Pre-Calculus **7.1 Trig Identities Notes [D2]** **Name:**

Even/Odd Trig Functions

$\sin(-\theta) =$ $\cos(-\theta) =$ $\tan(-\theta) =$

Proving Trig Identities:

Verify each identity

1. $\cos\theta \tan\theta = \sin\theta$

2. $\cos\theta\,(\sec\theta - \cos(-\theta)) = \sin^2\theta$

3. $\cos^2\theta - \sin^2\theta = 2\cos^2\theta - 1$

4. $\csc\theta + \sin(-\theta) = \cos\theta\cot\theta$

5. $\frac{1}{1-\cos^2\theta} = 1 + \cot^2\theta$

6. $\frac{1-\cos\theta}{\sin\theta} - \frac{\sin\theta}{1+\cos\theta} = 0$

You Try #7-9:

7. $\sin\theta\tan\theta = \frac{1-\cos^2\theta}{\cos\theta}$

8. $\csc\theta\,(\csc\theta - \sin\theta) = \cot^2\theta$

9. $\frac{\tan^2\theta}{\sec\theta} = \sec\theta - \cos\theta$

Pre-Calculus **7.1 Trig Identities Homework Worksheet [D2]**

Verify the identity.

1. $\frac{\sin\theta}{\tan\theta} = \cos\theta$

2. $\frac{\cos\theta\sec\theta}{\tan\theta} = \cot\theta$

3. $\frac{\tan\theta}{\csc\theta} = \sec\theta - \cos\theta$

4. $\sin\theta + \cos\theta\cot\theta = \csc\theta$

5. $\cot(-\theta)\cos(-\theta) + \sin(-\theta) = -\csc\theta$

6. $\tan\theta + \cot\theta = \sec\theta\csc\theta$

7. $(1 - \cos\theta)(1 + \cos\theta) = \frac{1}{\csc^2\theta}$

8. $\frac{\sec\theta - \cos\theta}{\sec\theta} = \sin^2\theta$

9. $(1 - \cos^2\theta)(1 + \cot^2\theta) = 1$

10. $2\cos^2\theta - 1 = 1 - 2\sin^2\theta$

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

12. $\sec^4\theta - \tan^4\theta = \sec^2\theta + \tan^2\theta$