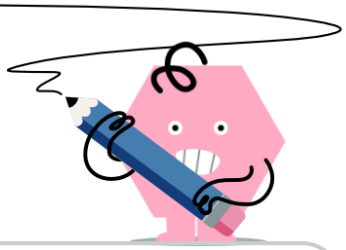
Name

Trigonometry Identities - Pythagorean Problem Cos to Sin (with Identity, Quadrant as Degrees)



1

Using:
$\cos^2(\theta) = 1 - \sin^2(\theta)$
$0^\circ < \theta < 90^\circ$

Solve for sine from cosine using trig identities

Solve:
$\cos(\theta) = \frac{4}{5}$
$\sin(\theta) = ?$

A	B
$\sin(\theta) = \frac{3}{5}$	$\sin(\theta) = \frac{\sqrt{11}}{5}$

2

Using:
$\cos^2(\beta) = 1 - \sin^2(\beta)$
$180^\circ < \beta < 270^\circ$

Solve for sine from cosine using trig identities

Solve:
$\cos(\beta) = -\frac{1}{6}$
$\sin(\beta) = ?$

A	B
$\sin(\beta) = -\frac{\sqrt{35}}{6}$	$\sin(\beta) = -\frac{\sqrt{14}}{6}$

3

Using:
$\cos^2(\alpha) = 1 - \sin^2(\alpha)$
$180^\circ < \alpha < 270^\circ$

Solve for sine from cosine using trig identities

Solve:
$\cos(\alpha) = -\frac{6}{8}$
$\sin(\alpha) = ?$

A	B
$\sin(\alpha) = \frac{\sqrt{7}}{4}$	$\sin(\alpha) = -\frac{\sqrt{7}}{4}$

4

Using:
$\cos^2(\alpha) = 1 - \sin^2(\alpha)$
$180^\circ < \alpha < 270^\circ$

Solve for sine from cosine using trig identities

Solve:
$\cos(\alpha) = -\frac{4}{8}$
$\sin(\alpha) = ?$

A	B
$\sin(\alpha) = \frac{\sqrt{3}}{2}$	$\sin(\alpha) = -\frac{\sqrt{3}}{2}$

5

Using:
$\cos^2(\theta) = 1 - \sin^2(\theta)$
$180^\circ < \theta < 270^\circ$

Solve for sine from cosine using trig identities

Solve:
$\cos(\theta) = -\frac{5}{8}$
$\sin(\theta) = ?$

A	B
$\sin(\theta) = -\frac{\sqrt{39}}{8}$	$\sin(\theta) = -\frac{\sqrt{66}}{8}$

6

Using:
$\cos^2(\beta) = 1 - \sin^2(\beta)$
$0^\circ < \beta < 90^\circ$

Solve for sine from cosine using trig identities

Solve:
$\cos(\beta) = \frac{1}{5}$
$\sin(\beta) = ?$

A	B
$\sin(\beta) = \frac{2\sqrt{6}}{5}$	$\sin(\beta) = \frac{6}{5}$

7

Using:
$\cos^2(\alpha) = 1 - \sin^2(\alpha)$
$90^\circ < \alpha < 180^\circ$

Solve for sine from cosine using trig identities

Solve:
$\cos(\alpha) = -\frac{6}{9}$
$\sin(\alpha) = ?$

A	B
$\sin(\alpha) = \frac{\sqrt{5}}{3}$	$\sin(\alpha) = -\frac{\sqrt{5}}{3}$

8

Using:
$\cos^2(\gamma) = 1 - \sin^2(\gamma)$
$270^\circ < \gamma < 360^\circ$

Solve for sine from cosine using trig identities

Solve:
$\cos(\gamma) = \frac{4}{5}$
$\sin(\gamma) = ?$

A	B
$\sin(\gamma) = -\frac{3}{5}$	$\sin(\gamma) = -\frac{\sqrt{7}}{5}$