Trigonometric Table for angles from 0° to 360°

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Deg | Rad | sin | cos | tan | cot | sec | cosec |
| 0 | 0 | 0 | 1 | 0 | - | 1 | - |
| 15 | $$\frac{π}{12}$$ | $$\frac{\sqrt{2}}{4} (\sqrt{3}-1)$$ | $$\frac{\sqrt{2}}{4} (\sqrt{3}+1)$$ | $$2-\sqrt{3}$$ | $$2+\sqrt{3}$$ | $$\sqrt{2}(\sqrt{3}-1)$$ | $$\sqrt{2}(\sqrt{3}+1)$$ |
| 30 | $$\frac{π}{6}$$ | $$\frac{1}{2}$$ | $$\frac{\sqrt{3}}{2}$$ | $$\frac{\sqrt{3}}{3}$$ | $$\sqrt{3}$$ | $$\frac{2\sqrt{3}}{3}$$ | 2 |
| 45 | $$\frac{π}{4}$$ | $$\frac{\sqrt{2}}{2}$$ | $$\frac{\sqrt{2}}{2}$$ | 1 | 1 | $$\sqrt{2}$$ | $$\sqrt{2}$$ |
| 60 | $$\frac{π}{3}$$ | $$\frac{\sqrt{3}}{2}$$ | $$\frac{1}{2}$$ | $$\sqrt{3}$$ | $$\frac{\sqrt{3}}{3}$$ | 2 | $$\frac{2\sqrt{3}}{3}$$ |
| 75 | $$\frac{5π}{12}$$ | $$\frac{\sqrt{2}}{4} (\sqrt{3}+1)$$ | $$\frac{\sqrt{2}}{4} (\sqrt{3}-1)$$ | $$2+\sqrt{3}$$ | $$2-\sqrt{3}$$ | $$\sqrt{2}(\sqrt{3}+1)$$ | $$\sqrt{2}(\sqrt{3}-1)$$ |
| 90 | $$\frac{π}{2}$$ | 1 | 0 | - | 0 | - | 1 |
| 105 | $$\frac{7π}{12}$$ | $$\frac{\sqrt{2}}{4} (\sqrt{3}+1)$$ | $$-\frac{\sqrt{2}}{4} (\sqrt{3}-1)$$ | $$- (2+\sqrt{3})$$ | $$- (2-\sqrt{3})$$ | $$-\sqrt{2}(\sqrt{3}+1)$$ | $$\sqrt{2}(\sqrt{3}-1)$$ |
| 120 | $$\frac{2π}{3}$$ | $$\frac{\sqrt{3}}{2}$$ | $$-\frac{1}{2}$$ | $$-\sqrt{3}$$ | $$-\frac{\sqrt{3}}{3}$$ | -2 | $$\frac{2\sqrt{3}}{3}$$ |
| 135 | $$\frac{3π}{4}$$ | $$\frac{\sqrt{2}}{2}$$ | $$-\frac{\sqrt{2}}{2}$$ | -1 | -1 | $$-\sqrt{2}$$ | $$\sqrt{2}$$ |
| 150 | $$\frac{5π}{6}$$ | $$\frac{1}{2}$$ | $$-\frac{\sqrt{3}}{2}$$ | $$-\frac{\sqrt{3}}{3}$$ | $$-\sqrt{3}$$ | $$-\frac{2\sqrt{3}}{3}$$ | 2 |
| 165 | $$\frac{11π}{12}$$ | $$\frac{\sqrt{2}}{4} (\sqrt{3}-1)$$ | $$-\frac{\sqrt{2}}{4} (\sqrt{3}+1)$$ | $$- (2-\sqrt{3})$$ | $$- (2+\sqrt{3})$$ | $$-\sqrt{2}(\sqrt{3}-1)$$ | $$\sqrt{2}(\sqrt{3}+1)$$ |
| 180 | $$π$$ | 0 | -1 | 0 | - | -1 | - |
| 195 | $$\frac{13π}{12}$$ | $$-\frac{\sqrt{2}}{4} (\sqrt{3}-1)$$ | $$-\frac{\sqrt{2}}{4} (\sqrt{3}+1)$$ | $$2-\sqrt{3}$$ | $$2+\sqrt{3}$$ | $$-\sqrt{2}(\sqrt{3}-1)$$ | $$-\sqrt{2}(\sqrt{3}+1)$$ |
| 210 | $$\frac{7π}{6}$$ | $$-\frac{1}{2}$$ | $$-\frac{\sqrt{3}}{2}$$ | $$\frac{\sqrt{3}}{3}$$ | $$\sqrt{3}$$ | $$-\frac{2\sqrt{3}}{3}$$ | -2 |
| 225 | $$\frac{5π}{4}$$ | $$-\frac{\sqrt{2}}{2}$$ | $$-\frac{\sqrt{2}}{2}$$ | 1 | 1 | $$-\sqrt{2}$$ | $$-\sqrt{2}$$ |
| 240 | $$\frac{4π}{3}$$ | $$-\frac{\sqrt{3}}{2}$$ | $$-\frac{1}{2}$$ | $$\sqrt{3}$$ | $$\frac{\sqrt{3}}{3}$$ | -2 | $$-\frac{2\sqrt{3}}{3}$$ |
| 255 | $$\frac{17π}{12}$$ | $$-\frac{\sqrt{2}}{4} (\sqrt{3}+1)$$ | $$-\frac{\sqrt{2}}{4} (\sqrt{3}-1)$$ | $$2+\sqrt{3}$$ | $$2-\sqrt{3}$$ | -$\sqrt{2}(\sqrt{3}+1)$ | -$\sqrt{2}(\sqrt{3}-1)$ |
| 270 | $$\frac{3π}{2}$$ | -1 | 0 | - | 0 | - | -1 |
| 285 | $$\frac{19π}{12}$$ | $$-\frac{\sqrt{2}}{4} (\sqrt{3}+1)$$ | $$\frac{\sqrt{2}}{4} (\sqrt{3}-1)$$ | $$- (2+\sqrt{3})$$ | $$- (2-\sqrt{3})$$ | $$\sqrt{2}(\sqrt{3}+1)$$ | $$-\sqrt{2}(\sqrt{3}-1)$$ |
| 300 | $$\frac{5π}{3}$$ | $$-\frac{\sqrt{3}}{2}$$ | $$\frac{1}{2}$$ | $$-\sqrt{3}$$ | $$-\frac{\sqrt{3}}{3}$$ | 2 | $$-\frac{2\sqrt{3}}{3}$$ |
| 315 | $$\frac{7π}{4}$$ | $$-\frac{\sqrt{2}}{2}$$ | $$\frac{\sqrt{2}}{2}$$ | -1 | -1 | $$\sqrt{2}$$ | $$-\sqrt{2}$$ |
| 330 | $$\frac{11π}{6}$$ | $$-\frac{1}{2}$$ | $$\frac{\sqrt{3}}{2}$$ | $$-\frac{\sqrt{3}}{2}$$ | $$-\sqrt{3}$$ | $$\frac{2\sqrt{3}}{3}$$ | -2 |
| 345 | $$\frac{23π}{12}$$ | $-\frac{\sqrt{2}}{4} (\sqrt{3}-1)$  | $$\frac{\sqrt{2}}{4} (\sqrt{3}+1)$$ | $$- (2-\sqrt{3})$$ | $$- (2+\sqrt{3})$$ | $$\sqrt{2}(\sqrt{3}-1)$$ | $$-\sqrt{2}(\sqrt{3}+1)$$ |
| 360 | $$2π$$ | 0 | 1 | 0 | - | 1 | - |

**Quotient Identities:**

$$tanθ=\frac{sinθ}{cosθ}$$

$$cotθ=\frac{cosθ}{sinθ}$$

**Reciprocal Identities:**

$$cscθ=\frac{1}{sinθ}$$

$$secθ=\frac{1}{cosθ}$$

$$cotθ=\frac{1}{tanθ}$$

$$sinθ=\frac{1}{cscθ}$$

$$cosθ=\frac{1}{secθ}$$

$$tanθ=\frac{1}{cotθ}$$

**Pythagorean Identities:**

$$sin^{2}θ+cos^{2}θ=1$$

$$cot^{2}θ+1=csc^{2}θ$$

$$tan^{2}θ+1=sec^{2}θ$$