Foundation Batch

MATHS

Trigonometry

LIVE 25-10-2024 07:00PM

TRIGONOMETRY
त्रिकोणमिति

$\sin\theta = \frac{P}{H}$ → $\frac{L}{K}$

$\cos\theta = \frac{B}{H}$ → $\frac{A}{K}$

$\tan\theta = \frac{P}{B}$ → $\frac{L}{A}$

$\operatorname{cosec}\theta = \frac{1}{\sin\theta} = \frac{H}{P}$ → $\frac{K}{L}$

$\sec\theta \rightarrow \frac{1}{\cos\theta} = \frac{H}{B}$ → $\frac{K}{A}$

$\cot \rightarrow \frac{1}{\tan\theta} = \frac{B}{P}$ → $\frac{A}{L}$

$\tan\theta = \frac{\sin\theta}{\cos\theta} = \frac{\frac{P}{H}}{\frac{B}{H}}$

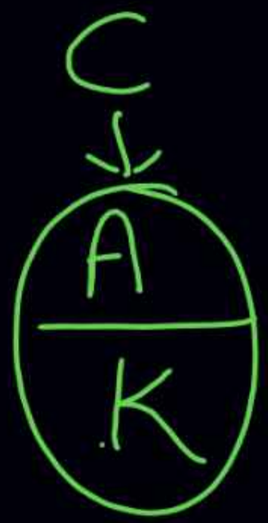
$\frac{P \times H}{B \times H} = \frac{P}{B}$

Trick

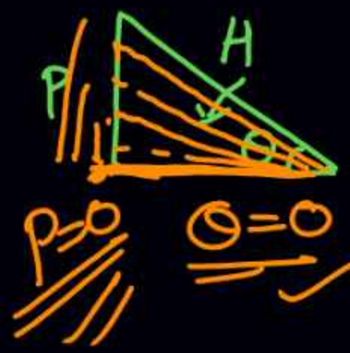
S → P / H

C → B / H

T → P / B

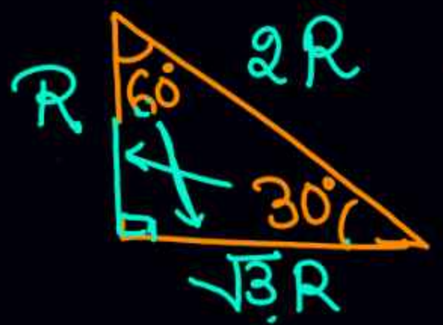


Trigonometric table of Acute Angle.



$\frac{P}{H} = \frac{0}{H}$

$\sin 0^\circ = 0$



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

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

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

$= \frac{1}{\sqrt{2}}$.

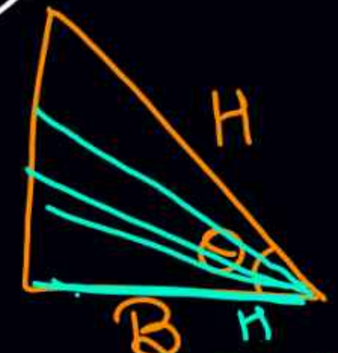
angle	0°	30°	45°	60°	90°
sinθ	0	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$	1
cosθ					
tanθ					
cosecθ					
secθ					
cotθ					

Trigonometric table of Acute Angle.

$0^\circ < \theta < 90^\circ$

$\sin\theta = \frac{3}{2}$ ✗

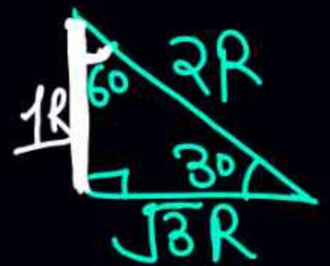
$\cot = \frac{\cos\theta}{\sin\theta}$



$\cos\theta = \frac{B}{H}$

$\cos 0^\circ = 1$

$B = H$



$\cos 30 = \frac{\sqrt{3}R}{2R}$

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

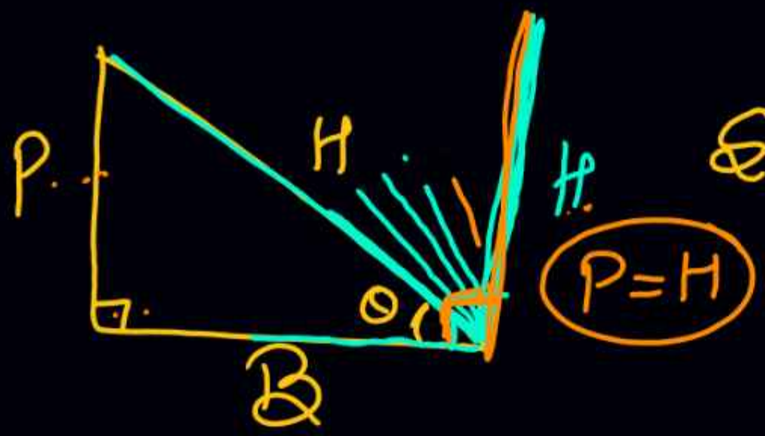
$\frac{1}{0}$

$\tan 90^\circ = \frac{1}{0}$

Not defined

angle	0°	30°	45°	60°	90°
sinθ	0	$\frac{1}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{\sqrt{3}}{2}$	1
cosθ	1	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{2}}$	$\frac{1}{2}$	0
tanθ	0	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	N.D.
Cosecθ	N.D	2	$\sqrt{2}$	$\frac{2}{\sqrt{3}}$	1
Secθ	1	$\frac{2}{\sqrt{3}}$	$\sqrt{2}$	2	N.D
Cotθ	N.D	$\sqrt{3}$	1	$\frac{1}{\sqrt{3}}$	0

$\frac{1}{0}$



$$\sin\theta = \frac{P}{H}$$

$$\sin 90^\circ = \frac{P}{P} = 1$$