

TRIÁNGULOS CUALESQUIERA
$\text{Área} = \frac{\text{base} \cdot \text{altura}}{2} \quad \text{ó} \quad \text{Área} = \sqrt{p(p-a)(p-b)(p-c)}$
siendo $p = \frac{a+b+c}{2}$ (semiperímetro)
$A + B + C = 180^\circ$
$a^2 = b^2 + c^2 - 2bc \cdot \cos A$ (th. del coseno)
$\frac{a}{\text{sen } A} = \frac{b}{\text{sen } B} = \frac{c}{\text{sen } C}$ (th. del seno)

TRIÁNG. RECTÁNGULOS
$a^2 = b^2 + c^2$ (T. de Pitágoras)
$\text{sen } B = \frac{\text{cateto opuesto}}{\text{hipotenusa}}$
$\text{cos } B = \frac{\text{cateto contiguo}}{\text{hipotenusa}}$
$\text{tag } B = \frac{\text{cateto opuesto}}{\text{cateto contiguo}}$

TRIGONOMETRÍA

$\text{tag } \alpha = \frac{\text{sen } \alpha}{\text{cos } \alpha} \quad \text{cotag } \alpha = \frac{\text{cos } \alpha}{\text{sen } \alpha} \quad \text{sec } \alpha = \frac{1}{\text{cos } \alpha} \quad \text{cosec } \alpha = \frac{1}{\text{sen } \alpha} \quad 360^\circ = 2\pi \text{ rad.} = 400^\text{g}$

$\text{sen } (90^\circ - \alpha) = \text{cos } \alpha$	$\text{cos } (90^\circ - \alpha) = \text{sen } \alpha$
$\text{sen } (90^\circ + \alpha) = \text{cos } \alpha$	$\text{cos } (90^\circ + \alpha) = -\text{sen } \alpha$
$\text{sen } (180^\circ - \alpha) = \text{sen } \alpha$	$\text{cos } (180^\circ - \alpha) = -\text{cos } \alpha$
$\text{sen } (180^\circ + \alpha) = -\text{sen } \alpha$	$\text{cos } (180^\circ + \alpha) = -\text{cos } \alpha$
$\text{sen } (360^\circ - \alpha) = -\text{sen } \alpha$	$\text{cos } (360^\circ - \alpha) = \text{cos } \alpha$
$\text{sen } (-\alpha) = -\text{sen } \alpha$	$\text{cos } (-\alpha) = \text{cos } \alpha$
$\text{sen } (360^\circ + \alpha) = \text{sen } \alpha$	$\text{cos } (360^\circ + \alpha) = \text{cos } \alpha$

Ángulo doble:

Suma de ángulos:

$\text{sen } ^2 \alpha + \text{cos } ^2 \alpha = 1$	$\text{sen } 2\alpha = 2 \cdot \text{sen } \alpha \cdot \text{cos } \alpha$	$\text{sen } (\alpha + \beta) = \text{sen } \alpha \text{cos } \beta + \text{cos } \alpha \text{sen } \beta$
$\text{tag } ^2 \alpha + 1 = \text{sec } ^2 \alpha$	$\text{cos } 2\alpha = \text{cos } ^2 \alpha - \text{sen } ^2 \alpha$	$\text{cos } (\alpha + \beta) = \text{cos } \alpha \text{cos } \beta - \text{sen } \alpha \text{sen } \beta$
$1 + \text{cotag } ^2 \alpha = \text{cosec } ^2 \alpha$	$\text{tag } 2\alpha = \frac{2 \cdot \text{tag } \alpha}{1 - \text{tag } ^2 \alpha}$	$\text{tag } (\alpha + \beta) = \frac{\text{tag } \alpha + \text{tag } \beta}{1 - \text{tag } \alpha \text{tag } \beta}$

Ángulo mitad:

Diferencia de ángulos:

$\text{tag } \alpha = \frac{\text{sen } \alpha}{\text{cos } \alpha}$	$\text{sen } \frac{\alpha}{2} = \pm \sqrt{\frac{1 - \text{cos } \alpha}{2}}$	$\text{sen } (\alpha - \beta) = \text{sen } \alpha \text{cos } \beta - \text{cos } \alpha \text{sen } \beta$
$\text{cotag } \alpha = \frac{\text{cos } \alpha}{\text{sen } \alpha} = \frac{1}{\text{tag } \alpha}$	$\text{cos } \frac{\alpha}{2} = \pm \sqrt{\frac{1 + \text{cos } \alpha}{2}}$	$\text{cos } (\alpha - \beta) = \text{cos } \alpha \text{cos } \beta + \text{sen } \alpha \text{sen } \beta$
$\text{sec } \alpha = \frac{1}{\text{cos } \alpha} \quad \text{cosec } \alpha = \frac{1}{\text{sen } \alpha}$	$\text{tag } \frac{\alpha}{2} = \pm \sqrt{\frac{1 - \text{cos } \alpha}{1 + \text{cos } \alpha}}$	$\text{tag } (\alpha - \beta) = \frac{\text{tag } \alpha - \text{tag } \beta}{1 + \text{tag } \alpha \text{tag } \beta}$

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