Cálculo Diferencial e Integral I

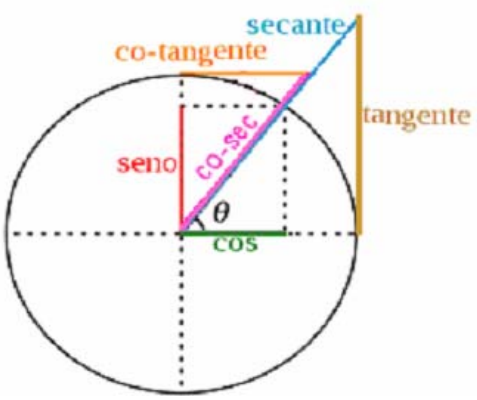
Faculdade de Engenharia, Arquiteturas e Urbanismo – FEAU

Prof. Dr. Sergio Pilling

UNIVERSIDADE DO VALE DO PARAÍBA
São José dos Campos - SP

Tabela das Principais Identidades Trigonométricas

1. $\operatorname{sen}^2 x + \cos^2 x = 1.$
2. $1 + \operatorname{tg}^2 x = \sec^2 x.$
3. $1 + \operatorname{cotg}^2 x = \operatorname{cosec}^2 x.$
4. $\operatorname{sen}^2 x = \frac{1-\cos\ 2x}{2}.$
5. $\cos^2 x = \frac{1+\cos\ 2x}{2}.$
6. $\operatorname{sen}\ 2x = 2\ \operatorname{sen}\ x\ \cos\ x.$
7. $2\ \operatorname{sen}\ x\ \cos\ y = \operatorname{sen}\,(x-y) + sen\,(x+y).$
8. $2\ \operatorname{sen}\ x\ \operatorname{sen}\ y = \cos\,(x-y) - \cos\,(x+y).$
9. $2\ \cos\ x\ \cos\ y = \cos\,(x-y) + \cos\,(x+y).$
10. $1 \pm \operatorname{sen}\ x = 1 \pm \cos\left(\frac{\pi}{2} - x\right).$



Identidades de soma e subtração

$$\operatorname{sen}(A \pm B) = \operatorname{sen}A\cos B \pm \operatorname{sen}B\cos A$$
$$\cos(A \pm B) = \cos A\cos B \mp \operatorname{sen}A\operatorname{sen}B$$
$$\tan(A \pm B) = \frac{\tan A \pm \tan B}{1 \mp \tan A\tan B}$$
$$\cot(A \pm B) = \frac{\cot A\ B \mp 1}{\cot B \pm \cot A}$$

$\sin\theta \equiv \cos\left(\frac{\pi}{2} - \theta\right) \equiv \frac{1}{\csc\theta}$
$\cos\theta \equiv \sin\left(\frac{\pi}{2} - \theta\right) \equiv \frac{1}{\sec\theta}$
$\tan\theta \equiv \frac{\sin\theta}{\cos\theta} \equiv \cot\left(\frac{\pi}{2} - \theta\right) \equiv \frac{1}{\cot\theta}$
$\csc\theta \equiv \sec\left(\frac{\pi}{2} - \theta\right) \equiv \frac{1}{\sin\theta}$
$\sec\theta \equiv \csc\left(\frac{\pi}{2} - \theta\right) \equiv \frac{1}{\cos\theta}$
$\cot\theta \equiv \frac{\cos\theta}{\sin\theta} \equiv \tan\left(\frac{\pi}{2} - \theta\right) \equiv \frac{1}{\tan\theta}$