Name:_____

5.2 Verifying Trig Identities

1) $\csc\theta\cot^2\theta+\dfrac{1}{\sin\theta}=\csc^3\theta$

2) $\dfrac{\sec^2\theta-1}{\sec^2\theta}=\sin^2\theta$

3) $\dfrac{\cos x}{1-\sin x}=\sec x+\tan x$

4) $\dfrac{\csc^2 x-\cot^2 x}{1-\sin^2 x}=\sec^2 x$

5) $\dfrac{\cot^2 x}{\csc x}=\csc x-\sin x$

6) $\sec^3 x=\sec x\tan^2 x+\sec x$

7) $\tan x \sin x = \sec x - \cos x$

8) $\tan x = \sin x \sec x$

9) $\dfrac{1-\cos^2\theta}{\cos^2\theta} = \tan^2\theta$

10) $\dfrac{(\sin x + \cos x)^2}{\sin x \cos x} = 2 + \sec x \csc x$

11) $\sec x \csc x(\tan x + \cot x) = \sec^2 x + \csc^2 x$

12) $\dfrac{\cos x}{1-\sin x} - \dfrac{1+\sin x}{\cos x} = 0$