



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

1
 $270^\circ < \alpha < 360^\circ$
 —
 Solve for cosecant from cotangent using trig identities

Solve:
 $\cot(\alpha) = -16$
 $\csc(\alpha) = ?$

A	B
$\csc(\alpha) = -\sqrt{257}$	$\csc(\alpha) = -\sqrt{321}$

2
 $180^\circ < \gamma < 270^\circ$
 —
 Solve for cosecant from cotangent using trig identities

Solve:
 $\cot(\gamma) = 8$
 $\csc(\gamma) = ?$

A	B
$\csc(\gamma) = -\sqrt{83}$	$\csc(\gamma) = -\sqrt{65}$

3
 $90^\circ < \gamma < 180^\circ$
 —
 Solve for cosecant from cotangent using trig identities

Solve:
 $\cot(\gamma) = -13$
 $\csc(\gamma) = ?$

A	B
$\csc(\gamma) = \sqrt{215}$	$\csc(\gamma) = \sqrt{170}$

4
 $0^\circ < \beta < 90^\circ$
 —
 Solve for cosecant from cotangent using trig identities

Solve:
 $\cot(\beta) = 19$
 $\csc(\beta) = ?$

A	B
$\csc(\beta) = \frac{\sqrt{362}}{\sqrt{5}}$	$\csc(\beta) = \sqrt{362}$

5
 $270^\circ < \alpha < 360^\circ$
 —
 Solve for cosecant from cotangent using trig identities

Solve:
 $\cot(\alpha) = -19$
 $\csc(\alpha) = ?$

A	B
$\csc(\alpha) = \sqrt{362}$	$\csc(\alpha) = -\sqrt{362}$

6
 $180^\circ < \theta < 270^\circ$
 —
 Solve for cosecant from cotangent using trig identities

Solve:
 $\cot(\theta) = 16$
 $\csc(\theta) = ?$

A	B
$\csc(\theta) = -\sqrt{273}$	$\csc(\theta) = -\sqrt{257}$

7
 $90^\circ < \gamma < 180^\circ$
 —
 Solve for cosecant from cotangent using trig identities

Solve:
 $\cot(\gamma) = -19$
 $\csc(\gamma) = ?$

A	B
$\csc(\gamma) = \sqrt{362}$	$\csc(\gamma) = \frac{\sqrt{362}}{\sqrt{3}}$

8
 $180^\circ < \gamma < 270^\circ$
 —
 Solve for cosecant from cotangent using trig identities

Solve:
 $\cot(\gamma) = 11$
 $\csc(\gamma) = ?$

A	B
$\csc(\gamma) = \sqrt{122}$	$\csc(\gamma) = -\sqrt{122}$