

Trigonometric Identities

Verifying Identities 2

1. $\tan x + \cot x = \sec x \csc x$

2. $\frac{\tan x \cot x}{\cos x} = \sec x$

3. $\frac{\cot^2 x}{1 + \csc x} = \frac{1 - \sin x}{\sin x}$

4. $\frac{\sin x}{1 - \cos x} = \frac{1 + \cos x}{\sin x}$

5. $\csc x(\csc x - \sin x) + \frac{\sin x - \cos x}{\sin x} + \cot x = \csc^2 x$

$$6. \frac{1 + \csc x}{\sec x} - \cot x = \cos x$$

$$7. \sin x(1 - 2\cos^2 x + \cos^4 x) = \sin^5 x$$

$$8. \csc^4 x - \cot^4 x = 2\csc^2 x - 1$$

$$9. \frac{\cot x}{\csc x - 1} = \frac{\csc x + 1}{\cot x}$$