

UNIT CIRCLE REFERENCE

$$\sin \hat{I}, = y \quad | \quad \cos \hat{I}, = x \quad | \quad \tan \hat{I}, = y/x$$

0, 2 \hat{I} € (1, 0) 30, \hat{I} €/6 (\hat{a} \hat{s} 3/2, 1/2) 45, \hat{I} €/4 (\hat{a} \hat{s} 2/2, \hat{a} \hat{s} 2/2) 60, \hat{I} €/3 (1/2, \hat{a} \hat{s} 3/2) 90, \hat{I} €/2 (0, 1)
180, \hat{I} € (-1, 0) 270, 3 \hat{I} €/2 (0, -1)

Quadrant I

0 to 90

x: +, y: +

All ratios positive

Quadrant II

90 to 180

x: -, y: +

Only sin positive

Quadrant III

180 to 270

x: -, y: -

Only tan positive

Quadrant IV

270 to 360

x: +, y: -

Only cos positive

Identities

$$\sin^2 \hat{I}, + \cos^2 \hat{I}, = 1$$

$$\tan \hat{\theta} = \sin \hat{\theta} / \cos \hat{\theta}$$

Conversions

Deg to Rad: $\hat{\theta} \rightarrow \hat{\theta} / 180$

Rad to Deg: $\hat{\theta} \rightarrow 180 / \hat{\theta}$