mobius

Trigonometry Identities - Pythagorean Problem Cos to Sin (without Identity, Quadrant as Radians)

1

$\pi < \theta < \dfrac{3\pi}{2}$

—

Solve for sine from cosine using trig identities

Solve:

$\cos(\theta) = -\dfrac{4}{8}$

$\sin(\theta) = ?$

A	B
$\sin(\theta) = -\dfrac{\sqrt{3}}{2}$	$\sin(\theta) = -\dfrac{\sqrt{5}}{2}$

2

$\pi < \alpha < \dfrac{3\pi}{2}$

—

Solve for sine from cosine using trig identities

Solve:

$\cos(\alpha) = -\dfrac{5}{8}$

$\sin(\alpha) = ?$

A	B
$\sin(\alpha) = -\dfrac{\sqrt{39}}{6\sqrt{2}}$	$\sin(\alpha) = -\dfrac{\sqrt{39}}{8}$

3

$\dfrac{\pi}{2} < \theta < \pi$

—

Solve for sine from cosine using trig identities

Solve:

$\cos(\theta) = -\dfrac{3}{9}$

$\sin(\theta) = ?$

A	B
$\sin(\theta) = -\dfrac{2\sqrt{2}}{3}$	$\sin(\theta) = \dfrac{2\sqrt{2}}{3}$

4

$\dfrac{\pi}{2} < \alpha < \pi$

—

Solve for sine from cosine using trig identities

Solve:

$\cos(\alpha) = -\dfrac{4}{5}$

$\sin(\alpha) = ?$

A	B
$\sin(\alpha) = \dfrac{\sqrt{14}}{5}$	$\sin(\alpha) = \dfrac{3}{5}$

5

$\dfrac{\pi}{2} < \gamma < \pi$

—

Solve for sine from cosine using trig identities

Solve:

$\cos(\gamma) = -\dfrac{4}{6}$

$\sin(\gamma) = ?$

A	B
$\sin(\gamma) = \dfrac{\sqrt{14}}{3}$	$\sin(\gamma) = \dfrac{\sqrt{5}}{3}$

6

$\dfrac{3\pi}{2} < \alpha < 2\pi$

—

Solve for sine from cosine using trig identities

Solve:

$\cos(\alpha) = \dfrac{5}{8}$

$\sin(\alpha) = ?$

A	B
$\sin(\alpha) = \dfrac{\sqrt{39}}{8}$	$\sin(\alpha) = -\dfrac{\sqrt{39}}{8}$

7

$\pi < \gamma < \dfrac{3\pi}{2}$

—

Solve for sine from cosine using trig identities

Solve:

$\cos(\gamma) = -\dfrac{6}{7}$

$\sin(\gamma) = ?$

A	B
$\sin(\gamma) = \dfrac{\sqrt{13}}{7}$	$\sin(\gamma) = -\dfrac{\sqrt{13}}{7}$

8

$\pi < \alpha < \dfrac{3\pi}{2}$

—

Solve for sine from cosine using trig identities

Solve:

$\cos(\alpha) = -\dfrac{6}{9}$

$\sin(\alpha) = ?$

A	B
$\sin(\alpha) = -\dfrac{\sqrt{5}}{3}$	$\sin(\alpha) = -\dfrac{2}{3}$