

$$\sin^2 x + \cos^2 x = 1$$

$$\sin x = \cos\left(x - \frac{\pi}{2}\right) = \cos\left(\frac{\pi}{2} - x\right)$$

$$\cos x = \sin\left(x + \frac{\pi}{2}\right) = \sin\left(\frac{\pi}{2} - x\right)$$

$$\sin(x - y) = \sin x * \cos y - \cos x * \sin y$$

$$\sin(x + y) = \sin x * \cos y + \cos x * \sin y$$

$$\cos(x + y) = \cos x * \cos y - \sin x * \sin y$$

$$\cos(x - y) = \cos x * \cos y + \sin x * \sin y$$