| F° C° | F° C° | F° C° | F° C° |
|---|--|---|--|
| 120 - 48.9 $118 - 47.8$ | 120 - 48.9 $118 + 47.8$ | 120 - 48.9 $118 - 47.8$ | 120 - 48.9 $118 - 47.8$ |
| $ \begin{array}{c} 118 + 4/.8 \\ 117 + 47.2 \\ 116 + 46.7 \\ 115 + 46.7 \end{array} $ | 118 + 47.8 117 + 47.2 116 + 16 7 | $ \begin{array}{c} 118 + 47.8 \\ 117 + 47.2 \\ 116 + 46.7 \end{array} $ | 118 + 47.8 117 + 47.2 116 - 46 7 |
| 115 + 46.1 114 + 45.6 | 115 + 46.1 114 + 45.6 | 115 + 46.1 114 + 45.6 | 115 + 46.1 114 + 45.6 |
| $11\overset{113}{\overset{+}{\overset{+}{\overset{+}{\overset{+}{\overset{+}{\overset{+}{\overset{+}{$ | $112 \xrightarrow{113} 44.4$ | $112 \xrightarrow{113} + 45.0 \\ 44.4$ | $112^{\frac{113}{111}} + \overset{45.0}{\cancel{4}}44.4$ |
| 110 - 43.3 $109 + 42.8$ | 110 - 43.3 $109 + 42.8$ | 110 - 43.3 $109 + 42.8$ | 110 — 43.3 109 — 42.8 |
| $ \begin{array}{c} 115 + 46.1 \\ 114 + 45.6 \\ 112 + 45.0 \\ 112 + 44.4 \\ 111 + 43.9 \\ 110 + 43.3 \\ 108 + 42.8 \\ 108 + 41.7 \\ 106 + 41.1 \end{array} $ | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | 108 - 42.2 | 108 - 42.2 |
| 105 40.6 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $ \begin{array}{c} 118 + 47.8 \\ 117 + 47.2 \\ 116 - 46.7 \\ 114 + 45.6 \\ 112 - 44.4 \\ 110 - 43.3 \\ 108 - 42.8 \\ 108 - 42.8 \\ 108 - 41.7 \\ 106 - 41.1 \\ 104 - 40.6 \\ 102 - 38.9 \\ 100 - 38.9 \\ 100 - 37.8 \end{array} $ | $ \begin{array}{c} 118 - 47.8 \\ 116 - 46.7 \\ 115 - 46.1 \\ 114 - 45.6 \\ 112 - 44.4 \\ 111 - 43.9 \\ 110 - 43.3 \\ 108 - 42.8 \\ 106 - 41.1 \\ 104 - 40.0 \\ 104 - 40.0 \end{array} $ |
| $104 \xrightarrow{40.0} 40.0$ $102 \xrightarrow{38.9} 101 \xrightarrow{38.3} 27.8$ | $ \begin{array}{r} 103 + 39.4 \\ 102 + 38.9 \\ 101 + 38.3 \end{array} $ | $ \begin{array}{r} 103 + 39.4 \\ 102 - 38.9 \\ 101 - 38.3 \end{array} $ | 103 + 39.4 $102 - 38.9$ |
| $100^{\frac{101}{99}} + \frac{333}{37.8}$ | $100^{\frac{101}{99}} + \frac{30.3}{37.2} \cdot \frac{3}{2} \cdot$ | $100^{101}_{99} + \frac{30.3}{37.2}$ 37.8 | $100^{\frac{101}{99}} + \frac{33.3}{37.2} \cdot \frac{3}{37.2}$ |
| $100 \xrightarrow{99} \xrightarrow{37.8} 37.8$ $98 \xrightarrow{36.7} 36.7$ $96 \xrightarrow{97} \xrightarrow{36.1} 35.6$ $95 \xrightarrow{35.0} 34.4$ | $ \begin{array}{c} 100 & + & 38.3 \\ 100 & + & 3.37.8 \\ 99 & + & 37.2 \\ 98 & + & 36.7 \\ 96 & + & 35.0 \\ 94 & + & 34.4 \\ 93 & + & 33.9 \\ 93 & + & 33.3 \\ 93 & + & 33.3 \\ 33 & 33.3 \\ \end{array} $ | $100 \xrightarrow{-38.3} 37.8$ $98 \xrightarrow{-37.2} 36.7$ $96 \xrightarrow{-36.1} 35.6$ $95 \xrightarrow{-35.0} 35.6$ | $100^{01}_{99} - \frac{38.3}{37.8}$ $98 - \frac{36.7}{36.1}$ $96 - \frac{35.0}{35.0}$ $95 - \frac{35.0}{35.0}$ |
| $ \begin{array}{r} 90 - 35.0 \\ 95 - 35.0 \\ 94 - 34.4 \\ 93 - 33.9 \\ 20 - 35.0 \\ 30 - 33.9 $ | 90 - 35.0 95 - 35.0 94 - 34.4 | 95 - 35.0 94 - 34.4 | $ \begin{array}{c} 90 - 35.0 \\ 95 - 35.0 \\ 94 - 34.4 \\ 93 - 33.9 \\ 20 - 33.9 $ |
| $92 \xrightarrow{93 + 33.9}_{91 + 32.8} 33.3$ $90 + 32.2$ | $92 \xrightarrow{\stackrel{93}{-}} 33.3$ $\stackrel{91}{\stackrel{32.8}{-}} 32.8$ | $\begin{array}{c} 94 + 34.4 \\ 92 + 33.9 \\ 92 + 33.3 \\ 90 + 32.2 \end{array}$ | $92 \xrightarrow{\stackrel{93}{-}} 33.3$ $\stackrel{91}{-} 32.8$ $90 - 32.2$ |
| | | | 90 + 32.2 $89 + 31.7$ |
| 88 + 31.1 | 80 | 00 - 31.1 | $ 88 \xrightarrow{87} \xrightarrow{31.7} 31.1 $ $ 86 \xrightarrow{30.0} 30.0 $ $ 84 \xrightarrow{84} \xrightarrow{28} 29.4 $ |
| $ \begin{array}{c} 86 - 30.0 \\ 85 - 29.4 \\ \hline 28.9 \end{array} $ | $\begin{array}{c} 86 + 30.0 \\ 85 + 29.4 \\ \hline 84 + 28.9 \end{array}$ | $\begin{array}{c} 86 + 30.0 \\ 85 + 29.4 \\ 84 + 28.9 \end{array}$ | 84 - 29.4 |
| $83 + 28.3 \\ 82 + 27.8$ | $ \begin{array}{c} 84 + 28.3 \\ \hline{} & 28.3 \\ 82 + 27.8 \\ \hline{} & 28.3 \\ \hline{} & 28.3 \\ \hline{} & 27.8 \\ \hline{} & 27.8 \\ \hline{} & 27.2 \\ \hline{} & 27.2 \\ \end{array} $ | $83 + 28.3 \\ 82 + 27.8$ | $84\overset{2}{\overset{3}{\overset{2}{\overset{3}{\overset{3}{\overset{3}{\overset{3}{\overset{3}{$ |
| 80 + 26.7 | 80 - 26.7 | $80^{\circ 1}_{79} + 26.1$ | $80^{\circ}_{79} - 26.1$ $78 - 25.6$ |
| 78 + 25.6 | 78 1 25 6 | $ \begin{array}{c} 80 \xrightarrow{1} & 27.2 \\ & -26.1 \\ & -26.1 \\ & -25.6 \\ & -76 \xrightarrow{17} & 25.6 \\ & -24.4 \\ & -23.3 \\ & -74 \xrightarrow{17} & 23.3 \\ & -22.8 \\ & -23.3 \\ & -23.2 \\ & -23.3 \\ & -23.2 \\ & -23.3 \\ & -23.3 \\ & -23.2 \\ & -23.3$ | 78 + 25.6 $76 + 25.0$ $76 + 24.4$ |
| 76 - 24.4 75 - 23.9 74 - 23.3 73 - 22.8 72 - 23.2 73 - 22.8 72 - 23.2 73 - 22.8 | $76 \xrightarrow{77} - 25.0 \\ 76 \xrightarrow{75} - 23.9 \\ 74 + 23.3$ | 70 - 24.4 $75 + 23.9$ $74 + 23.3$ | 75 + 23.9 $74 + 23.3$ |
| $72 \xrightarrow{73} + 22.8 \atop$ | $72 \xrightarrow{73} \begin{array}{c} 22.8 \\ -22.2 \\ -21.7 \\ -21.7 \\ -21.1 \end{array}$ | $72 \frac{73 + 22.8}{11 + 21.7} = 2.2$ | $72^{\frac{73}{11} + \frac{22.8}{2}}$ 22.2 |
| $\frac{70}{69} + \frac{21.1}{20.6}$ | 70 - 21.1 | $72 \xrightarrow{71} \begin{array}{c} 22.8 \\ -22.2 \\ 70 - 21.1 \\ 68 - 20.6 \\ 67 - 194 \\ 20.0 \end{array}$ | $72 \xrightarrow{71} - 21.7 \\ 70 \xrightarrow{21.7} 21.1 \\ 68 \xrightarrow{69} - 20.6 \\ 67 \xrightarrow{19.4} 20.0$ |
| $00_{67} + 20.0$ | $68 \frac{1}{19.4} 20.0$ | $ \begin{array}{r} 68 + 20.0 \\ 67 + 19.4 \\ 66 + 18.9 \\ 6^{65} + 18.3 \\ 6^$ | 68 - 20.0 |
| $ \begin{array}{c} 66 + 18.9 \\ 65 + 18.9 \\ 64 + 17.2 \\ 63 + 17.2 \\ 63 + 17.2 \\ 63 + 17.2 \end{array} $ | $64 \stackrel{65}{} 17.8$ | $64 \stackrel{65}{} 17.8$ | $64 \xrightarrow{65 + 18.3} 17.8$ |
| $ \begin{array}{c} 63 + 17.2 \\ 62 - 16.7 \\ 61 - 16.1 \end{array} $ | $ \begin{array}{c} 63 + 17.2 \\ 62 + 16.7 \\ 61 + 16.1 \end{array} $ | $ \begin{array}{c} 63 + 17.2 \\ 62 + 16.7 \\ 61 + 16.1 \end{array} $ | $ \begin{array}{c} 68 - 20.0 \\ 67 - 19.4 \\ 66 - 18.9 \\ 66 - 18.3 \\ 64 - 17.8 \\ 62 - 16.7 \\ 60 - 15.6 \\ 60 - 15.6 \end{array} $ |
| $ \begin{array}{c} 63 + 17.2 \\ 62 - 16.7 \\ 60 - 15.6 \\ 59 - 15.0 \\ 58 + 14.4 \\ 56 - 13.3 \\ 55 - 12.8 \\ 54 + 12.2 \\ 52 - 11.7 \\ 52 - 11.1 \\ 51 + 10.6 \end{array} $ | $ \begin{array}{c} 66 + 18.9 \\ 64 + 17.8 \\ 63 + 17.2 \\ 62 + 16.7 \\ 60 + 15.0 \\ 59 + 15.0 \\ 58 + 14.4 \\ 56 + 12.2 \\ 52 + 11.1 \\ 52 + 11.1 \\ 53 + 11.1 \\ 54 + 12.2 \\ 53 + 11.1 \\ 51 + 10.6 \\ 51 + 10.6 \\ 52 + 11.1 \\ 53 + 11.1 \\ 54 + 12.2 \\ 55 + 11.1 \\ 51 + 10.6 \\ 51 + 11.1 \\ 52 + 11.1 \\ 53 + 11.1 \\ 54 + 12.2 \\ 55 + 11.1 \\ 51 + 10.6 \\ 51 + 10.6 \\ 52 + 11.1 \\ 53 + 11.1 \\ 54 + 12.2 \\ 55 + 11.1 \\ 51 + 10.6 $ | $ \begin{array}{c} 64 \stackrel{65}{-} \stackrel{18.3}{-} 17.8 \\ \stackrel{63}{-} \stackrel{17.2}{-} 16.7 \\ 60 \stackrel{-}{-} 15.6 \\ \stackrel{59}{-} 15.0 \\ 58 \stackrel{-}{-} 14.4 \\ 56 \stackrel{57}{-} 13.9 \\ 54 \stackrel{-}{-} 12.2 \\ 53 \stackrel{-}{-} 11.1 \\ 52 \stackrel{-}{-} 11.1 \\ 51 \stackrel{-}{-} 10.6 \end{array} $ | $60_{59}^{\circ} - 15.6$ $58 - 14.4$ $56_{57}^{\circ} - 13.3$ $55 - 12.8$ $54 - 12.2$ |
| 58 + 14.4 57 + 13.9 56 + 13.3 | 58 + 14.4 57 + 13.9 56 - 13 3 | $\begin{array}{c} 58 + 14.4 \\ 57 + 13.9 \\ 56 + 13.3 \end{array}$ | 58 — 14.4 57 — 13.9 56 — 13.3 |
| 55 + 12.8 54 + 12.2 | $\begin{array}{c} 35 + 12.8 \\ 54 + 12.2 \end{array}$ | $\begin{array}{c} 35 \\ 55 \\ 54 \\ -12.2 \end{array}$ | $\begin{array}{c} 355 + 12.8 \\ 54 - 12.2 \end{array}$ |
| $52^{\frac{53}{1}} + 11.7 \\ 10.6 \\ 1.1$ | $52^{\frac{53}{11}} + 11.1$ | $52 \xrightarrow{53} + 11.7 + 10.6$ | $ \begin{array}{c} 54 + 12.2 \\ 53 + 11.7 \\ 51 + 10.6 \\ 51 + 10.6 \end{array} $ |
| 50 — 10.0 49 — 9.4 48 — 8.9 46 — 7.8 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $ \begin{array}{c} 51 & 10.6 \\ 50 & 10.0 \\ 48 & 8.9 \\ 47 & 8.3 \\ 46 & 7.8 \\ 45 & 7.2 \\ 44 & 6.7 \\ 42 & 5.6 \\ 40 & 4.4 \end{array} $ |
| 48 - 8.9 $47 + 8.3$ $46 - 7.8$ | 48 - 8.3 46 - 7.8 | 48 | 48 - 8.9 47 + 8.3 46 - 7.8 |
| $ \begin{array}{c} 46 + 7.8 \\ 45 + 7.2 \\ 44 + 6.7 \\ 43 + 6.1 \\ 42 + 5.6 \end{array} $ | $ \begin{array}{c} 45 - 7.8 \\ 44 - 6.7 \\ 42 - 5.6 \\ 41 - 5.0 \\ 41 - 5.0 \end{array} $ | $44^{45} + \frac{7.2}{6.7}$ | $44 \frac{45 + 7.2}{-} 6.7$ |
| 41 + 5.0 | 42 + 5.6 $41 + 5.0$ | $\begin{array}{c} 43 + 6.1 \\ 42 + 5.6 \\ 41 + 5.0 \end{array}$ | 42 + 5.6 $41 + 5.0$ |
| 40 + 4.4 $39 + 3.9$ $38 + 3.3$ | 40 + 3.9 + 3.9 | 40 + 4.4 | 40 - 4.4 |
| | 36 - 2.8 | 36 + 2.8 | 36 - 2.2 |
| $ 36\xrightarrow{37} - 2.2 $ $ 34 - 1.1 $ $ 32\xrightarrow{33} - 0.6 $ $ 32\xrightarrow{31} - 0.6 $ | $40_{39}^{41} + \frac{5.0}{4}.4$ $38 + \frac{3.3}{3}.3$ $36_{35}^{-1} + \frac{2.2}{1.7}$ $34 + \frac{1.1}{33} + \frac{0.6}{0.0}$ $32 + \frac{0.6}{0.0}$ | 35 + 1.7 $34 + 1.1$ $33 + 0.6$ | $40 \xrightarrow{41} - \overset{5.0}{\cancel{-}} 4.4$ $38 - \overset{3.9}{\cancel{-}} \overset{3.9}{\cancel{-}} \overset{2.8}{\cancel{-}} 2.2$ $34 - \overset{1.1}{\cancel{-}} \overset{33}{\cancel{-}} \overset{0.6}{\cancel{-}} \overset{3}{\cancel{-}} \overset{0.6}{\cancel{-}} \overset{3}{\cancel{-}} \overset{0.6}{\cancel{-}} \overset{3}{\cancel{-}} \overset{0.6}{\cancel{-}} \overset{3}{\cancel{-}} \overset{0.6}{\cancel{-}} \overset{3}{\cancel{-}} \overset{0.6}{\cancel{-}} \overset{3}{\cancel{-}} \overset{0.6}{\cancel{-}} \overset{0}{\cancel{-}} \overset{0}{\cancel$ |
| $32^{3}_{1} + 0.0$ | $32 \xrightarrow{31 \ -0.6}^{30 \ -0.6} 0.0$ $30 \ -1.1$ $28 \xrightarrow{27 \ -2.8}^{-1.7} -2.2$ $26 \ -3.3$ | $ \begin{array}{c} 46 - 7.8 \\ 44 - 6.7 \\ 43 - 6.7 \\ 42 - 5.6 \\ 40 - 4.4 \\ 39 - 3.9 \\ 38 - 3.3 \\ 36 - 2.8 \\ 35 - 1.7 \\ 34 - 1.1 \\ 32 - 0.0 \\ 301.1 \\ 282.2 \\ 272.8 \\ 263.3 \end{array} $ | $32 \xrightarrow{33} - 0.0 \\ 30 - 0.0 \\ 30 - 1.1 \\ 28 \xrightarrow{29}1.7 \\ 27 - 2.8 \\ 27 - 2.2 \\ 27 - 2.2 \\ 27 - 2.3 \\ 27 - 2.$ |
| 32 - 0.0 $ 31 - 0.6 $ $ 30 - 1.1 $ $ 28 - 7 $ $ 27 - 2.8 $ $ 27 - 2.8$ | 30 + -1.1 $29 + -1.7$ $28 + -2.2$ | 30 + -1.1 $29 + -1.7$ $28 + -2.2$ | 301.1 291.7 282.2 |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | $\begin{array}{c} 20 & -2.2 \\ 27 & -2.8 \\ 26 & -3.3 \end{array}$ | $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | $\begin{array}{c} 20 & -2.2 \\ 27 & -2.8 \\ 26 & -3.3 \end{array}$ |
| $ \begin{array}{c} 26 + -3.3 \\ 24 + -3.9 \\ 23 + -5.0 \end{array} $ | $ \begin{array}{c} 26 + -3.3 \\ 24 + -3.9 \\ 24 + -5.0 \end{array} $ | $24^{\frac{25}{4}} - 44$ | $ \begin{array}{c} 26 + -3.3 \\ 24 + -3.9 \\ 23 + -5.0 \end{array} $ |
| 22 + -5.6 | $\begin{array}{c} 23 + -5.0 \\ 22 + -5.6 \\ 21 + -6.1 \\ \end{array}$ | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | $\begin{array}{c} 27 \\ 23 \\ -5.0 \\ 22 \\ -6.1 \\ -6.1 \\ \end{array}$ |
| 20 | $20 \xrightarrow{19} - \overset{-6.7}{-16.7}$ $18 + \overset{-7.8}{-7.8}$ $16 \xrightarrow{17} - \overset{-8.3}{-8.9}$ $14 + \overset{-10.0}{-10.0}$ $12 \xrightarrow{-11.1}$ | $20^{\frac{1}{19} - \frac{-6.1}{-6.7}}_{19 - \frac{-7.2}{-7.8}}_{18 - \frac{-7.8}{-7.8}}_{16 - \frac{-8.3}{-9.4}}_{14 - \frac{-10.0}{-11.1}}_{11 - \frac{-11.7}{-11.7}}$ | 206.7 |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $16 \frac{17}{10} - 8.3$ | $16 \frac{17 + -8.3}{-8.9}$ | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ |
| $\begin{array}{c} 15 + -9.4 \\ 14 + -10.0 \\ 13 + -10.6 \end{array}$ | $ \begin{array}{c} 15 + -9.4 \\ 14 + -10.0 \\ 13 + -10.6 \end{array} $ | $ \begin{array}{c} 15 + -9.4 \\ 14 + -10.0 \\ 13 + -10.6 \end{array} $ | $ \begin{array}{c} 15 + -9.4 \\ 14 + -10.0 \\ 13 + -10.6 \end{array} $ |
| $12 \frac{1}{10} - 11.1$ | 12 + -11.1 | $ \begin{array}{c} 12 \xrightarrow{13} - 10.6 \\ 12 \xrightarrow{11} - 11.1 \\ 10 \xrightarrow{-12.2} \\ 8 \xrightarrow{9} - 12.8 \\ \hline -13.9 \\ -13.9 \\ \hline -13.9 \\ $ | |
| 1111.7 1012.2 912.8 713.9 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $ \begin{array}{c} 10 + -12.2 \\ 9 + -12.8 \\ -13 3 \end{array} $ | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | 713.9 614.4 515.0 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ |
| 4 + -15.6 | $4 \xrightarrow{5 + -15.0} -15.6$ $2 \xrightarrow{7 -16.7} -16.7$ | $4 \xrightarrow{\overset{5}{-} -15.0}_{\overset{3}{-} -16.7} -15.6$ | $4 \xrightarrow{515.0}_{316.1} 15.6$ 216.7 |
| 2 — -16.7 | | $ \begin{array}{c} 2 + -16.7 \\ 1 + -17.2 \\ -17.8 \end{array} $ | $ \begin{array}{c} 2 + -16.7 \\ 017.8 \end{array} $ |
| 0 — –17.8 | 0 ── −17.8 | U —— — I /.8 | U —— — — 1 / .8 |
| | | | |