

Verifying Trig Identities

Verify each trig identity. Show that one side of the equation is equivalent to the other side of the equation. Show each step of the process.

$$-\tan \theta \cos \theta = \sin(-\theta)$$

$$\cot^2 \theta (1 + \tan^2 \theta) = \csc^2 \theta$$

$$\frac{\sec \theta}{\csc \theta} = \tan \theta$$

$$\sin^2 \theta (\csc^2 \theta - 1) = \cos^2 \theta$$

$$\cot \theta \sin \theta = \cos \theta$$

$$(\sec \theta - 1)(\sec \theta + 1) = \tan^2 \theta$$

$$\sec \theta \cot \theta \sin \theta = 1$$

$$(1 - \cos \theta)(1 + \sec \theta) = \sec \theta - \cos \theta$$

$$\cos \theta \csc \theta = \cot \theta$$

$$\frac{\cos \theta + \sin \theta}{\sin \theta} = 1 + \cot \theta$$