

## Trigonometric Identities

### Verifying Identities 5

Verify that each of the following is an identity.

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

6.  $\cos^2 \theta \tan^2 \theta = \sin^2 \theta$

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

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

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

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

4.  $\tan^2 \theta + 1 = \frac{1}{\cos^2 \theta}$

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

5.  $1 - \cos^2 \theta = \sin \theta \cos \theta \tan \theta$

10.  $\frac{1}{\cos^2 \theta} = \tan^2 \theta + 1$