Name _____

1

Using:

$$\sec^2(\beta) = \tan^2(\beta) + 1$$

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

Solve for tangent from secant using trig identities

Solve:

$$\sec(\beta) = -9$$

$$\tan(\beta) = ?$$

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

2

Using:

$$\sec^2(\gamma) = \tan^2(\gamma) + 1$$

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

Solve for tangent from secant using trig identities

Solve:

$$\sec(\gamma) = 5$$

$$\tan(\gamma) = ?$$

A	B
$\tan(\gamma) = -2\sqrt{6}$	$\tan(\gamma) = -\sqrt{34}$

3

Using:

$$\sec^2(\alpha) = \tan^2(\alpha) + 1$$

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

Solve for tangent from secant using trig identities

Solve:

$$\sec(\alpha) = -6$$

$$\tan(\alpha) = ?$$

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

4

Using:

$$\sec^2(\alpha) = \tan^2(\alpha) + 1$$

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

Solve for tangent from secant using trig identities

Solve:

$$\sec(\alpha) = -4$$

$$\tan(\alpha) = ?$$

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

5

Using:

$$\sec^2(\theta) = \tan^2(\theta) + 1$$

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

Solve for tangent from secant using trig identities

Solve:

$$\sec(\theta) = -5$$

$$\tan(\theta) = ?$$

A	B
$\tan(\theta) = \dfrac{2\sqrt{6}}{\sqrt{2}}$	$\tan(\theta) = 2\sqrt{6}$

6

Using:

$$\sec^2(\gamma) = \tan^2(\gamma) + 1$$

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

Solve for tangent from secant using trig identities

Solve:

$$\sec(\gamma) = -8$$

$$\tan(\gamma) = ?$$

A	B
$\tan(\gamma) = \sqrt{79}$	$\tan(\gamma) = 3\sqrt{7}$

7

Using:

$$\sec^2(\beta) = \tan^2(\beta) + 1$$

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

Solve for tangent from secant using trig identities

Solve:

$$\sec(\beta) = -3$$

$$\tan(\beta) = ?$$

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

8

Using:

$$\sec^2(\beta) = \tan^2(\beta) + 1$$

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

Solve for tangent from secant using trig identities

Solve:

$$\sec(\beta) = 5$$

$$\tan(\beta) = ?$$

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