

III. TAFEL van de naauwkeurige waarden der sinusfen en cosinusfen, van 3 tot 3 sexagesimale graden.

$$\begin{aligned} \sin. 0^\circ &= \cos. 90^\circ = 0 \\ \sin. 3^\circ &= \cos. 87^\circ = \frac{1}{16}(\sqrt{6} + \sqrt{2}) \cdot (-1 + \sqrt{5}) - \frac{1}{8}(-1 + \sqrt{3}) \cdot \sqrt{(5 + \sqrt{5})} \\ \sin. 6^\circ &= \cos. 84^\circ = -\frac{1}{4}(1 + \sqrt{5}) + \frac{1}{4}\sqrt{(30 - 6\sqrt{5})} \\ \sin. 9^\circ &= \cos. 81^\circ = \frac{1}{4}\sqrt{(3 + \sqrt{5})} - \frac{1}{4}\sqrt{(5 - \sqrt{5})} \\ \sin. 12^\circ &= \cos. 78^\circ = -\frac{1}{8}(\sqrt{15} - \sqrt{3}) + \frac{1}{8}\sqrt{(10 + 2\sqrt{5})} \\ \sin. 15^\circ &= \cos. 75^\circ = \frac{1}{4}(\sqrt{6} - \sqrt{2}) \\ \sin. 18^\circ &= \cos. 72^\circ = \frac{1}{4}(-1 + \sqrt{5}) \\ \sin. 21^\circ &= \cos. 69^\circ = -\frac{1}{16}(\sqrt{6} - \sqrt{2}) \cdot (1 + \sqrt{5}) + \frac{1}{8}(1 + \sqrt{3}) \cdot \sqrt{(5 - \sqrt{5})} \\ \sin. 24^\circ &= \cos. 66^\circ = \frac{1}{8}(\sqrt{15} + \sqrt{3}) - \frac{1}{8}\sqrt{(10 - 2\sqrt{5})} \\ \sin. 27^\circ &= \cos. 63^\circ = -\frac{1}{8}(\sqrt{10} - \sqrt{2}) + \frac{1}{4}\sqrt{(5 + \sqrt{5})} \\ \sin. 30^\circ &= \cos. 60^\circ = \frac{1}{2} \\ \sin. 33^\circ &= \cos. 57^\circ = \frac{1}{16}(\sqrt{6} + \sqrt{2}) \cdot (-1 + \sqrt{5}) + \frac{1}{8}(-1 + \sqrt{3}) \cdot \sqrt{(5 + \sqrt{5})} \\ \sin. 36^\circ &= \cos. 54^\circ = \frac{1}{4}\sqrt{(10 - 2\sqrt{5})} \\ \sin. 39^\circ &= \cos. 51^\circ = \frac{1}{16}(\sqrt{6} + \sqrt{2}) \cdot (1 + \sqrt{5}) - \frac{1}{8}(-1 + \sqrt{3}) \cdot \sqrt{(5 - \sqrt{5})} \\ \sin. 42^\circ &= \cos. 48^\circ = -\frac{1}{8}(-1 + \sqrt{5}) + \frac{1}{8}\sqrt{(30 + 6\sqrt{5})} \\ \sin. 45^\circ &= \cos. 45^\circ = \frac{1}{2}\sqrt{2} \\ \sin. 48^\circ &= \cos. 42^\circ = \frac{1}{8}(\sqrt{15} - \sqrt{3}) + \frac{1}{8}\sqrt{(10 + 2\sqrt{5})} \\ \sin. 51^\circ &= \cos. 39^\circ = \frac{1}{16}(\sqrt{6} - \sqrt{2}) \cdot (1 + \sqrt{5}) + \frac{1}{8}(1 + \sqrt{3}) \cdot \sqrt{(5 - \sqrt{5})} \\ \sin. 54^\circ &= \cos. 36^\circ = \frac{1}{4}(1 + \sqrt{5}) \\ \sin. 57^\circ &= \cos. 33^\circ = -\frac{1}{16}(\sqrt{6} - \sqrt{2}) \cdot (-1 + \sqrt{5}) + \frac{1}{8}(1 + \sqrt{3}) \cdot \sqrt{(5 + \sqrt{5})} \\ \sin. 60^\circ &= \cos. 30^\circ = \frac{1}{2}\sqrt{3} \\ \sin. 63^\circ &= \cos. 27^\circ = \frac{1}{8}(\sqrt{10} - \sqrt{2}) + \frac{1}{4}\sqrt{(5 + \sqrt{5})} \\ \sin. 66^\circ &= \cos. 24^\circ = \frac{1}{8}(1 + \sqrt{5}) + \frac{1}{8}\sqrt{(30 - 6\sqrt{5})} \\ \sin. 69^\circ &= \cos. 21^\circ = \frac{1}{16}(\sqrt{6} + \sqrt{2}) \cdot (1 + \sqrt{5}) + \frac{1}{8}(-1 + \sqrt{3}) \cdot \sqrt{(5 - \sqrt{5})} \\ \sin. 72^\circ &= \cos. 18^\circ = \frac{1}{4}\sqrt{(10 + 2\sqrt{5})} \\ \sin. 75^\circ &= \cos. 15^\circ = \frac{1}{4}(\sqrt{6} + \sqrt{2}) \\ \sin. 78^\circ &= \cos. 12^\circ = \frac{1}{8}(-1 + \sqrt{5}) + \frac{1}{8}\sqrt{(30 + 6\sqrt{5})} \\ \sin. 81^\circ &= \cos. 9^\circ = \frac{1}{4}\sqrt{(3 + \sqrt{5})} + \frac{1}{4}\sqrt{(5 - \sqrt{5})} \end{aligned}$$

sin.

$$\begin{aligned} \sin. 84^\circ &= \cos. 6^\circ = \frac{1}{8}(\sqrt{15} + \sqrt{3}) + \frac{1}{8}\sqrt{(10 - 2\sqrt{5})} \\ \sin. 87^\circ &= \cos. 3^\circ = \frac{1}{16}(\sqrt{6} - \sqrt{2}) \cdot (-1 + \sqrt{5}) + \frac{1}{8}(1 + \sqrt{3}) \cdot \sqrt{(5 + \sqrt{5})} \end{aligned}$$

IV. Tafel van de naauwkeurige waarden der tangenten, van 3 tot 3 sexagesimale graden.

$$\begin{aligned} \text{tang. } 3^\circ &= 2 + \sqrt{5} + \sqrt{(15 + 6\sqrt{5})} - \frac{1}{4}[\sqrt{(50 + 22\sqrt{5})} + 3\sqrt{3} + \sqrt{15}] \\ \text{tang. } 6^\circ &= \frac{1}{4}\sqrt{(10 - 2\sqrt{5})} - \frac{1}{4}\sqrt{15} + \frac{1}{4}\sqrt{3} \\ \text{tang. } 9^\circ &= 1 + \sqrt{5} - \sqrt{(5 + 2\sqrt{5})} \\ \text{tang. } 12^\circ &= \frac{3}{4}\sqrt{3} - \frac{1}{4}\sqrt{15} - \frac{1}{4}\sqrt{(50 - 22\sqrt{5})} \\ \text{tang. } 15^\circ &= 2 - \sqrt{3} \\ \text{tang. } 18^\circ &= \sqrt{(1 - \frac{3}{4}\sqrt{5})} \\ \text{tang. } 21^\circ &= (15 - 6\sqrt{5}) - 2 + \sqrt{5} - \frac{1}{4}\sqrt{(50 - 22\sqrt{5})} - \frac{3}{4}\sqrt{3} + \frac{1}{4}\sqrt{15} \\ \text{tang. } 24^\circ &= \frac{1}{4}\sqrt{(50 + 22\sqrt{5})} - \frac{3}{4}\sqrt{3} - \frac{1}{4}\sqrt{15} \\ \text{tang. } 27^\circ &= -1 + \sqrt{5} - \sqrt{(5 - 2\sqrt{5})} \\ \text{tang. } 30^\circ &= \frac{1}{2}\sqrt{3} \\ \text{tang. } 33^\circ &= \sqrt{(15 + 6\sqrt{5})} - 2 - \sqrt{5} - \frac{1}{4}\sqrt{(50 + 22\sqrt{5})} + \frac{3}{4}\sqrt{3} + \frac{1}{4}\sqrt{15} \\ \text{tang. } 36^\circ &= \sqrt{(5 - 2\sqrt{5})} \\ \text{tang. } 39^\circ &= \sqrt{(15 - 6\sqrt{5})} + 2 - \sqrt{5} + \frac{1}{4}\sqrt{(50 - 22\sqrt{5})} - \frac{3}{4}\sqrt{3} + \frac{1}{4}\sqrt{15} \\ \text{tang. } 42^\circ &= -\frac{1}{4}\sqrt{(10 + 2\sqrt{5})} + \frac{1}{4}\sqrt{15} + \frac{1}{4}\sqrt{3} \\ \text{tang. } 45^\circ &= 1 \\ \text{tang. } 48^\circ &= \frac{1}{4}\sqrt{(50 - 22\sqrt{5})} + \frac{3}{4}\sqrt{3} - \frac{1}{4}\sqrt{15} \\ \text{tang. } 51^\circ &= \sqrt{(15 - 6\sqrt{5})} + 2 - \sqrt{5} - \frac{1}{4}\sqrt{(50 - 22\sqrt{5})} + \frac{3}{4}\sqrt{3} - \frac{1}{4}\sqrt{15} \\ \text{tang. } 54^\circ &= \sqrt{(1 + \frac{3}{4}\sqrt{5})} \\ \text{tang. } 57^\circ &= \sqrt{(15 + 6\sqrt{5})} - 2 - \sqrt{5} + \frac{1}{4}\sqrt{(50 + 22\sqrt{5})} - \frac{3}{4}\sqrt{3} - \frac{1}{4}\sqrt{15} \\ \text{tang. } 60^\circ &= \sqrt{3} \\ \text{tang. } 63^\circ &= -1 + \sqrt{5} + \sqrt{(5 - 2\sqrt{5})} \\ \text{tang. } 66^\circ &= \frac{1}{4}\sqrt{(10 - 2\sqrt{5})} + \frac{1}{4}\sqrt{15} - \frac{1}{4}\sqrt{3} \\ \text{tang. } 69^\circ &= \sqrt{(15 - 6\sqrt{5})} - 2 + \sqrt{5} + \frac{1}{4}\sqrt{(50 - 22\sqrt{5})} + \frac{3}{4}\sqrt{3} - \frac{1}{4}\sqrt{15} \\ \text{tang. } 72^\circ &= \sqrt{(5 + 2\sqrt{5})} \\ \text{tang. } 75^\circ &= 2 + \sqrt{3} \\ \text{tang. } 78^\circ &= \frac{1}{4}\sqrt{(10 + 2\sqrt{5})} + \frac{1}{4}\sqrt{15} + \frac{1}{4}\sqrt{3} \\ \text{tang. } 81^\circ &= 1 + \sqrt{5} + \sqrt{(5 + 2\sqrt{5})} \\ \text{tang. } 84^\circ &= \frac{1}{4}\sqrt{(50 + 22\sqrt{5})} + \frac{3}{4}\sqrt{3} + \frac{1}{4}\sqrt{15} \\ \text{tang. } 87^\circ &= 2 + \sqrt{5} + \sqrt{(15 + 6\sqrt{5})} + \frac{1}{4}\sqrt{(50 + 22\sqrt{5})} + \frac{3}{4}\sqrt{3} + \frac{1}{4}\sqrt{15} \end{aligned}$$

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