

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

Simplify the following trigonometric expression.

1)
$$\frac{\tan t - \tan t \sin^2 t}{2 \sin t \cos t}$$



2)
$$\frac{\cot t \sec^2 t - \cot t}{\sin t \tan t + \cos t}$$



3)
$$\frac{\sec t - \cos t}{3 \tan t \sin t}$$



4)
$$\frac{\cos t}{1 + \sin t} + \frac{\cos t}{1 - \sin t}$$



5)
$$\frac{\sin^3 t + \cos^3 t}{1 - \sin t \cos t}$$



6)
$$\frac{\sin t}{1 - \cos t} + \frac{1 - \cos t}{\sin t}$$

