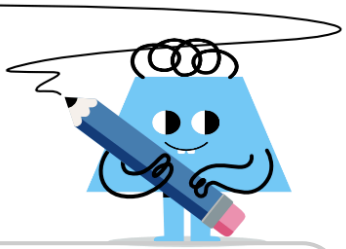
Name



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

1 $\frac{\pi}{2} < \theta < \pi$

Solve for cosecant from cotangent using trig identities

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

A	B
$\csc(\theta) = -\sqrt{82}$	$\csc(\theta) = \sqrt{82}$

2 $0 < \gamma < \frac{\pi}{2}$

Solve for cosecant from cotangent using trig identities

Solve:
$\cot(\gamma) = 15$
$\csc(\gamma) = ?$

A	B
$\csc(\gamma) = \sqrt{219}$	$\csc(\gamma) = \sqrt{226}$

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

Solve for cosecant from cotangent using trig identities

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

A	B
$\csc(\alpha) = -\sqrt{82}$	$\csc(\alpha) = -2\sqrt{23}$

4 $\frac{3\pi}{2} < \beta < 2\pi$

Solve for cosecant from cotangent using trig identities

Solve:
$\cot(\beta) = -1$
$\csc(\beta) = ?$

A	B
$\csc(\beta) = -3$	$\csc(\beta) = -\sqrt{2}$

5 $0 < \gamma < \frac{\pi}{2}$

Solve for cosecant from cotangent using trig identities

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

A	B
$\csc(\gamma) = \sqrt{362}$	$\csc(\gamma) = \sqrt{446}$

6 $0 < \beta < \frac{\pi}{2}$

Solve for cosecant from cotangent using trig identities

Solve:
$\cot(\beta) = 10$
$\csc(\beta) = ?$

A	B
$\csc(\beta) = \frac{\sqrt{101}}{\sqrt{10}}$	$\csc(\beta) = \sqrt{101}$

7 $\frac{\pi}{2} < \alpha < \pi$

Solve for cosecant from cotangent using trig identities

Solve:
$\cot(\alpha) = -11$
$\csc(\alpha) = ?$

A	B
$\csc(\alpha) = \sqrt{122}$	$\csc(\alpha) = 3\sqrt{10}$

8 $\frac{\pi}{2} < \theta < \pi$

Solve for cosecant from cotangent using trig identities

Solve:
$\cot(\theta) = -4$
$\csc(\theta) = ?$

A	B
$\csc(\theta) = \frac{\sqrt{17}}{\sqrt{6}}$	$\csc(\theta) = \sqrt{17}$