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	$\cot\angle\theta = \frac{\text{Adjacent}}{\text{Opposite}}$

Evaluate each expression.

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

2) $\cot^2 X (\sec^2 X - 1)$

3) $\frac{\csc 1170° \cot 240°}{\sin 450° \cos 750°}$

4) $7 + \tan \frac{4\pi}{3}$

5) $\frac{1 - \sin^2 X}{\sin^2 X}$

6) $\csc 90° \sec 0° + \frac{1}{5}$