | 5 | 26.9 | 25.7 | -23.8 |
| 2 | 12 | 4 | 26.7 | 26.2 | 122.0 | -8 | -7 | -4 | 38.1 | 39.9 | 238.9 | 3 | 9 | 5 | 38.1 | 36.1 | 134.5 |
| 2 | 13 | 4 | 10.4 | 11.8 | 80.5 | -8 | -6 | -4 | 12.1 | 14.5 | -4.9 | 3 | 10 | 5 | 18.8 | 17.9 | 133.4 |
| -3 | -13 | -4 | 44.6 | 42.0 | 243.8 | -8 | -5 | -4 | 40.7 | 41.6 | -7.0 | 3 | 11 | 5 | 19.3 | 19.5 | -19.0 |
| -3 | -12 | -4 | 30.2 | 31.8 | 5.4 | -8 | -4 | -4 | 25.8 | 26.1 | -1.3 | 3 | 12 | 5 | 26.4 | 25.1 | -18.0 |
| -3 | -11 | -4 | 28.4 | 27.0 | 28.7 | -8 | -3 | -4 | 41.4 | 41.2 | 238.0 | -4 | -11 | -5 | 19.6 | 18.9 | 233.3 |
| -3 | -10 | -4 | 29.6 | 29.2 | -35.4 | -8 | -2 | -4 | 8.9 | 8.1 | -62.6 | -4 | -10 | -5 | 23.9 | 23.0 | 239.0 |
| -3 | -9 | -4 | 48.3 | 47.5 | 235.4 | -8 | -1 | -4 | 54.6 | 53.4 | -33.7 | -4 | -9 | -5 | 22.1 | 24.2 | 34.0 |
| -3 | -8 | -4 | 33.8 | 33.6 | -2.7 | 8 | 0 | 4 | 12.6 | 9.9 | 15.7 | -4 | -8 | -5 | 35.1 | 35.6 | 29.3 |
| -3 | -7 | -4 | 24.9 | 26.1 | 29.9 | 8 | 1 | 4 | 56.9 | 54.6 | 42.6 | -4 | -7 | -5 | 29.1 | 27.2 | 219.2 |
| -3 | -6 | -4 | 20.0 | 18.7 | -29.0 | 8 | 2 | 4 | 6.3 | 7.3 | 65.0 | -4 | -6 | -5 | 30.7 | 31.6 | 228.8 |
| -3 | -5 | -4 | 64.0 | 64.6 | 213.6 | 8 | 3 | 4 | 39.3 | 39.7 | 134.6 | -4 | -5 | -5 | 16.6 | 15.4 | 2.6 |
| -3 | -4 | -4 | 41.0 | 41.0 | 19.3 | 8 | 4 | 4 | 26.1 | 27.5 | 12.7 | -4 | -4 | -5 | 42.8 | 42.6 | 12.1 |
| -3 | -3 | -4 | 75.1 | 76.5 | -1.4 | 8 | 5 | 4 | 40.2 | 41.4 | 16.8 | -4 | -3 | -5 | 47.9 | 47.4 | 192.3 |
| -3 | -2 | -4 | 37.5 | 35.7 | -7.6 | 8 | 6 | 4 | 11.5 | 13.3 | 5.1 | -4 | -2 | -5 | 42.2 | 42.1 | 184.0 |
| -3 | -1 | -4 | 40.1 | 39.7 | 194.6 | 8 | 7 | 4 | 36.8 | 39.7 | 134.4 | -4 | -1 | -5 | 26.4 | 27.3 | 24.1 |
| 3 | 0 | 4 | 55.7 | 54.1 | 4.5 | 8 | 8 | 4 | 20.4 | 19.1 | -26.8 | 4 | 0 | 5 | 41.7 | 40.5 | 5.6 |
| 3 | 1 | 4 | 41.3 | 40.9 | 177.3 | -9 | -6 | -4 | 33.8 | 35.2 | 26.6 | 4 | 1 | 5 | 22.8 | 26.0 | -14.4 |
| 3 | 2 | 4 | 35.8 | 35.6 | 10.6 | -9 | -5 | -4 | 9.6 | 9.6 | -58.1 | 4 | 2 | 5 | 43.5 | 43.4 | 184.4 |
| 3 | 3 | 4 | 76.2 | 76.9 | 7.1 | -9 | -4 | -4 | 22.9 | 24.9 | 196.0 | 4 | 3 | 5 | 48.9 | 48.0 | 174.1 |
| 3 | 4 | 4 | 39.3 | 40.0 | -8.2 | -9 | -3 | -4 | 20.7 | 22.4 | 262.1 | 4 | 4 | 5 | 42.3 | 43.4 | -1.6 |
| 3 | 5 | 4 | 64.5 | 64.9 | 154.4 | -9 | -2 | -4 | 50.9 | 52.5 | 20.2 | 4 | 5 | 5 | 17.1 | 16.7 | 11.6 |
| 3 | 6 | 4 | 16.7 | 18.2 | 36.5 | -9 | -1 | -4 | 23.6 | 24.6 | 269.5 | 4 | 6 | 5 | 31.7 | 30.4 | 142.2 |
| 3 | 7 | 4 | 23.8 | 25.3 | -15.0 | 9 | 0 | 4 | 22.9 | 22.9 | 185.7 | 4 | 7 | 5 | 27.8 | 27.4 | 151.5 |
| 3 | 8 | 4 | 36.1 | 35.8 | 14.2 | 9 | 1 | 4 | 23.0 | 26.9 | 98.9 | 4 | 8 | 5 | 35.9 | 36.2 | -17.3 |
| 3 | 9 | 4 | 47.5 | 46.9 | 135.4 | 9 | 2 | 4 | 51.2 | 51.3 | -9.8 | 4 | 9 | 5 | 25.3 | 24.3 | -24.1 |
| 3 | 10 | 4 | 27.9 | 28.8 | 42.6 | 9 | 3 | 4 | 19.8 | 21.6 | 110.2 | 4 | 10 | 5 | 23.0 | 22.7 | 135.7 |
| 3 | 11 | 4 | 29.3 | 28.2 | -16.9 | 9 | 4 | 4 | 23.8 | 25.8 | 176.7 | 4 | 11 | 5 | 19.6 | 19.0 | 140.5 |
| 3 | 12 | 4 | 33.1 | 33.8 | 5.7 | 9 | 5 | 4 | 8.5 | 10.1 | 78.5 | -5 | -10 | -5 | 36.1 | 33.6 | 54.1 |
| 3 | 13 | 4 | 42.5 | 42.4 | 127.3 | 9 | 6 | 4 | 35.1 | 35.4 | -12.6 | -5 | -9 | -5 | 29.9 | 30.5 | 38.3 |
| -4 | -12 | -4 | 38.8 | 38.5 | 38.8 | -10 | -3 | -4 | 29.4 | 28.3 | -20.5 | -5 | -8 | -5 | 15.9 | 14.5 | 229.2 |
| -4 | -11 | -4 | 16.1 | 15.3 | -63.1 | -10 | -2 | -4 | 8.9 | 6.6 | 22.6 | -5 | -7 | -5 | 32.1 | 31.8 | 221.0 |
| -4 | -10 | -4 | 18.2 | 18.3 | -71.9 | -10 | -1 | -4 | 41.4 | 44.0 | 210.0 | -5 | -6 | -5 | 33.3 | 34.5 | 12.5 |
| -4 | -9 | -4 | 23.2 | 24.9 | 0.7 | 10 | 0 | 4 | 2.8 | 1.9 | 1.6 | -5 | -5 | -5 | 45.3 | 44.3 | 10.4 |
| -4 | -8 | -4 | 65.6 | 64.8 | 31.6 | 10 | 1 | 4 | 41.5 | 45.2 | 161.4 | -5 | -4 | -5 | 24.2 | 25.2 | 208.3 |
| -4 | -7 | -4 | 33.2 | 32.6 | 265.8 | 10 | 2 | 4 | 9.1 | 6.2 | -4.0 | -5 | -3 | -5 | 40.9 | 40.3 | 224.2 |
| -4 | -6 | -4 | 9.9 | 8.6 | -17.0 | 10 | 3 | 4 | 30.5 | 29.3 | 35.6 | -5 | -2 | -5 | 46.8 | 47.1 | 11.7 |
| -4 | -5 | -4 | 31.1 | 31.5 | -86.7 | 0 | -12 | -5 | 40.1 | 39.8 | 49.0 | -5 | -1 | -5 | 42.7 | 41.8 | -2.9 |
| -4 | -4 | -4 | 83.5 | 83.7 | 10.4 | 0 | -10 | -5 | 33.2 | 32.7 | -83.6 | 5 | 0 | 5 | 19.5 | 18.4 | 187.0 |
| -4 | -3 | -4 | 43.0 | 42.8 | 242.1 | 0 | -8 | -5 | 17.1 | 18.1 | -37.6 | 5 | 1 | 5 | 42.3 | 41.7 | 12.1 |
| -4 | -2 | -4 | 12.4 | 13.2 | -88.9 | 0 | -6 | -5 | 44.4 | 46.9 | 220.5 | 5 | 2 | 5 | 44.9 | 46.9 | -3.2 |
| -4 | -1 | -4 | 27.7 | 28.2 | -40.0 | 0 | -4 | -5 | 32.4 | 29.8 | 41.9 | 5 | 3 | 5 | 39.7 | 38.5 | 144.8 |
| 4 | 0 | 4 | 90.6 | 92.8 | 3.9 | 0 | -2 | -5 | 22.2 | 23.9 | 144.4 | 5 | 4 | 5 | 22.3 | 25.1 | 161.4 |
| 4 | 1 | 4 | 25.7 | 29.3 | 45.7 | 0 | 0 | 5 | 58.8 | 62.8 | 4.4 | 5 | 5 | 5 | 45.9 | 45.0 | -2.2 |
| 4 | 2 | 4 | 10.6 | 11.4 | 93.7 | 0 | 2 | 5 | 29.8 | 29.5 | 225.8 | 5 | 6 | 5 | 35.4 | 36.2 | -1.7 |
| 4 | 3 | 4 | 40.9 | 41.3 | 125.8 | 0 | 4 | 5 | 29.3 | 26.9 | -24.5 | 5 | 7 | 5 | 33.5 | 31.8 | 150.5 |
| 4 | 4 | 4 | 85.3 | 84.7 | -2.0 | 0 | 6 | 5 | 45.0 | 46.3 | 148.8 | 5 | 8 | 5 | 16.6 | 14.2 | 147.4 |
| 4 | 5 | 4 | 35.7 | 35.5 | 89.9 | 0 | 8 | 5 | 25.9 | 25.9 | 46.1 | 5 | 9 | 5 | 29.6 | 30.3 | -27.9 |
| 4 | 6 | 4 | 7.1 | 5.7 | 12.3 | 0 | 10 | 5 | 29.1 | 28.4 | 94.1 | 5 | 10 | 5 | 35.4 | 32.5 | -44.0 |
| 4 | 7 | 4 | 30.2 | 30.3 | 104.2 | 0 | 12 | 5 | 39.7 | 39.5 | -37.2 | -6 | -10 | -5 | 34.7 | 34.5 | 23.1 |
| 4 | 8 | 4 | 63.4 | 63.8 | -21.8 | -1 | -12 | -5 | 6.6 | 1.6 | -52.3 | -6 | -9 | -5 | 30.8 | 28.6 | 217.3 |
| 4 | 9 | 4 | 26.4 | 25.1 | 7.7 | -1 | -11 | -5 | 19.6 | 17.8 | 230.6 | -6 | -8 | -5 | 31.7 | 31.4 | 232.4 |
| 4 | 10 | 4 | 17.4 | 16.7 | 84.3 | -1 | -10 | -5 | 17.2 | 15.9 | 46.8 | -6 | -7 | -5 | 27.9 | 29.7 | 29.6 |
| 4 | 11 | 4 | 12.6 | 11.6 | 79.2 | -1 | -9 | -5 | 36.5 | 36.9 | 39.8 | -6 | -6 | -5 | 28.0 | 28.6 | 31.5 |
| 4 | 12 | 4 | 40.2 | 38.6 | -25.2 | -1 | -8 | -5 | 6.4 | 10.1 | 26.2 | -6 | -5 | -5 | 37.1 | 35.5 | 214.3 |
| -5 | -11 | -4 | 40.3 | 39.7 | 243.7 | -1 | -7 | -5 | 29.0 | 29.9 | 247.6 | -6 | -4 | -5 | 42.9 | 41.5 | 186.9 |
| -5 | -10 | -4 | 27.5 | 30.6 | 36.5 | -1 | -6 | -5 | 29.2 | 29.2 | 27.4 | -6 | -3 | -5 | 25.2 | 24.2 | 21.9 |
| -5 | -9 | -4 | 16.0 | 13.7 | -0.3 | -1 | -5 | -5 | 25.5 | 26.0 | -14.1 | -6 | -2 | -5 | 48.2 | 48.5 | 27.4 |
| -5 | -8 | -4 | 15.3 | 12.9 | -49.9 | -1 | -4 | -5 | 17.2 | 16.6 | 42.2 | -6 | -1 | -5 | 31.7 | 34.1 | 186.7 |
| -5 | -7 | -4 | 39.9 | 39.5 | 228.1 | -1 | -3 | -5 | 47.2 | 46.6 | 207.7 | 6 | 0 | 5 | 21.9 | 21.0 | 186.2 |
| -5 | -6 | -4 | 46.1 | 44.1 | 6.0 | -1 | -2 | -5 | 31.8 | 31.8 | 1.5 | 6 | 1 | 5 | 33.5 | 35.1 | 183.8 |
| -5 | -5 | -4 | 23.3 | 24.6 | 6.7 | -1 | -1 | -5 | 34.5 | 36.6 | 47.5 | 6 | 2 | 5 | 46.6 | 46.8 | -19.7 |

8

| | | | | | | | | | | | | | | | | | |
|----|-----|----|------|------|-------|----|-----|----|------|------|-------|----|-----|----|------|------|-------|
| -5 | -4 | -4 | 23.8 | 24.1 | -42.9 | 1 | 0 | 5 | 2.4 | 0.4 | 133.7 | 6 | 3 | 5 | 23.5 | 23.4 | -7.4 |
| -5 | -3 | -4 | 35.9 | 37.0 | 234.5 | 1 | 1 | 5 | 28.8 | 31.5 | -36.7 | 6 | 4 | 5 | 43.2 | 42.6 | 179.5 |
| -5 | -2 | -4 | 47.8 | 50.5 | -2.1 | 1 | 2 | 5 | 32.6 | 32.1 | 4.5 | 6 | 5 | 5 | 37.3 | 35.0 | 156.3 |
| -5 | -1 | -4 | 26.4 | 36.1 | -22.7 | 1 | 3 | 5 | 46.3 | 45.4 | 162.8 | 6 | 6 | 5 | 27.6 | 28.2 | -19.7 |
| 5 | 0 | 4 | 7.8 | 7.1 | 185.4 | 1 | 4 | 5 | 16.4 | 16.0 | -40.6 | 6 | 7 | 5 | 26.5 | 29.7 | -19.2 |
| 5 | 1 | 4 | 36.6 | 36.7 | 33.5 | 1 | 5 | 5 | 29.7 | 30.9 | 26.6 | 6 | 8 | 5 | 31.9 | 30.8 | 136.6 |
| 5 | 2 | 4 | 50.1 | 57.1 | 12.3 | 1 | 6 | 5 | 28.1 | 28.9 | -21.1 | 6 | 9 | 5 | 31.9 | 29.8 | 155.3 |
| 5 | 3 | 4 | 35.3 | 35.3 | 137.0 | 1 | 7 | 5 | 24.9 | 26.3 | 126.8 | 6 | 10 | 5 | 36.8 | 35.0 | -14.2 |
| 5 | 4 | 4 | 21.4 | 22.2 | 44.9 | 1 | 8 | 5 | 6.2 | 9.8 | -24.2 | -7 | -8 | -5 | 31.0 | 31.2 | 43.3 |
| 5 | 5 | 4 | 22.6 | 24.0 | 6.4 | 1 | 9 | 5 | 36.6 | 37.1 | -27.6 | -7 | -7 | -5 | 30.5 | 29.9 | 1.5 |
| 5 | 6 | 4 | 46.6 | 46.0 | 5.3 | 1 | 10 | 5 | 16.1 | 15.4 | -38.1 | -7 | -6 | -5 | 24.7 | 23.8 | 222.6 |
| 5 | 7 | 4 | 39.1 | 39.9 | 143.5 | 1 | 11 | 5 | 19.6 | 18.8 | 151.6 | -7 | -5 | -5 | 36.6 | 35.9 | 218.0 |
| 5 | 8 | 4 | 13.2 | 11.3 | 60.6 | 1 | 12 | 5 | 8.5 | 1.5 | 76.8 | -7 | -4 | -5 | 34.1 | 35.6 | 12.3 |
| 5 | 9 | 4 | 16.4 | 15.0 | 16.0 | -2 | -12 | -5 | 26.5 | 26.7 | 247.7 | -7 | -3 | -5 | 27.3 | 25.4 | -3.6 |
| 5 | 10 | 4 | 29.6 | 29.9 | -21.8 | -2 | -11 | -5 | 2.6 | 4.7 | -7.6 | -7 | -2 | -5 | 26.7 | 25.1 | 204.8 |
| 5 | 11 | 4 | 41.4 | 39.9 | 127.9 | -2 | -10 | -5 | 23.0 | 23.2 | 47.1 | -7 | -1 | -5 | 41.8 | 41.6 | 197.4 |
| -6 | -11 | -4 | 15.5 | 15.2 | -3.5 | -2 | -9 | -5 | 24.3 | 24.4 | 199.0 | 7 | 0 | 5 | 34.3 | 35.6 | 6.1 |
| -6 | -10 | -4 | 34.9 | 34.9 | 16.7 | -2 | -8 | -5 | 23.0 | 23.5 | 217.8 | 7 | 1 | 5 | 42.2 | 41.8 | 169.4 |
| -6 | -9 | -4 | 32.7 | 32.5 | 249.8 | -2 | -7 | -5 | 21.7 | 22.1 | 68.4 | 7 | 2 | 5 | 25.3 | 24.3 | 168.6 |
| -6 | -8 | -4 | 19.2 | 18.5 | 266.2 | -2 | -6 | -5 | 50.3 | 49.9 | 27.0 | 7 | 3 | 5 | 26.1 | 25.7 | 13.4 |
| -6 | -7 | -4 | 25.2 | 25.4 | -6.7 | -2 | -5 | -5 | 16.2 | 16.3 | 182.9 | 7 | 4 | 5 | 35.4 | 36.7 | -0.6 |
| -6 | -6 | -4 | 33.4 | 32.6 | 23.7 | -2 | -4 | -5 | 38.3 | 40.1 | 246.8 | 7 | 5 | 5 | 36.3 | 36.2 | 150.1 |
| -6 | -5 | -4 | 48.4 | 46.6 | 248.3 | -2 | -3 | -5 | 20.7 | 20.2 | 3.3 | 7 | 6 | 5 | 24.5 | 23.1 | 151.1 |
| -6 | -4 | -4 | 13.3 | 14.5 | 34.1 | -2 | -2 | -5 | 33.0 | 32.3 | -29.7 | 7 | 7 | 5 | 30.3 | 31.0 | 6.4 |
| -6 | -3 | -4 | 40.5 | 39.6 | -34.3 | -2 | -1 | -5 | 21.0 | 20.6 | 217.1 | 7 | 8 | 5 | 30.8 | 30.5 | -30.5 |
| -6 | -2 | -4 | 57.9 | 58.4 | 30.7 | 2 | 0 | 5 | 43.9 | 44.4 | 184.8 | -8 | -7 | -5 | 31.3 | 32.3 | 209.5 |
| -6 | -1 | -4 | 42.9 | 42.6 | 243.7 | 2 | 1 | 5 | 19.7 | 19.7 | 149.9 | -8 | -6 | -5 | 15.8 | 14.6 | 225.2 |
| 6 | 0 | 4 | 9.0 | 9.0 | -2.7 | 2 | 2 | 5 | 37.9 | 38.1 | 40.6 | -8 | -5 | -5 | 32.6 | 30.5 | 39.7 |
| 6 | 1 | 4 | 40.3 | 40.0 | 126.3 | 2 | 3 | 5 | 21.3 | 20.6 | 4.5 | -8 | -4 | -5 | 31.5 | 31.4 | 6.2 |
| 6 | 2 | 4 | 55.8 | 55.3 | -21.7 | 2 | 4 | 5 | 35.0 | 35.6 | 121.6 | -8 | -3 | -5 | 18.4 | 15.7 | 194.1 |
| 6 | 3 | 4 | 43.3 | 41.3 | 43.6 | 2 | 5 | 5 | 17.4 | 17.3 | 185.5 | -8 | -2 | -5 | 29.3 | 28.8 | 196.9 |
| 6 | 4 | 4 | 14.0 | 14.3 | -40.5 | 2 | 6 | 5 | 49.0 | 49.5 | -16.8 | -8 | -1 | -5 | 37.3 | 38.7 | -9.5 |
| 6 | 5 | 4 | 45.5 | 44.7 | 121.3 | 2 | 7 | 5 | 21.8 | 20.8 | -63.5 | 8 | 0 | 5 | 18.2 | 20.7 | 5.5 |
| 6 | 6 | 4 | 33.2 | 32.5 | -9.0 | 2 | 8 | 5 | 25.2 | 24.8 | 157.8 | 8 | 1 | 5 | 39.1 | 40.0 | 19.5 |
| 6 | 7 | 4 | 27.3 | 25.9 | 18.5 | 2 | 9 | 5 | 26.4 | 25.5 | 167.3 | 8 | 2 | 5 | 27.7 | 28.8 | 169.2 |
| 6 | 8 | 4 | 17.4 | 18.2 | 103.0 | 2 | 10 | 5 | 22.2 | 23.1 | -27.2 | 8 | 3 | 5 | 18.7 | 17.7 | 189.2 |
| 6 | 9 | 4 | 30.1 | 31.9 | 124.3 | 2 | 11 | 5 | 6.7 | 6.1 | 19.7 | 8 | 4 | 5 | 31.6 | 32.0 | 1.2 |
| 6 | 10 | 4 | 36.2 | 36.6 | -5.0 | 2 | 12 | 5 | 26.2 | 26.5 | 126.4 | 8 | 5 | 5 | 31.3 | 28.6 | -27.9 |
| 6 | 11 | 4 | 18.5 | 16.7 | 11.6 | -3 | -12 | -5 | 25.6 | 23.9 | 27.7 | 8 | 6 | 5 | 13.8 | 14.2 | 145.4 |
| -7 | -9 | -4 | 22.3 | 22.7 | -89.6 | -3 | -11 | -5 | 17.0 | 17.9 | 38.6 | 8 | 7 | 5 | 33.0 | 33.6 | 162.9 |
| -7 | -8 | -4 | 35.1 | 34.4 | 31.7 | -3 | -10 | -5 | 19.4 | 17.5 | 234.9 | -9 | -4 | -5 | 26.4 | 27.0 | 190.5 |
| -7 | -7 | -4 | 17.1 | 17.2 | -72.3 | -3 | -9 | -5 | 38.6 | 37.3 | 236.8 | -9 | -3 | -5 | 13.9 | 15.3 | 237.3 |
| -7 | -6 | -4 | 22.5 | 21.3 | 243.4 | -3 | -8 | -5 | 27.5 | 25.9 | 34.1 | -9 | -2 | -5 | 32.8 | 34.1 | 25.9 |
| -7 | -5 | -4 | 37.4 | 37.7 | 243.8 | -3 | -7 | -5 | 33.8 | 34.0 | 29.9 | -9 | -1 | -5 | 28.6 | 26.2 | -32.5 |
| -7 | -4 | -4 | 52.6 | 54.6 | 10.9 | -3 | -6 | -5 | 16.5 | 15.6 | 192.5 | 9 | 0 | 5 | 17.3 | 14.7 | 192.3 |
| -7 | -3 | -4 | 20.7 | 20.4 | -79.4 | -3 | -5 | -5 | 25.8 | 24.2 | 212.5 | 9 | 1 | 5 | 26.6 | 26.7 | 38.5 |
| -7 | -2 | -4 | 14.5 | 13.8 | 218.8 | -3 | -4 | -5 | 46.4 | 46.1 | 29.5 | 9 | 2 | 5 | 32.4 | 32.8 | -13.2 |
| -7 | -1 | -4 | 20.8 | 20.6 | 213.4 | -3 | -3 | -5 | 46.1 | 45.5 | 5.1 | 9 | 3 | 5 | 16.5 | 14.7 | 132.9 |
| 7 | 0 | 4 | 47.4 | 45.2 | 6.2 | -3 | -2 | -5 | 5.0 | 1.6 | 220.2 | 9 | 4 | 5 | 28.5 | 28.4 | 182.8 |
| 7 | 1 | 4 | 23.3 | 22.2 | 161.4 | -3 | -1 | -5 | 43.4 | 41.9 | 207.7 | 0 | -10 | -6 | 62.0 | 59.9 | 216.4 |
| 7 | 2 | 4 | 14.5 | 12.9 | 156.8 | 3 | 0 | 5 | 44.7 | 44.6 | 3.9 | 0 | -8 | -6 | 23.6 | 20.5 | 56.8 |
| 7 | 3 | 4 | 19.8 | 23.5 | 87.6 | 3 | 1 | 5 | 40.8 | 40.4 | 162.9 | 0 | -6 | -6 | 98.1 | 95.5 | 197.2 |
| 7 | 4 | 4 | 52.9 | 55.5 | -0.9 | 3 | 2 | 5 | 5.2 | 1.5 | 210.6 | 0 | -4 | -6 | 33.7 | 32.6 | 71.5 |
| 7 | 5 | 4 | 36.4 | 37.0 | 126.6 | 3 | 3 | 5 | 45.2 | 46.3 | 4.5 | 0 | -2 | -6 | 92.3 | 87.3 | 176.4 |
| 7 | 6 | 4 | 18.8 | 20.3 | 127.4 | 3 | 4 | 5 | 43.8 | 45.3 | -22.8 | 0 | 0 | 6 | 70.7 | 70.6 | 1.7 |
| 7 | 7 | 4 | 19.0 | 19.9 | 80.4 | 3 | 5 | 5 | 25.3 | 24.6 | 165.4 | 0 | 2 | 6 | 95.3 | 89.9 | 192.2 |
| 7 | 8 | 4 | 36.1 | 34.2 | -17.1 | 3 | 6 | 5 | 17.7 | 16.5 | 175.9 | 0 | 4 | 6 | 30.1 | 30.8 | -64.1 |
| 7 | 9 | 4 | 20.0 | 20.5 | 106.0 | 3 | 7 | 5 | 33.4 | 34.2 | -17.7 | 0 | 6 | 6 | 99.2 | 95.7 | 170.7 |

9

| H | K | L | FO | FC | ALPH | H | K | L | FO | FC | ALPH | H | K | L | FO | FC | ALPH |
|----|-----|----|------|------|-------|----|-----|----|------|------|-------|----|-----|----|------|------|-------|
| 0 | 8 | 6 | 24.4 | 21.9 | -43.7 | 3 | 9 | 6 | 31.1 | 30.9 | 154.2 | 7 | 1 | 6 | 35.7 | 34.8 | 244.1 |
| 0 | 10 | 6 | 61.8 | 59.0 | 154.7 | 3 | 10 | 6 | 31.5 | 29.8 | 154.7 | 7 | 2 | 6 | 45.1 | 43.7 | 177.6 |
| -1 | -11 | -6 | 32.0 | 31.3 | 224.5 | 3 | 11 | 6 | 34.8 | 32.8 | -45.1 | 7 | 3 | 6 | 21.4 | 21.0 | -85.1 |
| -1 | -10 | -6 | 25.4 | 23.3 | 183.5 | -4 | -10 | -6 | 42.8 | 39.5 | 206.3 | 7 | 4 | 6 | 21.4 | 18.9 | -10.7 |
| -1 | -9 | -6 | 57.3 | 55.5 | 39.1 | -4 | -9 | -6 | 33.3 | 31.4 | 52.4 | 7 | 5 | 6 | 19.6 | 19.7 | 231.1 |
| -1 | -8 | -6 | 18.9 | 18.5 | 198.9 | -4 | -8 | -6 | 22.0 | 21.5 | 93.2 | 7 | 6 | 6 | 40.1 | 40.3 | 164.5 |
| -1 | -7 | -6 | 54.9 | 53.3 | 215.8 | -4 | -7 | -6 | 8.1 | 7.7 | 187.9 | 7 | 7 | 6 | 20.6 | 17.9 | -60.3 |
| -1 | -6 | -6 | 22.5 | 30.7 | 189.9 | -4 | -6 | -6 | 45.4 | 45.5 | 196.7 | -8 | -5 | -6 | 43.8 | 45.6 | 46.8 |
| -1 | -5 | -6 | 49.7 | 47.1 | 21.3 | -4 | -5 | -6 | 9.8 | 8.7 | 75.5 | -8 | -4 | -6 | 4.2 | 2.1 | -62.9 |
| -1 | -4 | -6 | 55.4 | 54.2 | 186.4 | -4 | -4 | -6 | 18.1 | 18.2 | 36.4 | -8 | -3 | -6 | 23.6 | 24.3 | 157.7 |
| -1 | -3 | -6 | 68.1 | 63.7 | 191.9 | -4 | -3 | -6 | 21.5 | 21.9 | 169.3 | -8 | -2 | -6 | 21.8 | 20.1 | 195.3 |
| -1 | -2 | -6 | 48.0 | 46.9 | 192.3 | -4 | -2 | -6 | 64.4 | 64.2 | 187.2 | -8 | -1 | -6 | 39.8 | 38.5 | 25.4 |
| -1 | -1 | -6 | 70.1 | 69.7 | 26.2 | -4 | -1 | -6 | 30.2 | 28.3 | 53.1 | 8 | 0 | 6 | 21.0 | 20.1 | 175.4 |
| 1 | 0 | 6 | 54.6 | 53.1 | 183.9 | 4 | 0 | 6 | 5.7 | 3.7 | 21.0 | 8 | 1 | 6 | 41.2 | 39.8 | -13.9 |
| 1 | 1 | 6 | 67.6 | 68.0 | -19.1 | 4 | 1 | 6 | 27.9 | 27.2 | -43.2 | 8 | 2 | 6 | 21.6 | 20.0 | 179.6 |
| 1 | 2 | 6 | 47.3 | 46.3 | 173.7 | 4 | 2 | 6 | 65.4 | 64.7 | 182.6 | 8 | 3 | 6 | 21.5 | 25.7 | 217.2 |
| 1 | 3 | 6 | 68.5 | 63.6 | 176.1 | 4 | 3 | 6 | 22.0 | 21.8 | 202.1 | 8 | 4 | 6 | 5.5 | 3.0 | 57.8 |
| 1 | 4 | 6 | 56.3 | 54.6 | 180.5 | 4 | 4 | 6 | 18.2 | 18.7 | -26.5 | 8 | 5 | 6 | 45.0 | 45.8 | -35.7 |
| 1 | 5 | 6 | 50.8 | 48.3 | -11.3 | 4 | 5 | 6 | 11.5 | 7.3 | -39.8 | 0 | -10 | -7 | 39.3 | 39.5 | 239.5 |
| 1 | 6 | 6 | 31.7 | 30.2 | 178.0 | 4 | 6 | 6 | 45.8 | 46.2 | 176.2 | 0 | -8 | -7 | 9.0 | 6.7 | 75.5 |
| 1 | 7 | 6 | 54.9 | 52.6 | 152.8 | 4 | 7 | 6 | 11.3 | 7.8 | 194.4 | 0 | -6 | -7 | 51.2 | 50.8 | 209.4 |
| 1 | 8 | 6 | 19.5 | 18.2 | 178.9 | 4 | 8 | 6 | 20.4 | 20.1 | -82.3 | 0 | -4 | -7 | 17.1 | 15.5 | 44.9 |
| 1 | 9 | 6 | 57.8 | 56.3 | -30.4 | 4 | 9 | 6 | 33.3 | 32.0 | -42.2 | 0 | -2 | -7 | 50.5 | 48.9 | 194.0 |
| 1 | 10 | 6 | 21.0 | 23.0 | 186.0 | 4 | 10 | 6 | 43.0 | 40.4 | 166.9 | 0 | 0 | 7 | 26.4 | 31.7 | 5.3 |
| 1 | 11 | 6 | 32.4 | 31.7 | 148.3 | -5 | -9 | -6 | 32.4 | 31.5 | 72.2 | 0 | 2 | 7 | 51.4 | 48.5 | 177.7 |
| -2 | -11 | -6 | 4.7 | 6.9 | 48.7 | -5 | -8 | -6 | 33.7 | 34.8 | 202.3 | 0 | 4 | 7 | 16.0 | 14.5 | -24.0 |
| -2 | -10 | -6 | 32.2 | 30.4 | 89.9 | -5 | -7 | -6 | 28.0 | 27.9 | 167.1 | 0 | 6 | 7 | 52.2 | 51.9 | 170.5 |
| -2 | -9 | -6 | 6.0 | 7.1 | 160.9 | -5 | -6 | -6 | 7.1 | 5.5 | 151.4 | 0 | 8 | 7 | 8.9 | 5.7 | -23.2 |
| -2 | -8 | -6 | 61.9 | 59.2 | 196.4 | -5 | -5 | -6 | 38.7 | 36.0 | 62.8 | 0 | 10 | 7 | 36.4 | 37.3 | 132.7 |
| -2 | -7 | -6 | 21.2 | 21.7 | 103.4 | -5 | -4 | -6 | 44.8 | 41.1 | 205.4 | -1 | -10 | -7 | 11.8 | 9.6 | 120.1 |
| -2 | -6 | -6 | 40.4 | 41.2 | 54.6 | -5 | -3 | -6 | 20.0 | 18.0 | 149.1 | -1 | -9 | -7 | 28.4 | 28.0 | 34.1 |
| -2 | -5 | -6 | 12.0 | 13.6 | 126.2 | -5 | -2 | -6 | 8.3 | 7.8 | 211.2 | -1 | -8 | -7 | 11.6 | 11.5 | 172.4 |
| -2 | -4 | -6 | 85.7 | 84.3 | 201.0 | -5 | -1 | -6 | 40.8 | 42.0 | 48.2 | -1 | -7 | -7 | 30.1 | 30.5 | 228.8 |
| -2 | -3 | -6 | 23.0 | 22.4 | 24.0 | 5 | 0 | 6 | 57.9 | 58.6 | 184.6 | -1 | -6 | -7 | 10.9 | 12.1 | 61.4 |
| -2 | -2 | -6 | 22.2 | 20.9 | -6.9 | 5 | 1 | 6 | 39.6 | 40.5 | -38.6 | -1 | -5 | -7 | 32.7 | 32.6 | 30.8 |
| -2 | -1 | -6 | 7.7 | 9.3 | -55.7 | 5 | 2 | 6 | 9.2 | 7.8 | 143.3 | -1 | -4 | -7 | 12.1 | 13.0 | 170.3 |
| 2 | 0 | 6 | 85.9 | 82.0 | 184.6 | 5 | 3 | 6 | 21.7 | 20.1 | 228.0 | -1 | -3 | -7 | 39.3 | 37.9 | 193.6 |
| 2 | 1 | 6 | 8.7 | 8.3 | 43.7 | 5 | 4 | 6 | 43.0 | 39.9 | 167.0 | -1 | -2 | -7 | 6.6 | 4.7 | -45.7 |
| 2 | 2 | 6 | 22.5 | 22.7 | 15.1 | 5 | 5 | 6 | 35.6 | 34.5 | -50.7 | -1 | -1 | -7 | 34.2 | 32.8 | 17.4 |
| 2 | 3 | 6 | 23.3 | 23.1 | -16.8 | 5 | 6 | 6 | 3.8 | 3.5 | 213.6 | 1 | 0 | 7 | 31.1 | 29.5 | 182.8 |
| 2 | 4 | 6 | 84.5 | 82.8 | 167.6 | 5 | 7 | 6 | 28.5 | 29.4 | 203.1 | 1 | 1 | 7 | 33.3 | 32.3 | -3.8 |
| 2 | 5 | 6 | 15.9 | 14.6 | 239.8 | 5 | 8 | 6 | 35.1 | 35.3 | 170.5 | 1 | 2 | 7 | 4.5 | 4.7 | 41.9 |
| 2 | 6 | 6 | 41.5 | 41.3 | -48.1 | 5 | 9 | 6 | 32.6 | 30.4 | -59.2 | 1 | 3 | 7 | 38.5 | 38.3 | 178.1 |
| 2 | 7 | 6 | 17.6 | 19.5 | 262.3 | -6 | -8 | -6 | 33.5 | 33.7 | 209.4 | 1 | 4 | 7 | 13.4 | 13.9 | 200.3 |
| 2 | 8 | 6 | 63.9 | 60.8 | 174.5 | -6 | -7 | -6 | 40.4 | 37.4 | 57.6 | 1 | 5 | 7 | 32.5 | 32.2 | -17.5 |
| 2 | 9 | 6 | 9.8 | 7.8 | 210.3 | -6 | -6 | -6 | 16.3 | 16.9 | 139.0 | 1 | 6 | 7 | 12.3 | 12.7 | -58.8 |
| 2 | 10 | 6 | 30.3 | 29.8 | -79.5 | -6 | -5 | -6 | 17.9 | 19.8 | 179.7 | 1 | 7 | 7 | 29.2 | 29.0 | 144.9 |
| 2 | 11 | 6 | 6.9 | 7.9 | -29.9 | -6 | -4 | -6 | 34.1 | 33.2 | 177.9 | 1 | 8 | 7 | 14.7 | 12.3 | 199.2 |
| -3 | -11 | -6 | 34.1 | 32.4 | 58.9 | -6 | -3 | -6 | 34.8 | 33.7 | 43.2 | 1 | 9 | 7 | 31.1 | 25.5 | -19.3 |
| -3 | -10 | -6 | 32.7 | 30.8 | 217.2 | -6 | -2 | -6 | 14.4 | 15.1 | 90.6 | 1 | 10 | 7 | 9.4 | 9.8 | 247.7 |
| -3 | -9 | -6 | 30.8 | 31.7 | 217.4 | -6 | -1 | -6 | 26.4 | 24.9 | 155.7 | -2 | -10 | -7 | 21.8 | 20.9 | 65.2 |
| -3 | -8 | -6 | 23.4 | 21.2 | 188.4 | 6 | 0 | 6 | 27.3 | 28.9 | 187.9 | -2 | -9 | -7 | 25.0 | 24.0 | 199.5 |
| -3 | -7 | -6 | 40.1 | 40.7 | 53.8 | 6 | 1 | 6 | 25.4 | 25.7 | 218.3 | -2 | -8 | -7 | 40.9 | 41.1 | 216.3 |
| -3 | -6 | -6 | 47.4 | 47.7 | 195.0 | 6 | 2 | 6 | 14.7 | 13.4 | -86.2 | -2 | -7 | -7 | 23.9 | 24.0 | 74.5 |
| -3 | -5 | -6 | 44.5 | 43.0 | 177.5 | 6 | 3 | 6 | 34.6 | 33.6 | -30.9 | -2 | -6 | -7 | 22.3 | 22.7 | 29.4 |
| -3 | -4 | -6 | 31.1 | 31.1 | 164.8 | 6 | 4 | 6 | 35.8 | 35.5 | 195.2 | -2 | -5 | -7 | 20.0 | 18.6 | 162.5 |
| -3 | -3 | -6 | 62.1 | 60.8 | 31.4 | 6 | 5 | 6 | 19.2 | 19.4 | 195.2 | -2 | -4 | -7 | 49.1 | 46.7 | 210.9 |
| -3 | -2 | -6 | 47.1 | 44.7 | 188.3 | 6 | 6 | 6 | 15.9 | 14.7 | 223.8 | -2 | -3 | -7 | 28.6 | 28.0 | 18.8 |
| -3 | -1 | -6 | 43.9 | 42.8 | 165.9 | 6 | 7 | 6 | 39.0 | 37.1 | -45.9 | -2 | -2 | -7 | 14.9 | 14.4 | 23.2 |
| 3 | 0 | 6 | 26.1 | 24.7 | 182.2 | 6 | 8 | 6 | 33.5 | 33.5 | 163.4 | -2 | -1 | -7 | 20.5 | 18.3 | 209.3 |
| 3 | 1 | 6 | 43.9 | 43.7 | 204.4 | -7 | -7 | -6 | 19.5 | 19.1 | 76.5 | 2 | 0 | 7 | 58.7 | 57.0 | 185.1 |
| 3 | 2 | 6 | 47.2 | 44.6 | 182.3 | -7 | -6 | -6 | 41.5 | 40.9 | 207.7 | 2 | 1 | 7 | 19.5 | 17.0 | 157.4 |

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| | | | | | | | | | | | | | | | | | |
|---|---|---|------|------|-------|----|----|----|------|------|-------|---|---|---|------|------|-------|
| 3 | 3 | 6 | 61.5 | 60.8 | -23.5 | -7 | -5 | -6 | 20.4 | 18.4 | 141.6 | 2 | 2 | 7 | 14.4 | 14.1 | -1.9 |
| 3 | 4 | 6 | 31.0 | 30.9 | 199.8 | -7 | -4 | -6 | 18.1 | 18.1 | 21.8 | 2 | 3 | 7 | 30.6 | 28.4 | -13.1 |
| 3 | 5 | 6 | 46.3 | 44.4 | 191.8 | -7 | -3 | -6 | 27.4 | 24.7 | 100.2 | 2 | 4 | 7 | 48.4 | 45.2 | 160.7 |
| 3 | 6 | 6 | 48.0 | 47.9 | 174.6 | -7 | -2 | -6 | 45.9 | 44.1 | 194.5 | 2 | 5 | 7 | 21.0 | 19.5 | 203.8 |
| 3 | 7 | 6 | 40.2 | 39.8 | -42.1 | -7 | -1 | -6 | 35.6 | 33.2 | 125.1 | 2 | 6 | 7 | 23.2 | 23.5 | -15.3 |
| 3 | 8 | 6 | 20.7 | 19.9 | 177.3 | 7 | 0 | 6 | 6.6 | 6.6 | 15.0 | 2 | 7 | 7 | 22.3 | 22.8 | -68.8 |

(11)

| H | K | L | FO | FC | ALPH | H | K | L | FO | FC | ALPH | H | K | L | FO | FC | ALPH |
|----|----|----|------|------|-------|----|----|----|------|------|-------|----|----|----|------|------|-------|
| 2 | 8 | 7 | 41.8 | 40.9 | 155.7 | -7 | -3 | -7 | 20.0 | 19.7 | 25.1 | -4 | -5 | -8 | 19.5 | 20.0 | 267.8 |
| 2 | 9 | 7 | 24.6 | 24.3 | 166.1 | -7 | -2 | -7 | 29.6 | 29.5 | 187.1 | -4 | -4 | -8 | 54.1 | 51.1 | 10.4 |
| 2 | 10 | 7 | 19.2 | 20.0 | -53.4 | -7 | -1 | -7 | 29.3 | 27.1 | 170.6 | -4 | -3 | -8 | 24.1 | 24.2 | 234.9 |
| -3 | -9 | -7 | 23.1 | 22.4 | 220.4 | 7 | 0 | 7 | 30.2 | 31.3 | 4.9 | -4 | -2 | -8 | 11.3 | 12.3 | 233.3 |
| -3 | -8 | -7 | 10.4 | 12.8 | 41.0 | 7 | 1 | 7 | 26.6 | 27.2 | 199.0 | -4 | -1 | -8 | 9.2 | 6.2 | -29.9 |
| -3 | -7 | -7 | 36.3 | 35.4 | 37.5 | 7 | 2 | 7 | 31.0 | 30.4 | 186.6 | 4 | 0 | 8 | 46.3 | 44.4 | 6.7 |
| -3 | -6 | -7 | 41.5 | 39.7 | 156.7 | 7 | 3 | 7 | 20.1 | 20.2 | -12.3 | 4 | 1 | 8 | 10.4 | 7.7 | 62.5 |
| -3 | -5 | -7 | 27.8 | 28.6 | 217.1 | 7 | 4 | 7 | 21.2 | 19.7 | -16.2 | 4 | 2 | 8 | 11.8 | 11.2 | 138.0 |
| -3 | -4 | -7 | 26.2 | 25.3 | 57.0 | 0 | -8 | -8 | 51.2 | 50.1 | 24.0 | 4 | 3 | 8 | 21.2 | 23.3 | 137.0 |
| -3 | -3 | -7 | 35.2 | 36.6 | 12.0 | 0 | -6 | -8 | 17.0 | 17.7 | 216.9 | 4 | 4 | 8 | 53.9 | 52.1 | 0.8 |
| -3 | -2 | -7 | 28.3 | 26.8 | 173.7 | 0 | -4 | -8 | 63.7 | 60.0 | 20.5 | 4 | 5 | 8 | 23.8 | 23.5 | 94.5 |
| -3 | -1 | -7 | 29.1 | 35.6 | 174.3 | 0 | -2 | -8 | 8.9 | 5.8 | 202.9 | 4 | 6 | 8 | 4.7 | 2.4 | 54.6 |
| 3 | 0 | 7 | 32.3 | 30.8 | 2.4 | 0 | 0 | 8 | 93.2 | 95.1 | 4.1 | -5 | -5 | -8 | 19.1 | 18.7 | 15.0 |
| 3 | 1 | 7 | 38.7 | 37.1 | 196.8 | 0 | 2 | 8 | 6.1 | 6.2 | 186.8 | -5 | -4 | -8 | 20.8 | 18.5 | -38.4 |
| 3 | 2 | 7 | 29.1 | 27.9 | 196.0 | 0 | 4 | 8 | 63.7 | 59.6 | -8.4 | -5 | -3 | -8 | 21.9 | 21.9 | 238.9 |
| 3 | 3 | 7 | 37.8 | 37.9 | -0.7 | 0 | 6 | 8 | 18.2 | 18.9 | 156.0 | -5 | -2 | -8 | 21.9 | 25.3 | -10.8 |
| 3 | 4 | 7 | 26.4 | 24.7 | -51.8 | 0 | 8 | 8 | 53.5 | 50.9 | -11.2 | -5 | -1 | -8 | 27.4 | 26.9 | -17.9 |
| 3 | 5 | 7 | 25.8 | 27.0 | 156.4 | -1 | -8 | -8 | 30.1 | 28.5 | 4.3 | 5 | 0 | 8 | 6.4 | 7.2 | 186.5 |
| 3 | 6 | 7 | 41.6 | 39.8 | 170.6 | -1 | -7 | -6 | 42.8 | 41.0 | 221.8 | 5 | 1 | 8 | 27.9 | 27.3 | 30.6 |
| 3 | 7 | 7 | 38.2 | 35.5 | -25.7 | -1 | -6 | -8 | 23.2 | 23.7 | 1.8 | 5 | 2 | 8 | 26.0 | 28.2 | 26.2 |
| 3 | 8 | 7 | 15.1 | 13.5 | -32.0 | -1 | -5 | -8 | 31.0 | 32.8 | 25.1 | 5 | 3 | 8 | 22.2 | 20.0 | 137.8 |
| 3 | 9 | 7 | 23.3 | 22.6 | 155.5 | -1 | -4 | -8 | 22.0 | 16.7 | -0.6 | 5 | 4 | 8 | 18.2 | 16.5 | 38.8 |
| -4 | -8 | -7 | 26.6 | 25.2 | 54.9 | -1 | -3 | -8 | 40.4 | 39.9 | 197.8 | 5 | 5 | 8 | 14.3 | 17.9 | 0.5 |
| -4 | -7 | -7 | 21.9 | 19.8 | 215.8 | -1 | -2 | -8 | 20.1 | 19.5 | -11.3 | -6 | -2 | -8 | 39.0 | 37.1 | 28.8 |
| -4 | -6 | -7 | 34.0 | 32.6 | 205.6 | -1 | -1 | -8 | 43.1 | 42.0 | 9.5 | -6 | -1 | -8 | 27.6 | 26.1 | 251.8 |
| -4 | -5 | -7 | 19.4 | 19.9 | 13.9 | 1 | 0 | 8 | 19.5 | 18.4 | 4.8 | 6 | 0 | 8 | 8.1 | 2.8 | -14.0 |
| -4 | -4 | -7 | 22.7 | 20.7 | 8.8 | 1 | 1 | 8 | 41.2 | 41.7 | 1.3 | 6 | 1 | 8 | 21.1 | 22.8 | 121.0 |
| -4 | -3 | -7 | 51.4 | 50.9 | 185.0 | 1 | 2 | 8 | 22.0 | 21.0 | 25.2 | 6 | 2 | 8 | 36.2 | 35.0 | -16.9 |
| -4 | -2 | -7 | 53.9 | 52.5 | 197.0 | 1 | 3 | 8 | 39.4 | 40.4 | 174.2 | 0 | -4 | -8 | 33.2 | 31.4 | 27.7 |
| -4 | -1 | -7 | 35.5 | 33.0 | 47.2 | 1 | 4 | 8 | 18.8 | 16.5 | 12.2 | 0 | -2 | -9 | 13.7 | 13.4 | 176.6 |
| 4 | 0 | 7 | 17.4 | 17.4 | 7.9 | 1 | 5 | 8 | 32.0 | 32.4 | -11.9 | 0 | 0 | 9 | 43.4 | 44.2 | 6.1 |
| 4 | 1 | 7 | 32.0 | 31.3 | -39.4 | 1 | 6 | 8 | 26.0 | 24.3 | 10.3 | 0 | 2 | 9 | 14.8 | 15.5 | 202.8 |
| 4 | 2 | 7 | 52.7 | 51.8 | 172.4 | 1 | 7 | 8 | 43.2 | 40.6 | 149.4 | 0 | 4 | 9 | 33.1 | 30.6 | -11.5 |
| 4 | 3 | 7 | 50.3 | 50.6 | 180.4 | 1 | 8 | 8 | 28.1 | 27.9 | 2.4 | -1 | -5 | -9 | 23.0 | 20.3 | 11.0 |
| 4 | 4 | 7 | 23.1 | 22.2 | 3.9 | -2 | -8 | -8 | 14.5 | 14.3 | 263.2 | -1 | -4 | -9 | 10.0 | 7.9 | 19.9 |
| 4 | 5 | 7 | 24.2 | 21.6 | -2.4 | -2 | -7 | -8 | 10.1 | 8.8 | 154.8 | -1 | -3 | -9 | 33.1 | 30.3 | 205.6 |
| 4 | 6 | 7 | 34.2 | 33.0 | 168.3 | -2 | -6 | -8 | 61.9 | 59.8 | 20.9 | -1 | -2 | -9 | 22.2 | 20.3 | -0.9 |
| 4 | 7 | 7 | 19.9 | 19.1 | 156.1 | -2 | -5 | -8 | 2.7 | 1.5 | 175.4 | -1 | -1 | -9 | 25.2 | 26.4 | 27.7 |
| 4 | 8 | 7 | 26.2 | 24.5 | -43.2 | -2 | -4 | -8 | 15.4 | 16.6 | 239.5 | 1 | 0 | 9 | 7.9 | 1.5 | 159.8 |
| -5 | -7 | -7 | 22.9 | 22.0 | 201.6 | -2 | -3 | -8 | 16.4 | 15.2 | -22.2 | 1 | 1 | 9 | 23.3 | 24.3 | -12.3 |
| -5 | -6 | -7 | 30.0 | 28.5 | 25.4 | -2 | -2 | -8 | 66.5 | 63.7 | 10.6 | 1 | 2 | 9 | 23.6 | 20.7 | 10.3 |
| -5 | -5 | -7 | 42.9 | 40.7 | 34.8 | -2 | -1 | -8 | 26.3 | 23.4 | -63.7 | 1 | 3 | 9 | 32.3 | 29.8 | 168.6 |
| -5 | -4 | -7 | 35.4 | 35.2 | 209.9 | 2 | 0 | 8 | 2.7 | 4.1 | 202.8 | 1 | 4 | 9 | 10.3 | 7.3 | -12.1 |
| -5 | -3 | -7 | 23.9 | 24.6 | 198.6 | 2 | 1 | 8 | 19.9 | 21.0 | 65.6 | 1 | 5 | 9 | 23.6 | 22.1 | 6.7 |
| -5 | -2 | -7 | 28.0 | 26.6 | -0.1 | 2 | 2 | 8 | 66.1 | 63.7 | 0.4 | -2 | -5 | -9 | 11.5 | 11.9 | 191.3 |
| -5 | -1 | -7 | 31.9 | 31.1 | 6.2 | 2 | 3 | 8 | 16.0 | 15.4 | 30.9 | -2 | -4 | -9 | 19.4 | 22.7 | 237.3 |
| 5 | 0 | 7 | 45.6 | 45.9 | 184.2 | 2 | 4 | 8 | 15.8 | 15.8 | 132.2 | -2 | -3 | -9 | 17.9 | 17.8 | 3.4 |
| 5 | 1 | 7 | 33.9 | 32.1 | 5.1 | 2 | 5 | 8 | 6.5 | 3.6 | 208.4 | -2 | -2 | -9 | 30.8 | 29.3 | -0.9 |
| 5 | 2 | 7 | 28.3 | 27.5 | 8.4 | 2 | 6 | 8 | 62.1 | 60.1 | -9.8 | -2 | -1 | -9 | 19.2 | 15.7 | 221.6 |
| 5 | 3 | 7 | 22.3 | 23.9 | 174.5 | 2 | 7 | 8 | 9.4 | 8.3 | 195.3 | 2 | 0 | 9 | 25.0 | 21.8 | 187.2 |
| 5 | 4 | 7 | 34.4 | 34.0 | 160.4 | 2 | 8 | 8 | 11.7 | 13.3 | 113.3 | 2 | 1 | 9 | 16.6 | 15.0 | 146.7 |
| 5 | 5 | 7 | 42.0 | 40.5 | -25.5 | -3 | -7 | -8 | 22.7 | 22.3 | 21.6 | 2 | 2 | 9 | 32.3 | 31.4 | 16.7 |
| 5 | 6 | 7 | 30.5 | 29.3 | -17.0 | -3 | -6 | -8 | 7.7 | 9.4 | -35.3 | 2 | 3 | 9 | 18.6 | 17.8 | 4.4 |
| 5 | 7 | 7 | 23.9 | 22.5 | 171.9 | -3 | -5 | -8 | 38.1 | 37.2 | 218.7 | 2 | 4 | 9 | 20.4 | 20.4 | 135.5 |
| -6 | -6 | -7 | 13.1 | 11.2 | 41.2 | -3 | -4 | -8 | 16.6 | 18.5 | 37.4 | 2 | 5 | 9 | 12.9 | 12.7 | 178.8 |
| -6 | -5 | -7 | 29.4 | 29.3 | 183.9 | -3 | -3 | -8 | 33.9 | 36.2 | 2.2 | -3 | -4 | -9 | 33.1 | 30.9 | 29.9 |
| -6 | -4 | -7 | 40.8 | 38.6 | 183.7 | -3 | -2 | -8 | 26.0 | 22.3 | 11.3 | -3 | -3 | -9 | 28.0 | 27.2 | 6.5 |
| -6 | -3 | -7 | 39.8 | 37.5 | 34.5 | -3 | -1 | -8 | 31.3 | 29.2 | 194.1 | -3 | -2 | -9 | 2.8 | 3.9 | 164.5 |
| -6 | -2 | -7 | 30.2 | 29.8 | 46.2 | 3 | 0 | 8 | 33.0 | 30.2 | 6.7 | -3 | -1 | -9 | 30.6 | 28.4 | 200.4 |
| -6 | -1 | -7 | 30.2 | 28.6 | 180.5 | 3 | 1 | 8 | 33.0 | 30.4 | 180.0 | 3 | 0 | 9 | 39.0 | 35.7 | 4.6 |
| 6 | 0 | 7 | 25.4 | 27.2 | 186.7 | 3 | 2 | 8 | 24.6 | 21.9 | -8.6 | 3 | 1 | 9 | 30.0 | 28.3 | 173.3 |
| 6 | 1 | 7 | 30.7 | 28.2 | 191.5 | 3 | 3 | 8 | 34.1 | 36.6 | 8.6 | 3 | 2 | 9 | 6.0 | 4.4 | 208.4 |

| | | | | | | | | | | | | | | | | | |
|----|----|----|------|------|-------|----|----|----|------|------|-------|----|----|----|------|------|-------|
| 6 | 2 | 7 | 27.6 | 27.8 | -39.0 | 3 | 4 | 8 | 13.5 | 16.4 | -17.2 | 3 | 3 | 9 | 29.9 | 27.8 | 7.2 |
| 6 | 3 | 7 | 37.3 | 37.0 | -24.9 | 3 | 5 | 8 | 37.3 | 36.9 | 153.2 | 3 | 4 | 9 | 32.9 | 30.0 | -20.4 |
| 6 | 4 | 7 | 40.1 | 40.0 | 185.6 | 3 | 6 | 8 | 10.7 | 8.9 | 45.5 | -4 | -1 | -9 | 20.7 | 20.0 | 19.1 |
| 6 | 5 | 7 | 29.8 | 30.1 | 186.7 | 3 | 7 | 8 | 21.8 | 22.7 | -6.2 | 4 | 0 | 9 | 31.5 | 29.0 | 7.6 |
| -7 | -4 | -7 | 23.0 | 20.1 | 31.6 | -4 | -6 | -8 | 8.6 | 5.4 | -44.6 | 4 | 1 | 9 | 17.4 | 18.8 | -7.7 |

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