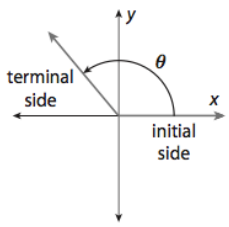
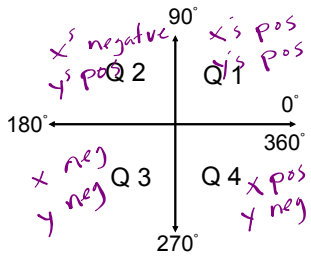
8-3 Radians and Unit Circle





Clockwise rotation: Negative degree

Counter Clockwise rotation: Positive degree

Feb 1-10:09 PM

Angle Measures

Angles are measured with two different units:

- Degrees

-Radians : Measured using π

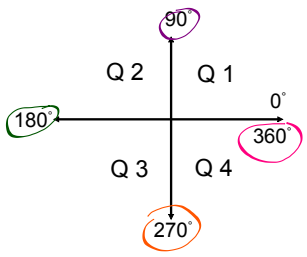
Definition of a radian

https://en.wikipedia.org/wiki/Radian#mediaviewer/File:Circle_radians.gif

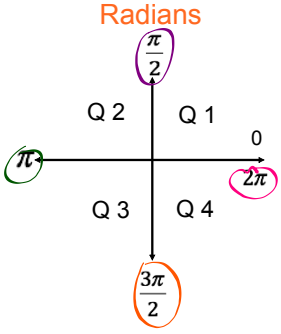
Feb 1-10:16 PM

Landmark Angles

Degrees



Radians

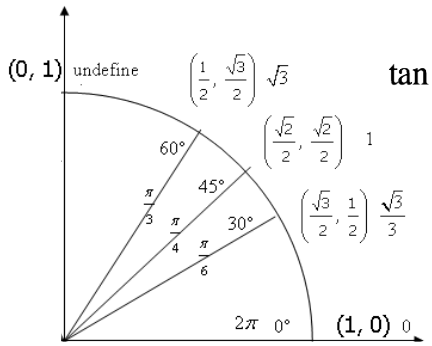


Feb 22-10:33 AM

UNIT CIRCLE

$(\cos\theta, \sin\theta)$

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



Dec 16-9:18 AM

Evaluate the following

y coord

$\sin\pi = 0$

$\sin\frac{\pi}{3} =$

$\cos\pi = -1$

$\tan\pi = 0$

x coord

$\cos\frac{3\pi}{4} =$

$\cos\frac{4\pi}{3} = -\frac{1}{2}$

$\tan\frac{11\pi}{6} =$

$\tan\frac{7\pi}{4} = -1$

Feb 8-9:52 PM

Remember that $(\cos\theta, \sin\theta)$ and $\tan\theta = \frac{\sin\theta}{\cos\theta}$

$\cos\theta$ is the x value

$\sin\theta$ is the y value

$\tan\theta = \frac{y}{x}$

Quadrants where functions are positive

$Q2$: $\sin\theta$	$Q1$: $\sin\theta$, $\cos\theta$, $\tan\theta$
$Q3$: $\tan\theta$	$Q4$: $\cos\theta$

Feb 22-10:50 AM

Find the angle

y

$\sin\theta = \frac{\sqrt{3}}{2}$

$\theta = 60°, 120°$

$\sin\theta = -\frac{\sqrt{2}}{2}$

x

$\cos\theta = -\frac{1}{2}$

$\theta = 120°, 240°$

$\cos\theta = -\frac{\sqrt{3}}{2}$

$\tan\theta = und$

$\tan\theta = \sqrt{3}$

Feb 8-9:59 PM

Mar 1-9:30 AM