Identidades trigonométricas:

$$\operatorname{sen}^2\alpha + \cos^2\alpha = 1$$

$$\operatorname{cosec}^2\alpha - \operatorname{ctg}^2\alpha = 1$$

$$\sec^2\alpha - \tan^2\alpha = 1$$

$$\cos(\alpha - \beta) = \cos\alpha\cos\beta + \operatorname{sen}\beta\operatorname{sen}\alpha$$

$$\operatorname{sen}(\alpha - \beta) = \operatorname{sen}\alpha\cos\beta - \operatorname{sen}\beta\cos\alpha$$

$$\tan(\alpha - \beta) = \frac{\tan\alpha - \tan\beta}{1 + \tan\alpha\tan\beta}$$

$$\cos(\alpha + \beta) = \cos\alpha\cos\beta - \operatorname{sen}\alpha\operatorname{sen}\beta$$

$$\operatorname{sen}(\alpha + \beta) = \operatorname{sen}\alpha\cos\beta + \operatorname{sen}\beta\cos\alpha$$

$$\tan(\alpha + \beta) = \frac{\tan\alpha + \tan\beta}{1 - \tan\alpha\tan\beta}$$

$$\operatorname{sen}\alpha + \operatorname{sen}\beta = 2\operatorname{sen}\left(\frac{\alpha+\beta}{2}\right)\cos\left(\frac{\alpha-\beta}{2}\right)$$

$$\operatorname{sen}\alpha - \operatorname{sen}\beta = 2\operatorname{sen}\left(\frac{\alpha-\beta}{2}\right)\cos\left(\frac{\alpha+\beta}{2}\right)$$

$$\cos\alpha + \cos\beta = 2\cos\left(\frac{\alpha+\beta}{2}\right)\cos\left(\frac{\alpha-\beta}{2}\right)$$

$$\cos\alpha - \cos\beta = -2\operatorname{sen}\left(\frac{\alpha+\beta}{2}\right)\operatorname{sen}\left(\frac{\alpha-\beta}{2}\right)$$

$$2\operatorname{sen}\alpha\cos\beta = \operatorname{sen}(\alpha+\beta) + \operatorname{sen}(\alpha-\beta)$$

$$2\cos\alpha\operatorname{sen}\beta = \operatorname{sen}(\alpha+\beta) - \operatorname{sen}(\alpha-\beta)$$

$$2\cos\alpha\cos\beta = \cos(\alpha+\beta) + \cos(\alpha-\beta)$$

$$2\operatorname{sen}\alpha\operatorname{sen}\beta = \cos(\alpha-\beta) - \cos(\alpha+\beta)$$

$$\operatorname{sen}(2x) = 2\operatorname{sen}x\cos x \qquad \cos(2x) = \cos^2 x - \operatorname{sen}^2 x$$