Trigonometry

Name _____

7.2 Verifying Trig Identities

Per/Sec. _____ Dat

Verify each identity.

1 $\sin\theta\sec\theta = \tan\theta$

2 $\sin\theta\cot\theta = \cos\theta$

3 $\tan^2\theta - \sec^2\theta = -1$

4 $\cos\theta\csc\theta\tan\theta = 1$

5 $\sec^2\theta - \sec^2\theta\sin^2\theta = 1$

6 $\dfrac{\sin\theta}{1-\cos^2\theta} = \csc\theta$

7 $1 + \sec^2\theta \sin^2\theta = \sec^2\theta$

8 $\cot\theta(\tan\theta + \cot\theta) = \csc^2\theta$

9 $\tan\theta \cot\theta + \sin^2\theta + \cos^2\theta = 2$

10 $(1 - \cos^2\theta)\csc\theta \cot\theta = \cos\theta$

11 $\dfrac{\sin\theta}{1 - \sin^2\theta} = \sec\theta \tan\theta$

12 $\sec^2\theta \csc^2\theta = \csc^2\theta + \sec^2\theta$

13 $\dfrac{\cot\theta}{1 + \cot^2\theta} = \cos\theta \sin\theta$

14 $\dfrac{\cot\theta}{\sec\theta} = \dfrac{1}{\sin\theta} - \sin\theta$