

RECIPROCAL IDENTITIES:**(YOU HAVE TO MEMORIZE THESE!)**

$$\sec \theta =$$

$$\csc \theta =$$

$$\tan \theta =$$

$$\cot \theta =$$

PYTHAGOREAN IDENTITIES:

What is the equation for a unit circle?

What does x represent in a unit circle?What does y represent in a unit circle?

Pythagorean Identity:

Divide Pyth. ID by $\cos^2 \theta$ and simplifyDivide Pyth. ID by $\sin^2 \theta$ and simplify**Simplify the expression.**

1. $\cos \theta \tan \theta$

2. $\sec \theta - \sec \theta \sin^2 \theta$

3. $\tan \theta + \cot \theta$

4. $\frac{\sin \theta}{\cos \theta} + \frac{\cos \theta}{1 + \sin \theta}$

5. $(1 + \sin \theta)(\sec \theta - \tan \theta)$

6. $\frac{\cos \theta + \tan \theta \sin \theta}{\tan \theta}$

You Try #7-8:

7. $\cos \theta + \tan \theta \sin \theta$

8. $\sin^2 \theta (1 + \cot^2 \theta)$

Simplify the trigonometric expression.

1. $\cos \theta \csc \theta$

2. $\tan \theta \csc \theta$

3. $\frac{\sec \theta}{\csc \theta}$

4. $\cos^2 \theta (1 + \tan^2 \theta)$

5. $\frac{\tan \theta}{\sec \theta}$

6. $\frac{\sin \theta}{\csc \theta} + \frac{\cos \theta}{\sec \theta}$

7. $\cos^3 \theta + \sin^2 \theta \cos \theta$

8. $\csc \theta - \csc \theta \cos^2 \theta$

9. $\tan \theta \cos \theta \csc \theta$

10. $\frac{\sec \theta - \cos \theta}{\tan \theta}$

11. $\frac{\cot \theta}{\csc \theta - \sin \theta}$

12. $\frac{1 + \cot \theta}{\csc \theta}$