Name _____ Date _____

Pythagorean Identities - Independent Practice Worksheet

Complete all the problems.

1. Simplify $\cos^2 x + \cos^2 x \sec^2 x$

2. Simplify the expression: $(\csc^2 x - 1)(\tan x)$ to a single trigonometric function.

3. If $\sin \Theta = \frac{3}{5}$

Find the values of the sec Θ, using a Pythagorean identity.

4. Simplify the expression: $(1 - \sin^2 x)(\tan x)$ to a single trigonometric function.

5. Simplify $\sec^2 x + \tan^2 x \cot^2 x$

6. If $\tan \Theta = \frac{12}{10}$

Find the values of the cot Θ, using a Pythagorean identity.

7. Simplify the expression: $(\tan^2 x + 1)(\cos x)$ to a single trigonometric function.

8. Simplify $\sin^2 x + \cot^2 x \sec^2 x$

9. If $\sec \Theta = \frac{14}{12}$

Find the values of the tan Θ, using a Pythagorean identity.

10. Simplify $\sin^2 x + \sin^2 x \csc^2 x$