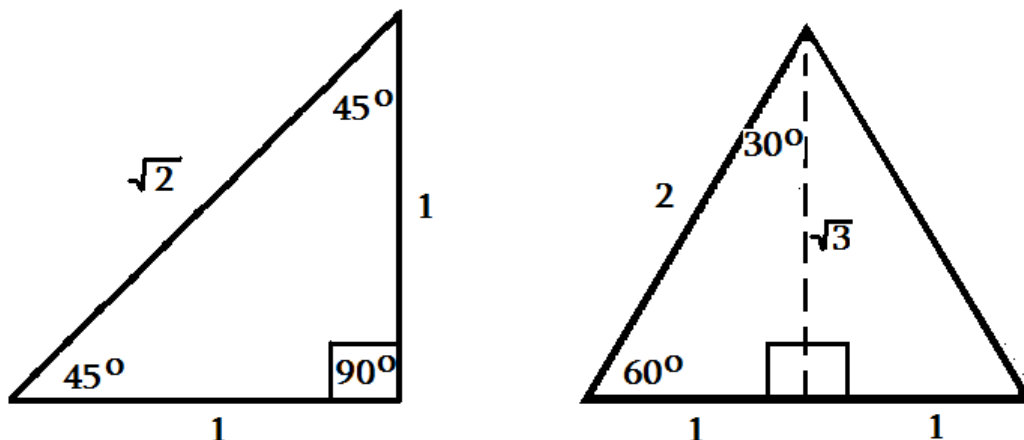


Special Triangles and Memorable Trigonometric Values



$$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}} \quad \cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}} \quad \tan \theta = \frac{\text{opposite}}{\text{adjacent}}$$

$$\sin \frac{\pi}{6} = \frac{1}{2} = \sin 30^\circ$$

$$\cos \frac{\pi}{6} = \frac{\sqrt{3}}{2} = \cos 30^\circ$$

$$\tan \frac{\pi}{6} = \frac{1}{\sqrt{3}} = \tan 30^\circ$$

$$\sin \frac{\pi}{3} = \frac{\sqrt{3}}{2} = \sin 60^\circ$$

$$\cos \frac{\pi}{3} = \frac{1}{2} = \cos 60^\circ$$

$$\tan \frac{\pi}{3} = \sqrt{3} = \tan 60^\circ$$

$$\sin \frac{\pi}{4} = \frac{1}{\sqrt{2}} = \sin 45^\circ$$

$$\cos \frac{\pi}{4} = \frac{1}{\sqrt{2}} = \cos 45^\circ$$

$$\tan \frac{\pi}{4} = 1 = \tan 45^\circ$$

$$\sin \frac{\pi}{2} = 1 = \sin 90^\circ$$

$$\cos \frac{\pi}{2} = 0 = \cos 90^\circ$$

$$\tan \frac{\pi}{2} = \text{Undefined} = \tan 90^\circ$$

$$\sin \pi = 0 = \sin 180^\circ$$

$$\cos \pi = -1 = \cos 180^\circ$$

$$\tan \pi = 0 = \tan 180^\circ$$

$$\sin 0 = 0 = \sin 0^\circ$$

$$\cos \pi = 1 = \cos 0^\circ$$

$$\tan 0 = 0 = \tan 0^\circ$$

$$(\theta \text{ in radians}) = \frac{\pi}{180^\circ} (\theta \text{ in degrees})$$