



Trigonometry Identities - Pythagorean Problem Csc to Cot (without Identity, Quadrant as Degrees)

¹ $0^\circ < \gamma < 90^\circ$

Solve for cotangent from cosecant using trig identities

Solve:

$$\begin{aligned} \csc(\gamma) &= 8 \\ \cot(\gamma) &=? \end{aligned}$$

A	B
$\cot(\gamma) = 9$	$\cot(\gamma) = 3\sqrt{7}$

² $0^\circ < \theta < 90^\circ$

Solve for cotangent from cosecant using trig identities

Solve:

$$\begin{aligned} \csc(\theta) &= 3 \\ \cot(\theta) &=? \end{aligned}$$

A	B
$\cot(\theta) = -2\sqrt{2}$	$\cot(\theta) = 2\sqrt{2}$

³ $90^\circ < \beta < 180^\circ$

Solve for cotangent from cosecant using trig identities

Solve:

$$\begin{aligned} \csc(\beta) &= 2 \\ \cot(\beta) &=? \end{aligned}$$

A	B
$\cot(\beta) = -\sqrt{3}$	$\cot(\beta) = \sqrt{3}$

⁴ $180^\circ < \beta < 270^\circ$

Solve for cotangent from cosecant using trig identities

Solve:

$$\begin{aligned} \csc(\beta) &= -4 \\ \cot(\beta) &=? \end{aligned}$$

A	B
$\cot(\beta) = \sqrt{15}$	$\cot(\beta) = 3$

⁵ $90^\circ < \theta < 180^\circ$

Solve for cotangent from cosecant using trig identities

Solve:

$$\begin{aligned} \csc(\theta) &= 6 \\ \cot(\theta) &=? \end{aligned}$$

A	B
$\cot(\theta) = -\frac{\sqrt{35}}{\sqrt{6}}$	$\cot(\theta) = -\sqrt{35}$

⁶ $0^\circ < \beta < 90^\circ$

Solve for cotangent from cosecant using trig identities

Solve:

$$\begin{aligned} \csc(\beta) &= 6 \\ \cot(\beta) &=? \end{aligned}$$

A	B
$\cot(\beta) = \sqrt{35}$	$\cot(\beta) = -\sqrt{35}$

⁷ $180^\circ < \gamma < 270^\circ$

Solve for cotangent from cosecant using trig identities

Solve:

$$\begin{aligned} \csc(\gamma) &= -2 \\ \cot(\gamma) &=? \end{aligned}$$

A	B
$\cot(\gamma) = 2$	$\cot(\gamma) = \sqrt{3}$

⁸ $0^\circ < \theta < 90^\circ$

Solve for cotangent from cosecant using trig identities

Solve:

$$\begin{aligned} \csc(\theta) &= 7 \\ \cot(\theta) &=? \end{aligned}$$

A	B
$\cot(\theta) = 4\sqrt{3}$	$\cot(\theta) = -4\sqrt{3}$