

Trig Identities worksheet 3.4 name:

Prove each identity:

1.  $\sec x - \tan x \sin x = \frac{1}{\sec x}$

2.  $\frac{1 + \cos x}{\sin x} = \csc x + \cot x$

3.  $\frac{\sec \theta \sin \theta}{\tan \theta + \cot \theta} = \sin^2 \theta$

4.  $\frac{\sec \theta}{\cos \theta} - \frac{\tan \theta}{\cot \theta} = 1$

5.  $\cos^2 y - \sin^2 y = 1 - 2\sin^2 y$

6.  $\csc^2 \theta \tan^2 \theta - 1 = \tan^2 \theta$

7.  $\frac{\sec^2 \theta}{\sec^2 \theta - 1} = \csc^2 \theta$

8.  $\tan^2 x \sin^2 x = \tan^2 x - \sin^2 x$