

Trigonometry Identities

$$1. \cot x + 1 = \csc x (\cos x + \sin x)$$

$$4. \frac{1}{1-\sin x} + \frac{1}{1+\sin x} = 2\sec^2 x$$

$$2. \frac{\tan x - \cot x}{\sin x \cos x} = \sec^2 x - \csc^2 x$$

$$5. \cos x + \sin x \tan x = \sec x$$



$$3. \frac{\cos x}{1-\sin x} = \frac{1+\sin x}{\cos x}$$

$$6. \frac{\csc x - \sin x}{\sin x \csc x} = \csc x - \sin x$$

Trigonometry Identities

$$7. \frac{1}{\tan x} + \tan x = \frac{\sec^2 x}{\tan x}$$

$$10. \frac{\cos^2 x - \sin^2 x}{1 - \tan^2 x} = \cos^2 x$$

$$8. \frac{1+\sin x}{\cos x} + \frac{\cos x}{1+\sin x} = 2 \sec x$$

$$11. \frac{\sin x}{\cos x + 1} + \frac{\cos x - 1}{\sin x} = 0$$



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$$9. \sec x + \tan x = \frac{\cos y}{1 - \sin y}$$

$$12. \frac{\sin^2 x + \cos^2 x + \cot^2 x}{1 + \tan^2 x} = \cot^2 x$$