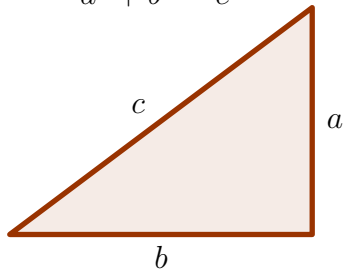


THE LEARNING STUDIO

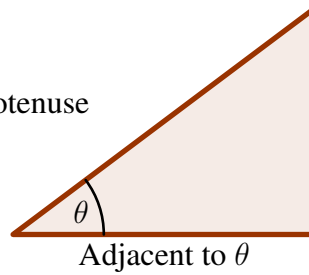
Pythagoras' Theorem

$$a^2 + b^2 = c^2$$



SOHCAHTOA

Hypotenuse

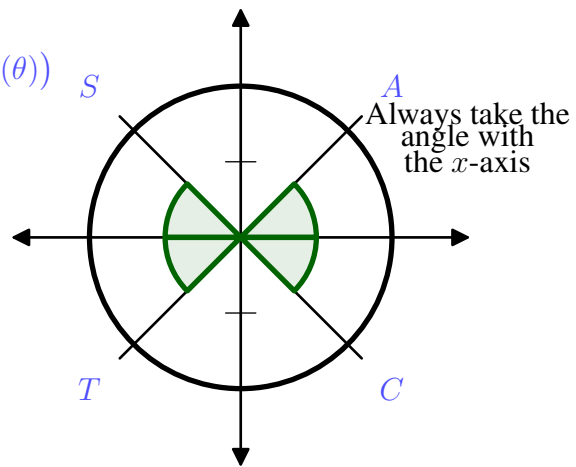
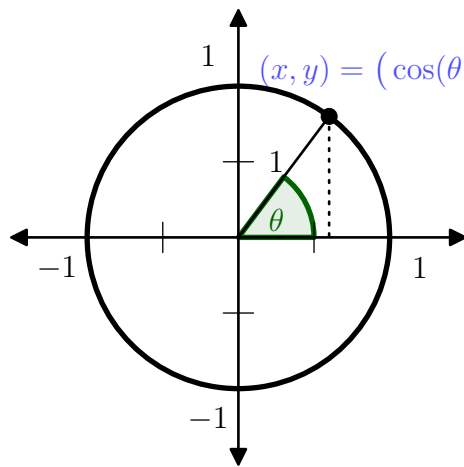


$$\sin(\theta) = \frac{O}{H}$$

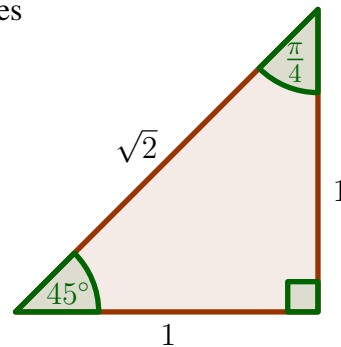
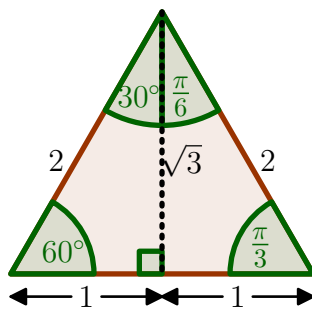
$$\cos(\theta) = \frac{A}{H}$$

$$\tan(\theta) = \frac{O}{A}$$

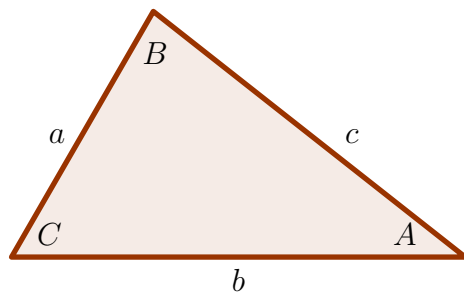
Unit Circle Definition of sin and cos



Exact Values



Non-Right Angled Trigonometry



$$c^2 = a^2 + b^2 - 2ab \cos(C)$$

$$\frac{a}{\sin(A)} = \frac{b}{\sin(B)} = \frac{c}{\sin(C)}$$

$$\text{Area} = \frac{1}{2} ab \sin(C)$$

$$\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}, \quad s = \frac{a+b+c}{2}$$

Trig Identities

$$\tan(\theta) = \frac{\sin(\theta)}{\cos(\theta)}$$

$$\sin^2(\theta) + \cos^2(\theta) = 1$$

$$\sin(A \pm B) = \sin(A) \cos(B) \pm \cos(A) \sin(B)$$

$$\cos(A \pm B) = \cos(A) \cos(B) \mp \sin(A) \sin(B)$$