

Identidades trigonometricas

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$$\text{sen}^2 x + \text{cos}^2 x = 1$$

$$1 + \text{tg}^2 x = \text{sec}^2 x$$

$$1 + \text{cotg}^2 x = \text{csc}^2 x$$

$$\text{tg } x = \frac{\text{sen } x}{\text{cos } x} - \text{csc } x = \frac{1}{\text{sen } x}$$

$$\text{sec } x = \frac{1}{\text{cos } x} - \text{cotg } x = \frac{1}{\text{tg } x} = \frac{\text{cos } x}{\text{sen } x}$$

$$\text{sen}(x \pm y) = \text{sen } x \cdot \text{cos } y \pm \text{cos } x \cdot \text{sen } y$$

$$\text{cos}(x \pm y) = \text{cos } x \cdot \text{cos } y \mp \text{sen } x \cdot \text{sen } y$$

$$\text{tg}(x \pm y) = \frac{\text{tg } x \pm \text{tg } y}{1 \mp \text{tg } x \cdot \text{tg } y}$$

$$\text{sen}(2x) = 2 \text{sen } x \cdot \text{cos } x$$

$$\text{cos}(2x) = \text{cos}^2 x - \text{sen}^2 x \quad \text{tg} 2a = \frac{2 \text{tga}}{1 - \text{tg}^2 a}$$

$$\text{sen}(a/2) = \pm \sqrt{(1 - \text{cos } a)/2} \quad \text{cos}(a/2) = \pm \sqrt{(1 + \text{cos } a)/2}$$

$$\text{tg}(a/2) = \pm \sqrt{(1 - \text{cos } a)/(1 + \text{cos } a)}$$

$$\text{sen } A + \text{sen } B = 2 \cdot \text{sen}((A+B)/2) \cdot \text{cos}((A-B)/2)$$

$$\text{sen } A - \text{sen } B = 2 \cdot \text{cos}((A+B)/2) \cdot \text{sen}((A-B)/2)$$

$$\text{cos } A + \text{cos } B = 2 \cdot \text{cos}((A+B)/2) \cdot \text{cos}((A-B)/2)$$

$$\text{cos } A - \text{cos } B = -2 \cdot \text{sen}((A+B)/2) \cdot \text{sen}((A-B)/2)$$

$$\frac{\text{cos } a}{\text{sen } a} = \text{cat ady} / \text{hip} \Rightarrow \text{sec } a = \frac{1}{\text{cos } a} \quad \frac{\text{sen } a}{\text{cos } a} = \text{cat op} / \text{hip} \Rightarrow \text{cosec } a$$

$$\text{tan } a = \frac{\text{cat op}}{\text{cat ady}} \Rightarrow \text{cotg } a = \frac{\text{cat ady}}{\text{cat op}} = \frac{\text{sen } a}{\text{cos } a}$$