

RIGHT TRIANGLE DEFINITIONS OF TRIGONOMETRIC FUNCTIONS

$$\sin \theta = \frac{o}{h}$$

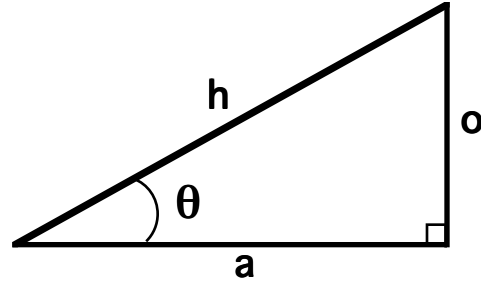
$$\csc \theta = \frac{h}{o}$$

$$\cos \theta = \frac{a}{h}$$

$$\sec \theta = \frac{h}{a}$$

$$\tan \theta = \frac{o}{a}$$

$$\cot \theta = \frac{a}{o}$$



VALUES OF TRIGONOMETRIC FUNCTIONS FOR SPECIAL ANGLES

θ		$\sin \theta$	$\cos \theta$	$\tan \theta$	$\cot \theta$	$\sec \theta$	$\csc \theta$
degrees	radians						
0	0	0	1				
30							
45	$\pi/4$	$1/\sqrt{2}$	$1/\sqrt{2}$	1			
60	$\pi/3$		$1/2$				
90				∞			
120							
135							
150							
180	π						
210							
225							
240							
270	$3\pi/2$						
300							
315							
330							
360	2π						

BASIC TRIGONOMETRIC IDENTITIES

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

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

$$\text{trig}(\theta + 2\pi) = \text{trig}(\theta)$$

$$\text{trig}(-\theta) = \pm \text{trig}(\theta)$$

$$\text{trig}\left(\frac{\pi}{2} - \theta\right) = \text{cotrig}(\theta)$$

$$\sec(\theta), \csc(\theta), \cot(\theta) = \frac{1}{?}, \frac{1}{?}, \frac{1}{?}$$