

Graphing

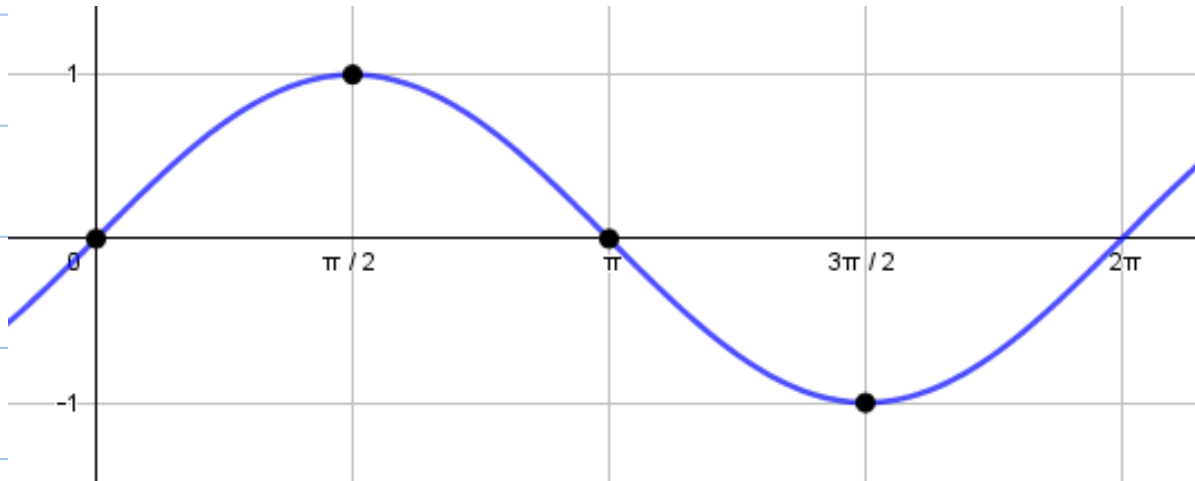
Let the x coordinate be the angle...

IN RADIANS

Let the y coordinate be the value of sine

Mark the points you know...

The Sine Graph



Transforming Sine

...same as it ever was...

$$y = a \cdot \sin(b(x - c)) + d$$

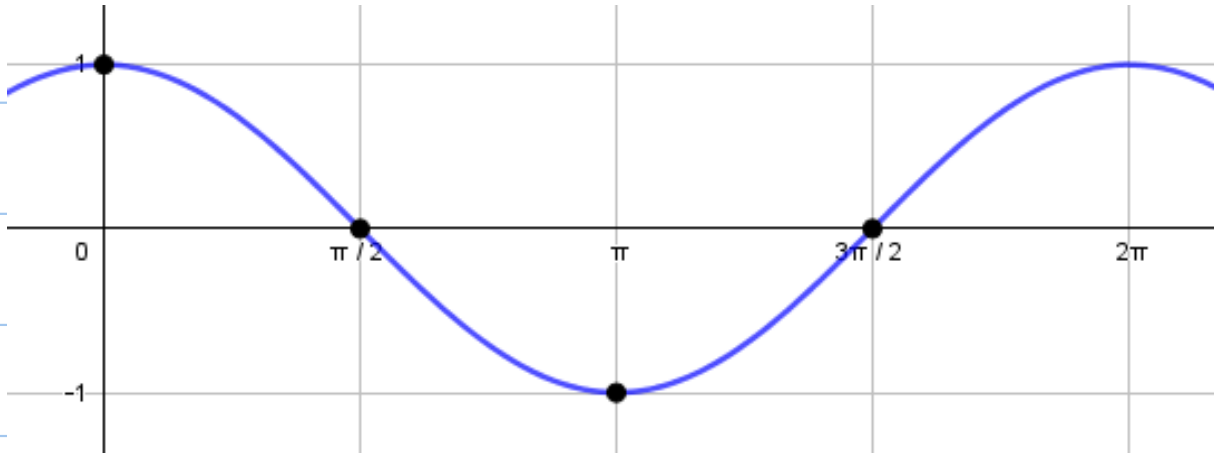
Example

$$y = 3 - 2 \sin(x)$$

Example

$$y = \sin\left(x - \frac{\pi}{2}\right)$$

The Cosine Graph



Properties

Domain: all real numbers (angles in radians)

Range: $[-1,1]$

Amplitude: 1

Period: 2π

Transforming Cosine

...same as it ever was!

$$y = a \cdot \cos(b(x - c)) + d$$

Example

$$y = 3 + \cos(2x)$$

Example

$$y = \cos(2x + \pi)$$