Name

Trigonometry Identities - Pythagorean Problem Sec to Tan (without Identity, Quadrant as Degrees)

1

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

Solve for tangent from secant using trig identities

Solve:

$\sec(\alpha) = 7$

$\tan(\alpha) = ?$

A	B
$\tan(\alpha) = -2\sqrt{14}$	$\tan(\alpha) = -4\sqrt{3}$

2

$180^\circ < \gamma < 270^\circ$

Solve for tangent from secant using trig identities

Solve:

$\sec(\gamma) = -7$

$\tan(\gamma) = ?$

A	B
$\tan(\gamma) = 4\sqrt{3}$	$\tan(\gamma) = 2\sqrt{14}$

3

$90^\circ < \beta < 180^\circ$

Solve for tangent from secant using trig identities

Solve:

$\sec(\beta) = -9$

$\tan(\beta) = ?$

A	B
$\tan(\beta) = -4\sqrt{5}$	$\tan(\beta) = -\sqrt{82}$

4

$0^\circ < \gamma < 90^\circ$

Solve for tangent from secant using trig identities

Solve:

$\sec(\gamma) = 6$

$\tan(\gamma) = ?$

A	B
$\tan(\gamma) = \sqrt{35}$	$\tan(\gamma) = 5\sqrt{2}$

5

$90^\circ < \theta < 180^\circ$

Solve for tangent from secant using trig identities

Solve:

$\sec(\theta) = -4$

$\tan(\theta) = ?$

A	B
$\tan(\theta) = -\sqrt{15}$	$\tan(\theta) = -\frac{\sqrt{15}}{\sqrt{7}}$

6

$270^\circ < \theta < 360^\circ$

Solve for tangent from secant using trig identities

Solve:

$\sec(\theta) = 2$

$\tan(\theta) = ?$

A	B
$\tan(\theta) = -\frac{\sqrt{3}}{\sqrt{10}}$	$\tan(\theta) = -\sqrt{3}$

7

$270^\circ < \gamma < 360^\circ$

Solve for tangent from secant using trig identities

Solve:

$\sec(\gamma) = 5$

$\tan(\gamma) = ?$

A	B
$\tan(\gamma) = 2\sqrt{6}$	$\tan(\gamma) = -2\sqrt{6}$

8

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

Solve for tangent from secant using trig identities

Solve:

$\sec(\alpha) = -2$

$\tan(\alpha) = ?$

A	B
$\tan(\alpha) = \sqrt{6}$	$\tan(\alpha) = \sqrt{3}$