$$\sin^2 x + \cos^2 x = 1. \quad \tan^2 x + 1 = \sec^2 x. \quad \cot^2 x + 1 = \csc^2 x.$$

$$\sin(-x) = -\sin x. \quad \cos(-x) = \cos x. \quad \tan(-x) = -\tan x.$$

$$\sin(x+y) = \sin x \cos y + \cos x \sin y. \quad \cos(x+y) = \cos x \cos y - \sin x \sin y.$$

$$\sin 2x = 2 \sin x \cos x. \quad \cos 2x = 2\cos^2 x - 1 = 1 - 2\sin^2 x.$$

$$\frac{d}{dx} \sin x = \cos x. \quad \frac{d}{dx} \cos x = -\sin x. \quad \frac{d}{dx} \tan x = \sec^2 x.$$

$$\frac{d}{dx} \csc x = -\cot x \csc x. \quad \frac{d}{dx} \sec x = \tan x \sec x. \quad \frac{d}{dx} \cot x = -\csc^2 x.$$