

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

- 1) List the 3 pythagorean identities.

Use the fundamental identities to find the value of the trigonometric function.

- 2) Given that $\sin \theta = \frac{1}{5}$, find $\sec (\pi/2 - \theta)$.

Use basic identities to simplify the expression.

- 3) $\cot \theta \sec \theta \sin \theta$

Find all solutions in the interval $[0, 2\pi)$.

- 4) $\cos^2 x + 2 \cos x + 1 = 0$

Use basic identities to simplify the expression.

- 5) $\frac{\tan \theta}{\sec \theta}$

Simplify the expression.

- 6) $(\sin^2 x + \cos^2 x) - (\csc^2 x - \cot^2 x)$

Prove the identity.

- 7) $\sin x \sec x \cot x = 1$

Determine if the following is an identity.

- 8) $\tan^2 x = \sec^2 x - \sin^2 x - \cos^2 x$

Prove the identity.

- 9) $\frac{\cot x}{1 + \csc x} = \frac{\csc x - 1}{\cot x}$