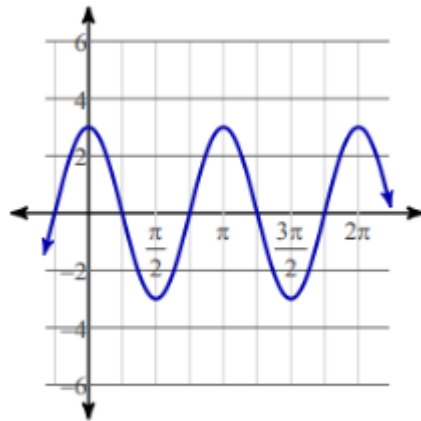
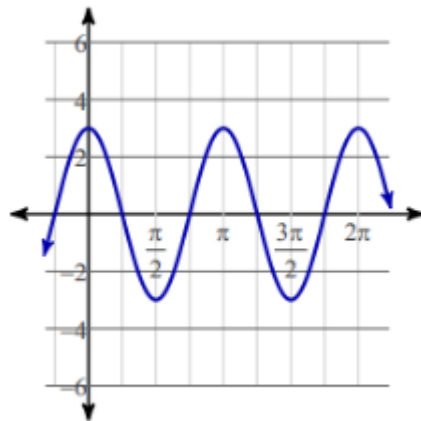


Suppose Point A is a seat on a Ferris wheel with a 12-meter radius positioned on an x-y-coordinate system like your unit circle. You are on a seat to the right of the vertical axis halfway to the highest point of the ride. Find the x- and y- coordinates of your seat after the wheel has rotated counterclockwise through an angle of  $\frac{2\pi}{3}$  radians.

Find the amplitude of the cosine function.



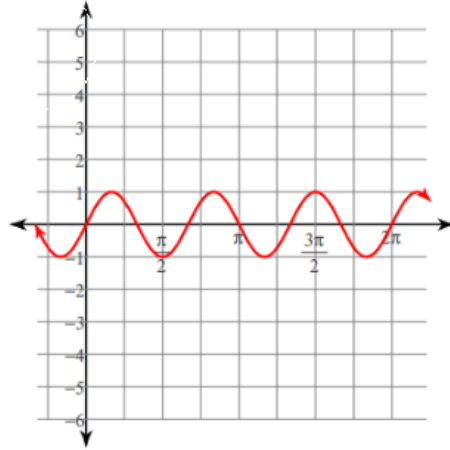
Find the period of the cosine function.



How many radians is  $80^\circ$ ?

Write the equation for a sine function with a period of  $4\pi$ , and amplitude of 3 and a midline at  $y = 0$ .

Find the period of the sine function.

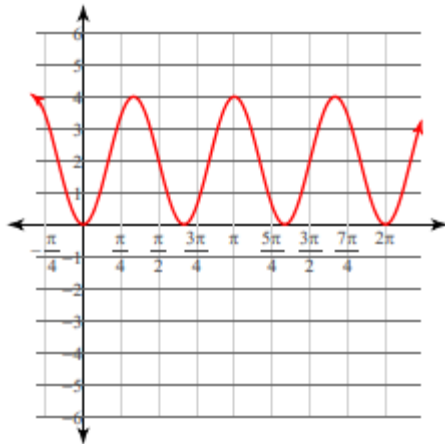


How many degrees is  $\frac{2\pi}{45}$ ?

What are the coordinates of the point where the central angle of  $\frac{11\pi}{6}$  intersects a circle of radius 12?

What are the coordinates of the point where the central angle of  $\frac{\pi}{3}$  intersects a circle of radius 12?

The midline of the cosine function is  
 $y = ?$



Write the equation for a sine function with a period of  $\frac{\pi}{2}$ , and amplitude of 2 and a midline at  $y = -3$ .

Find the period of the sine function.

$$y = \sin\left(\frac{1}{4}x\right)$$

Answers:

$y = 2 \sin(4x) - 3$	$(6\sqrt{3}, -6)$	$\pi$
$(-6, 6\sqrt{3})$	2	$\frac{4\pi}{9}$
$(6, 6\sqrt{3})$	$8\pi$	8
$\frac{2\pi}{3}$	3	$y = 3\sin\left(\frac{1}{2}x\right)$