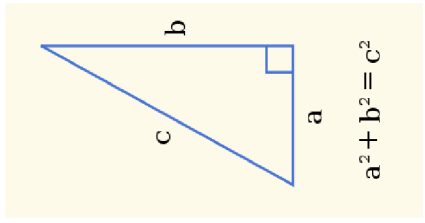


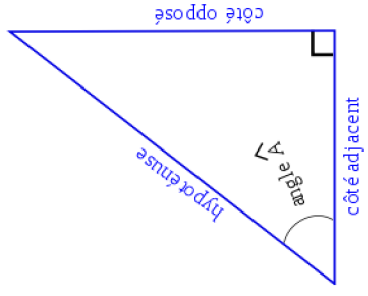
PYTHAGORE/CAH-SOH-TOA



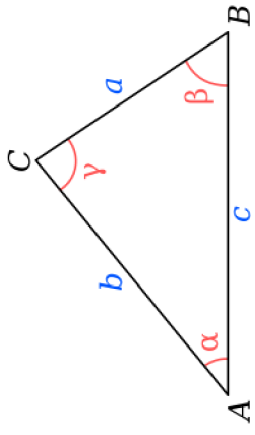
$$\cos(\hat{A}) = \frac{\text{côté adjacent}}{\text{hypoténuse}} = \frac{a}{h}$$

$$\sin(\hat{A}) = \frac{\text{côté opposé}}{\text{hypoténuse}} = \frac{o}{h}$$

$$\tan(\hat{A}) = \frac{\text{côté opposé}}{\text{côté adjacent}} = \frac{o}{a}$$



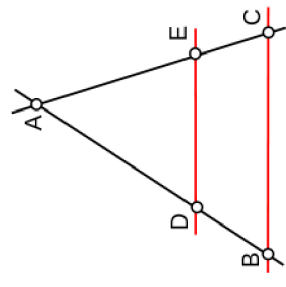
LOI SINUS/COSINUS



$$\frac{a}{\sin \alpha} = \frac{b}{\sin \beta} = \frac{c}{\sin \gamma}$$

$$c^2 = a^2 + b^2 - 2ab \cos \gamma.$$

THALES



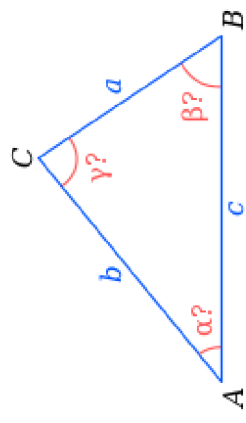
$$\frac{AD}{AB} = \frac{AE}{AC} = \frac{DE}{BC}.$$

$$\alpha = \arccos\left(\frac{b^2 + c^2 - a^2}{2bc}\right)$$

$$\beta = \arccos\left(\frac{c^2 + a^2 - b^2}{2ca}\right)$$

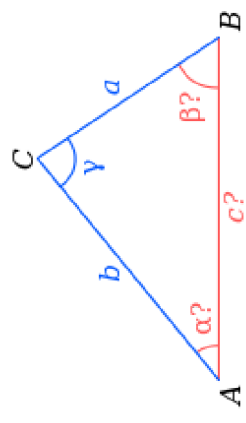
$$\gamma = \arccos\left(\frac{a^2 + b^2 - c^2}{2ab}\right)$$

$$c = \sqrt{a^2 + b^2 - 2ab \cos \gamma} \quad \boxed{\cot = \frac{\cos}{\sin}}$$



$$\alpha = \frac{\pi}{2} - \frac{\gamma}{2} + \arctan\left(\frac{a-b}{a+b} \cot \frac{\gamma}{2}\right)$$

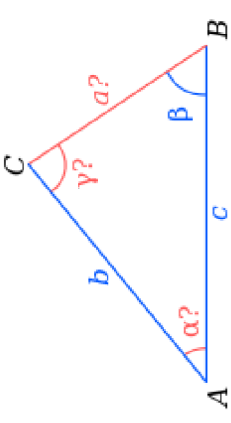
$$\beta = \frac{\pi}{2} - \frac{\gamma}{2} - \arctan\left(\frac{a-b}{a+b} \cot \frac{\gamma}{2}\right)$$



$$\gamma = \arcsin\left(\frac{c \sin \beta}{b}\right)$$

$$\alpha = \pi - \beta - \arcsin\left(\frac{c \sin \beta}{b}\right)$$

$$a = \sqrt{b^2 - c^2 \sin^2 \beta} + c \cos \beta$$



$$a = \frac{c \sin \alpha}{\sin(\alpha + \beta)}$$

$$b = \frac{c \sin \beta}{\sin(\alpha + \beta)}$$

$$\gamma = \pi - \alpha - \beta$$

