

Geometry & Trigonometry

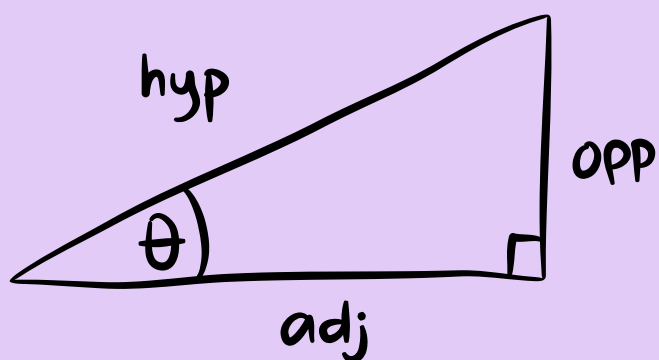
01

Trigonometry Table

	0°	30°	45°	60°	90°	120°	180°	270°	360°
sin(a)	0	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$	1	$\frac{\sqrt{3}}{2}$	0	-1	0
cos(a)	1	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	0	$-\frac{1}{2}$	-1	0	1
tan(a)	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	∞	$-\sqrt{3}$	0	∞	0
cot(a)	∞	$\sqrt{3}$	1	$\frac{1}{\sqrt{3}}$	0	$\frac{1}{\sqrt{3}}$	∞	0	∞
sec(a)	1	$\frac{2}{\sqrt{3}}$	$\sqrt{2}$	2	∞	-2	-1	∞	1
cosec(a)	∞	2	$\sqrt{2}$	$\frac{2}{\sqrt{3}}$	1	$\frac{2}{\sqrt{3}}$	∞	-1	∞

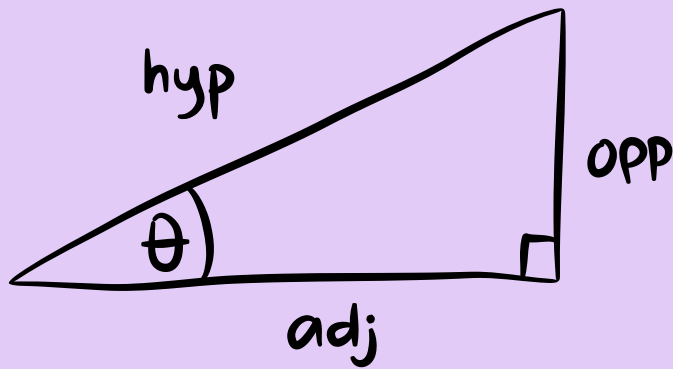
02

Trigonometry Ratios



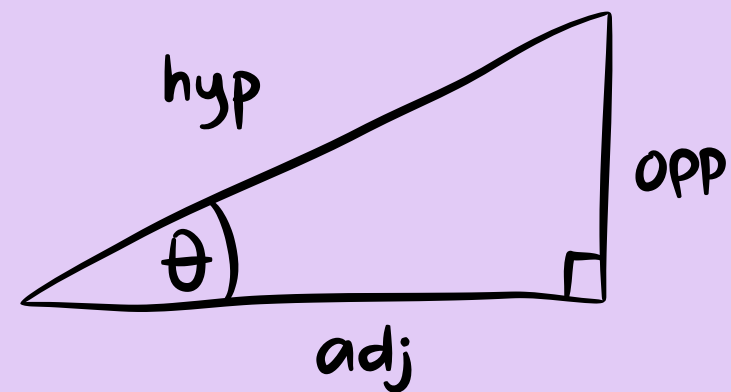
$$\sin(\theta) = \frac{\text{opp}}{\text{hyp}}$$

$$\sin \theta = \frac{1}{\csc \theta}$$



$$\cos(\theta) = \frac{\text{adj}}{\text{hyp}}$$

$$\sec \theta = \frac{1}{\cos \theta}$$



$$\tan(\theta) = \frac{\text{opp}}{\text{adj}}$$

$$\tan \theta = \frac{1}{\cot \theta}$$

$$\tan \theta = \frac{\sin \theta}{\cos \theta}$$

03

Trigonometric identities

$$1 = \sin^2 \theta + \cos^2 \theta$$

$$\tan^2 \theta + 1 = \sec^2 \theta$$

$$\cot^2 \theta + 1 = \text{cosec}^2 \theta$$

