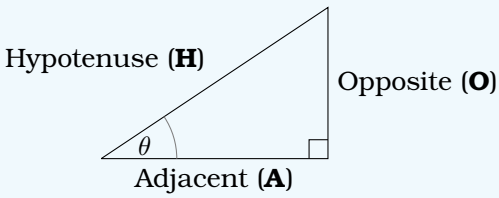
Summary of High School Trigonometry

Right-angled Triangles



Pythagorean Theorem:

$$\mathbf{O}^2 + \mathbf{A}^2 = \mathbf{H}^2$$

SOH $\quad \mathbf{s}\sin(\theta) = \dfrac{\mathbf{O}\text{pposite}}{\mathbf{H}\text{ypotenuse}}$

CAH $\quad \mathbf{c}\cos(\theta) = \dfrac{\mathbf{A}\text{djacent}}{\mathbf{H}\text{ypotenuse}}$

TOA $\quad \mathbf{t}\tan(\theta) = \dfrac{\mathbf{O}\text{pposite}}{\mathbf{A}\text{djacent}}$

The six trigonometric functions

$\mathbf{sin}(\theta)$	$\mathbf{csc}(\theta) = \dfrac{1}{\sin(\theta)}$
$\mathbf{cos}(\theta)$	$\mathbf{sec}(\theta) = \dfrac{1}{\cos(\theta)}$
$\mathbf{tan}(\theta) = \dfrac{\sin(\theta)}{\cos(\theta)}$	$\mathbf{cot}(\theta)) = \dfrac{1}{\tan(\theta)} = \dfrac{\cos(\theta)}{\sin(\theta)}$

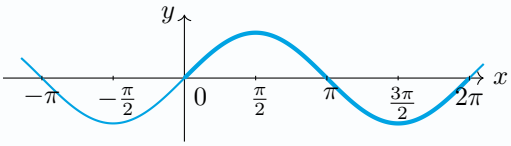
Pythagorean Identities

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

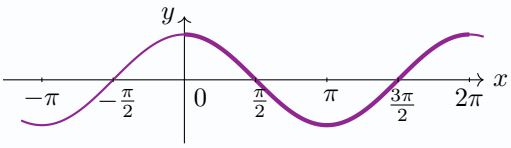
$$\tan^2(\theta) + 1 = \sec^2(\theta)$$

$$1 + \cot^2(\theta) = \csc^2(\theta)$$

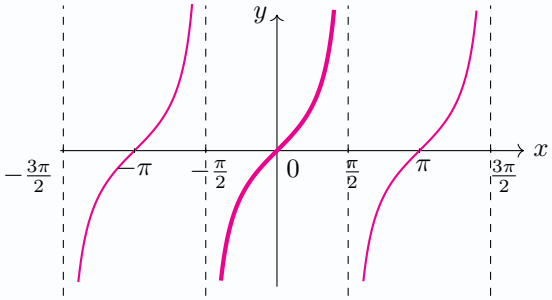
Graph of sin(x)



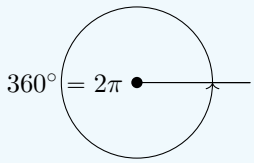
Graph of cos(x)



Graph of tan(x)



Converting from Degrees to Radians



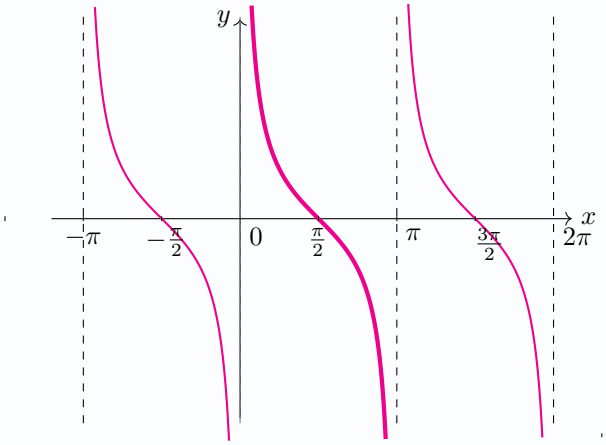
$$\frac{\text{Angle in Degrees}}{360^\circ} = \frac{\text{Angle in Radians}}{2\pi}$$

Playlist of Trigonometry Videos

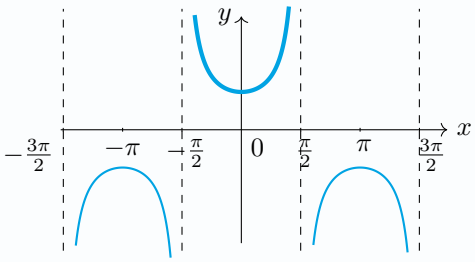
Or click here.

Science students: **continue to the next page**

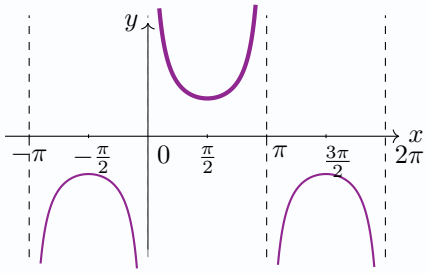
Graph of cot(x)



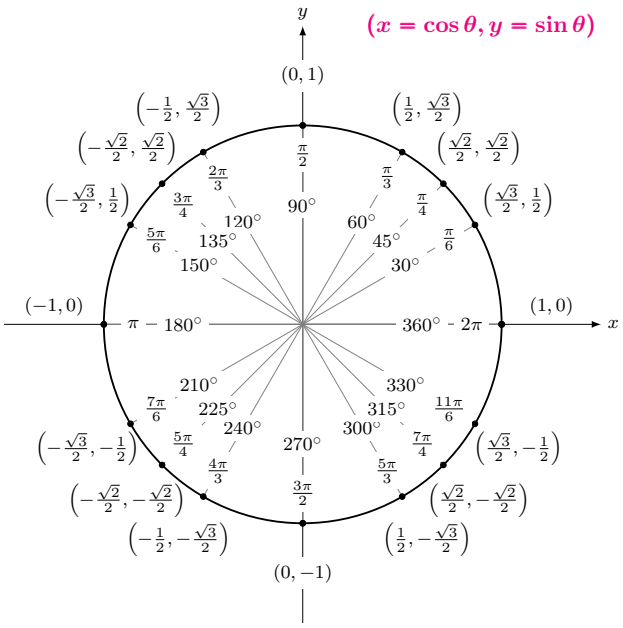
Graph of sec(x)



Graph of csc(x)



Unit Circle



Notes about this

Practice Set

Or click here.