Name _____ Date _____

Pythagorean Identities - Independent Practice Worksheet

Complete all the problems.

1. Simplify the expression.

(1- $\cos^2 x$) (cosec x)

2. $\cos^2 x + \cos^2 x \tan^2 x$

3. (1 – sin (a)) (1 + sin (a))

4. Verify: $\tan\frac{\pi}{4} + x = \frac{\cos 2x}{1-\sin 2x}$

5. If csc = $\frac{5}{3}$ and $\tan\theta = \frac{3}{4}$, find the values of the remaining trigonometric functions, using a Pythagorean Identity.

6. Verify: $\frac{1}{sec^2 k}$ = $\sin^2 k \times \cos^2 k + \cos^4 k$.

7. Verify: $\sec^2 a + \csc^2 a = \frac{1}{\sin^2 a} \times cos^2 a$.

8. Verify: Cot p x sec p = cos p

9. Verify: tan θ + cot θ = sec θ csc θ

10. Verify: $\cot^2 a = \cos^2 a + \cot a \times \cos a$