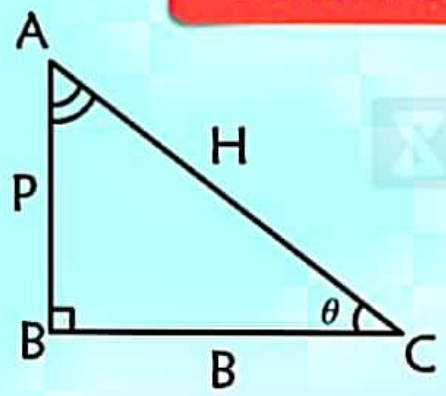
TRIGONOMETRY RATIO

" Pandit Badri Prasad Bole Hari Hari "

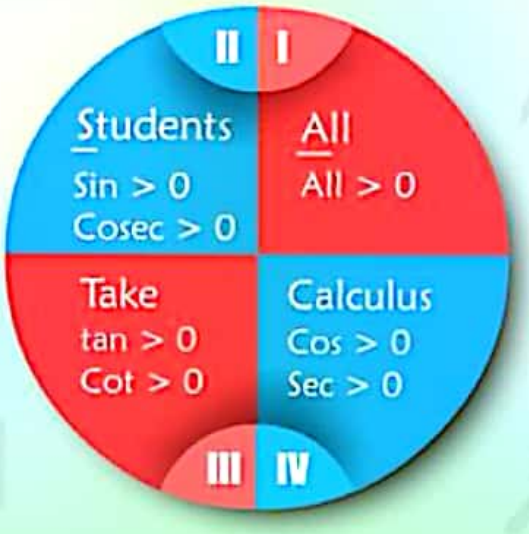


sin	cos	tan	cot	sec	cosec
P	B	P	B	H	H
H	H	B	P	B	P

Value

θ	0	$\pi/6$	$\pi/4$	$\pi/3$	$\pi/2$
$\sin\theta$	0	$1/2$	$1/\sqrt{2}$	$\sqrt{3}/2$	1
$\cos\theta$	1	$\sqrt{3}/2$	$1/\sqrt{2}$	$1/2$	0
$\tan\theta$	0	$1/\sqrt{3}$	1	$\sqrt{3}$	N.D
$\cot\theta$	N.D	$\sqrt{3}$	1	$1/\sqrt{3}$	0
$\sec\theta$	1	$2/\sqrt{3}$	$\sqrt{2}$	2	N.D
$\operatorname{cosec}\theta$	N.D	2	$\sqrt{2}$	$2/\sqrt{3}$	1

Quadrant



$(90^0 + \theta)$ Reduction

$\sin(90^0 + \theta) = \cos\theta$

$\cos(90^0 + \theta) = -\sin\theta$

$\tan(90^0 + \theta) = -\cot\theta$

$\cot(90^0 + \theta) = -\tan\theta$

$\sec(90^0 + \theta) = -\csc\theta$

$\csc(90^0 + \theta) = \sec\theta$

$(180^0 + \theta)$ Reduction

$\sin(180^0 + \theta) = -\sin\theta$

$\cos(180^0 + \theta) = -\cos\theta$

$\tan(180^0 + \theta) = \tan\theta$

$\cot(180^0 + \theta) = \cot\theta$

$\csc(180^0 + \theta) = -\csc\theta$

$\sec(180^0 + \theta) = -\sec\theta$

" Complementary angles are those whose sum is 90^0 "

$(360^0 - \theta)$ or $(2\pi - \theta)$ Reduction

$\sin(2\pi - \theta) = \sin(-\theta) = -\sin\theta$

$\cos(2\pi - \theta) = \cos(-\theta) = \cos\theta$

$\tan(2\pi - \theta) = \tan(-\theta) = -\tan\theta$

$\cot(-\theta) = -\cot\theta$

$\csc(-\theta) = -\csc\theta$

$\sec(-\theta) = \sec\theta$