

# Alfa y beta

$$\text{sen}(a+b) = \text{sen}a \cdot \cos b + \cos a \cdot \text{sen}b$$

$$\cos(a+b) = \cos a \cdot \cos b - \text{sen}a \cdot \text{sen}b$$

$$\text{tg}(a+b) = \frac{\text{tga} + \text{tgb}}{1 - \text{tga} \cdot \text{tgb}}$$

$$\text{sen}2a = 2 \cdot \text{sen}a \cdot \cos a$$

$$\cos 2a = \cos^2 a - \text{sen}^2 a$$

$$\text{tg} 2a = \frac{2\text{tga}}{1 - \text{tg}^2 a}$$

$$\text{sen } a/2 = \sqrt{\frac{1 - \cos a}{2}} \text{ (todo dentro)}$$

$$\cos a/2 = \sqrt{\frac{1 + \cos a}{2}} \text{ (todo dentro)}$$

$$\text{tg } a/2 = \frac{1 - \cos a}{1 + \cos a} \text{ (todo dentro)}$$

$$\text{sen}A + \text{sen}B = 2 \text{sen} \frac{A+B}{2} \cdot \cos \frac{A-B}{2}$$

$$\text{sen}A - \text{sen}B = 2 \cos \frac{A+B}{2} \cdot \text{sen} \frac{A-B}{2}$$

$$\cos A + \cos B = 2 \cos \frac{A+B}{2} \cdot \cos \frac{A-B}{2}$$

$$\cos A - \cos B = -2 \text{sen} \frac{A+B}{2} \cdot \text{sen} \frac{A-B}{2}$$