

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

2.  $\cot x + \tan x = \csc x \sec x$

3.  $\sin^2\theta(\csc^2\theta + \sec^2\theta) = \sec^2\theta$

4.  $\cos^2 t - \sin^2 t = 2\cos^2 t - 1$

5.  $\sec^2 y + \csc^2 y = \sec^2 y \csc^2 y$

6.  $\cos^4 x - \sin^4 x = \cos^2 x - \sin^2 x$

7.  $\cos^2\theta \tan^2\theta + \sin^2\theta \tan^2\theta + 1 = \sec^2\theta$

8.  $\frac{\csc y}{\csc y - 1} + \frac{\csc y}{\csc y + 1} = 2 \sec^2 y$

9.  $\frac{1 + \cos x}{1 - \cos x} = \frac{\sec x + 1}{\sec x - 1}$

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

11.  $\sec t + \csc t = (\tan t + \cot t)(\cos t + \sin t)$

12.  $\frac{\sin x}{1 + \cos x} = \csc x - \cot x$