

Name :

Class :

Trigonometric Expressions



A trigonometric expression is a mathematical expression that involves trigonometric functions, such as: Sine (sin) Cosine (cos) Tangent (tan) Cotangent (cot) Secant (sec) Cosecant (csc).

Sine	Sin	$\sin \angle \theta = \frac{\text{Opposite}}{\text{Hypotenuse}}$
Cosine	Cos	$\cos \angle \theta = \frac{\text{Adjacent}}{\text{Hypotenuse}}$
Tangent	Tan	$\tan \angle \theta = \frac{\text{Opposite}}{\text{Adjacent}}$
Secant	Sec	$\sec \angle \theta = \frac{\text{Hypotenuse}}{\text{Adjacent}}$
Cosecant	Csc	$\csc \angle \theta = \frac{\text{Hypotenuse}}{\text{Opposite}}$
Cotangent	Cot	$\cot \angle \theta = \frac{\text{Adjacent}}{\text{Opposite}}$

Simplify the following trigonometric expression.

1) $\sin \theta \sec \theta$

2) $\frac{\sec x}{\csc x}$

3) $\frac{1 + \cos y}{1 + \sec y}$

4) $(\tan x)(\cos x)(\csc x)$

5) $\cos^2 \theta (1 + \tan^2 \theta)$

6) $\tan \theta + \cos(-\theta) + \tan(-\theta)$