Algebra II/Trig B Name _____

Proving Trigonometric Identities #2
Homework
Module 3, Unit 7, Lesson 12

Prove each identity.

1. $\sin^2\theta\tan^2\theta = \tan^2\theta - \sin^2\theta$

2. $\dfrac{\sec x}{\cot x + \tan x} = \sin x$

3. $\dfrac{1-\sin y}{\cos y} = \dfrac{\cos y}{1+\sin y}$

4. $\sec x - \sin x\tan x = \cos x$

5. $\dfrac{1+\tan\theta}{\tan\theta} = \cot\theta + 1$

6. $\sec x - \tan x = \dfrac{\cos x}{1+\sin x}$

7. $\dfrac{\cos\theta - 1}{\cot\theta} = \dfrac{\cot\theta}{\csc\theta + 1}$

8. $\tan^2 x \cos^2 x + \cot^2 x \sin^2 x = 1$

9. $\dfrac{\csc^2 t}{\cot t} = \csc t \sec t$

10. $\cot^2\theta - \cos^2\theta = \cos^2 x \cot^2 x$