



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

1 $\frac{\pi}{2} < \alpha < \pi$
—
Solve for cotangent from cosecant using trig identities

Solve:
 $\csc(\alpha) = 7$
 $\cot(\alpha) = ?$

A	B
$\cot(\alpha) = -2\sqrt{2}$	$\cot(\alpha) = -4\sqrt{3}$

2 $0 < \beta < \frac{\pi}{2}$
—
Solve for cotangent from cosecant using trig identities

Solve:
 $\csc(\beta) = 4$
 $\cot(\beta) = ?$

A	B
$\cot(\beta) = \sqrt{5}$	$\cot(\beta) = \sqrt{15}$

3 $\frac{3\pi}{2} < \theta < 2\pi$
—
Solve for cotangent from cosecant using trig identities

Solve:
 $\csc(\theta) = -6$
 $\cot(\theta) = ?$

A	B
$\cot(\theta) = -2\sqrt{2}$	$\cot(\theta) = -\sqrt{35}$

4 $\pi < \alpha < \frac{3\pi}{2}$
—
Solve for cotangent from cosecant using trig identities

Solve:
 $\csc(\alpha) = -9$
 $\cot(\alpha) = ?$

A	B
$\cot(\alpha) = 4\sqrt{5}$	$\cot(\alpha) = -4\sqrt{5}$

5 $\frac{\pi}{2} < \theta < \pi$
—
Solve for cotangent from cosecant using trig identities

Solve:
 $\csc(\theta) = 9$
 $\cot(\theta) = ?$

A	B
$\cot(\theta) = -2\sqrt{15}$	$\cot(\theta) = -4\sqrt{5}$

6 $\pi < \gamma < \frac{3\pi}{2}$
—
Solve for cotangent from cosecant using trig identities

Solve:
 $\csc(\gamma) = -5$
 $\cot(\gamma) = ?$

A	B
$\cot(\gamma) = 2\sqrt{10}$	$\cot(\gamma) = 2\sqrt{6}$

7 $0 < \beta < \frac{\pi}{2}$
—
Solve for cotangent from cosecant using trig identities

Solve:
 $\csc(\beta) = 3$
 $\cot(\beta) = ?$

A	B
$\cot(\beta) = \sqrt{7}$	$\cot(\beta) = 2\sqrt{2}$

8 $\pi < \beta < \frac{3\pi}{2}$
—
Solve for cotangent from cosecant using trig identities

Solve:
 $\csc(\beta) = -8$
 $\cot(\beta) = ?$

A	B
$\cot(\beta) = 3\sqrt{7}$	$\cot(\beta) = \sqrt{59}$