



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

$$1 \quad 90^\circ < \gamma < 180^\circ$$

Solve for cosine from sine using trig identities

Solve:

$$\sin(\gamma) = \frac{4}{6}$$
$$\cos(\gamma) = ?$$

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

$$2 \quad 270^\circ < \alpha < 360^\circ$$

Solve for cosine from sine using trig identities

Solve:

$$\sin(\alpha) = -\frac{4}{6}$$
$$\cos(\alpha) = ?$$

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

$$3 \quad 90^\circ < \gamma < 180^\circ$$

Solve for cosine from sine using trig identities

Solve:

$$\sin(\gamma) = \frac{4}{9}$$
$$\cos(\gamma) = ?$$

A	B
$\cos(\gamma) = -\frac{\sqrt{65}}{9}$	$\cos(\gamma) = -\frac{3\sqrt{5}}{9}$

$$4 \quad 180^\circ < \beta < 270^\circ$$

Solve for cosine from sine using trig identities

Solve:

$$\sin(\beta) = -\frac{3}{5}$$
$$\cos(\beta) = ?$$

A	B
$\cos(\beta) = -\frac{\sqrt{7}}{5}$	$\cos(\beta) = -\frac{4}{5}$

$$5 \quad 180^\circ < \theta < 270^\circ$$

Solve for cosine from sine using trig identities

Solve:

$$\sin(\theta) = -\frac{1}{5}$$
$$\cos(\theta) = ?$$

A	B
$\cos(\theta) = -\frac{2\sqrt{3}}{5}$	$\cos(\theta) = -\frac{2\sqrt{6}}{5}$

$$6 \quad 0^\circ < \theta < 90^\circ$$

Solve for cosine from sine using trig identities

Solve:

$$\sin(\theta) = \frac{3}{6}$$
$$\cos(\theta) = ?$$

A	B
$\cos(\theta) = \frac{\sqrt{3}}{2}$	$\cos(\theta) = -\frac{\sqrt{3}}{2}$

$$7 \quad 180^\circ < \alpha < 270^\circ$$

Solve for cosine from sine using trig identities

Solve:

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

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

$$8 \quad 180^\circ < \theta < 270^\circ$$

Solve for cosine from sine using trig identities

Solve:

$$\sin(\theta) = -\frac{2}{4}$$
$$\cos(\theta) = ?$$

A	B
$\cos(\theta) = -\frac{\sqrt{3}}{2}$	$\cos(\theta) = -\frac{2}{2}$