

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

Evaluate each expression.

1)
$$\frac{-6(1 + \csc^2 X)}{\cot^2 X}$$

2) $\sin X \tan X + \cos X$

3) $(1 - \cot^2 X) \sin X$

4)
$$\frac{-1 + \sec^2 X}{\sec^2 X}$$

5)
$$\frac{\tan^2 X + 1}{\cot^2 X - \csc^2 X}$$

6) $\sin^2 X - \sin^2 X \cos^2 X$