

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) $\frac{(1 + \sec^2 X)}{\tan^2 X}$

2) $\sin X \tan X - \csc X \tan X$

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

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

5) $\frac{\cos X}{\cot X}$

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