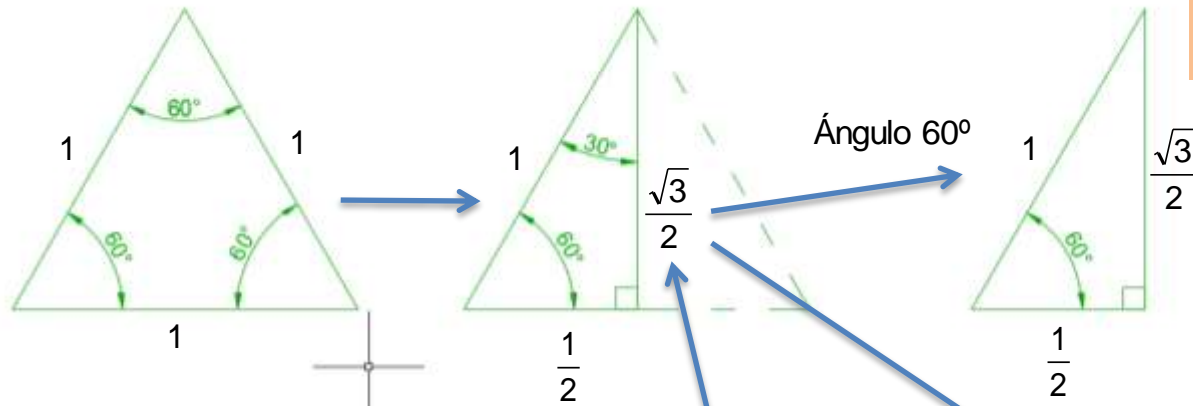


# Razones trigonométricas de los triángulos de 30°, 60° y 45°.



$$\text{sen } 60^\circ = \frac{C_{\text{OPUESTO}}}{\text{hipotenusa}} = \frac{\frac{\sqrt{3}}{2}}{\frac{\sqrt{3}}{2}} = \frac{\sqrt{3}}{2}$$

$$\text{tag } 60^\circ = \frac{C_{\text{OPUESTO}}}{C_{\text{CONTIGUO}}} = \frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} = \sqrt{3}$$

$$\text{cos } 60^\circ = \frac{C_{\text{CONTIGUO}}}{\text{hipotenusa}} = \frac{\frac{1}{2}}{\frac{\sqrt{3}}{2}} = \frac{1}{\sqrt{3}}$$

$$\text{sen } 30^\circ = \frac{C_{\text{OPUESTO}}}{\text{hipotenusa}} = \frac{\frac{1}{2}}{\frac{\sqrt{3}}{2}} = \frac{1}{\sqrt{3}}$$

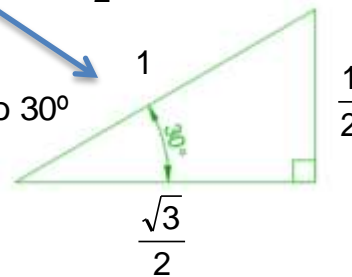
$$\text{tag } 30^\circ = \frac{C_{\text{OPUESTO}}}{C_{\text{CONTIGUO}}} = \frac{\frac{1}{2}}{\frac{\sqrt{3}}{2}} = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$$

$$\text{cos } 30^\circ = \frac{C_{\text{CONTIGUO}}}{\text{hipotenusa}} = \frac{\frac{\sqrt{3}}{2}}{\frac{\sqrt{3}}{2}} = \frac{\sqrt{3}}{2}$$

$$h^2 = c^2 + c^2 \rightarrow c = \sqrt{h^2 - c^2}$$

$$C_{\text{OPUESTO}} = \sqrt{(1)^2 - \left(\frac{1}{2}\right)^2} = \sqrt{1 - \frac{1}{4}} = \sqrt{\frac{4}{4} - \frac{1}{4}} = \sqrt{\frac{3}{4}} = \frac{\sqrt{3}}{2}$$

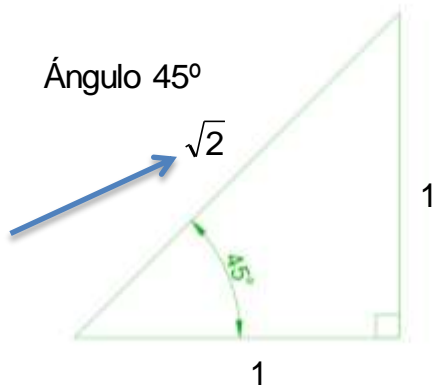
Ángulo 30°



Ángulo 45°

$$h = \sqrt{c^2 + c^2}$$

$$h = \sqrt{(1)^2 + (1)^2} = \sqrt{2}$$



$$\text{sen } 45^\circ = \frac{C_{\text{OPUESTO}}}{\text{hipotenusa}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$\text{tag } 45^\circ = \frac{C_{\text{OPUESTO}}}{C_{\text{CONTIGUO}}} = \frac{1}{1} = 1$$

$$\text{cos } 45^\circ = \frac{C_{\text{CONTIGUO}}}{\text{hipotenusa}} = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$