Name

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

1

$\sin(\alpha) \rightarrow$ negative

Solve for tangent from secant using trig identities

Solve:
$\sec(\alpha) = 3$
$\tan(\alpha) = ?$

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

2

$\sin(\beta) \rightarrow$ positive

Solve for tangent from secant using trig identities

Solve:
$\sec(\beta) = -5$
$\tan(\beta) = ?$

A	B
$\tan(\beta) = -\sqrt{30}$	$\tan(\beta) = -2\sqrt{6}$

3

$\sin(\gamma) \rightarrow$ positive

Solve for tangent from secant using trig identities

Solve:
$\sec(\gamma) = -4$
$\tan(\gamma) = ?$

A	B
$\tan(\gamma) = -\sqrt{15}$	$\tan(\gamma) = -\sqrt{13}$

4

$\sin(\beta) \rightarrow$ positive

Solve for tangent from secant using trig identities

Solve:
$\sec(\beta) = 4$
$\tan(\beta) = ?$

A	B
$\tan(\beta) = \sqrt{15}$	$\tan(\beta) = 4$

5

$\sin(\beta) \rightarrow$ positive

Solve for tangent from secant using trig identities

Solve:
$\sec(\beta) = -9$
$\tan(\beta) = ?$

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

6

$\sin(\gamma) \rightarrow$ negative

Solve for tangent from secant using trig identities

Solve:
$\sec(\gamma) = 5$
$\tan(\gamma) = ?$

A	B
$\tan(\gamma) = -2\sqrt{3}$	$\tan(\gamma) = -2\sqrt{6}$

7

$\sin(\beta) \rightarrow$ negative

Solve for tangent from secant using trig identities

Solve:
$\sec(\beta) = 9$
$\tan(\beta) = ?$

A	B
$\tan(\beta) = -\frac{4\sqrt{5}}{\sqrt{2}}$	$\tan(\beta) = -4\sqrt{5}$

8

$\sin(\gamma) \rightarrow$ positive

Solve for tangent from secant using trig identities

Solve:
$\sec(\gamma) = -6$
$\tan(\gamma) = ?$

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