

Proving Trig Identities Worksheet 2

Use the Reciprocal and Quotient identities to prove the following.

1.) $\sin x \sec x = \tan x$

2.) $\tan x = \frac{\sec x}{\csc x}$

3.) $\sin x \csc x = 1$

4.) $\cot x = \frac{\csc x}{\sec x}$

5.) $\frac{\tan^2 x}{\sec^2 x} + \frac{\cot^2 x}{\csc^2 x} = 1$

6.) $\cos^2 x = \frac{\cos x}{\sec x}$

$$7.) \frac{1}{\sin x} - \frac{1}{\csc x} = \csc x - \sin x$$

$$8.) \csc x = \frac{\sec x}{\tan x}$$

$$9.) \sin x \csc x \sec x = \frac{1}{\cos x}$$

$$10.) \cos x = \frac{\cos x \tan x}{\sin x \sec x}$$