

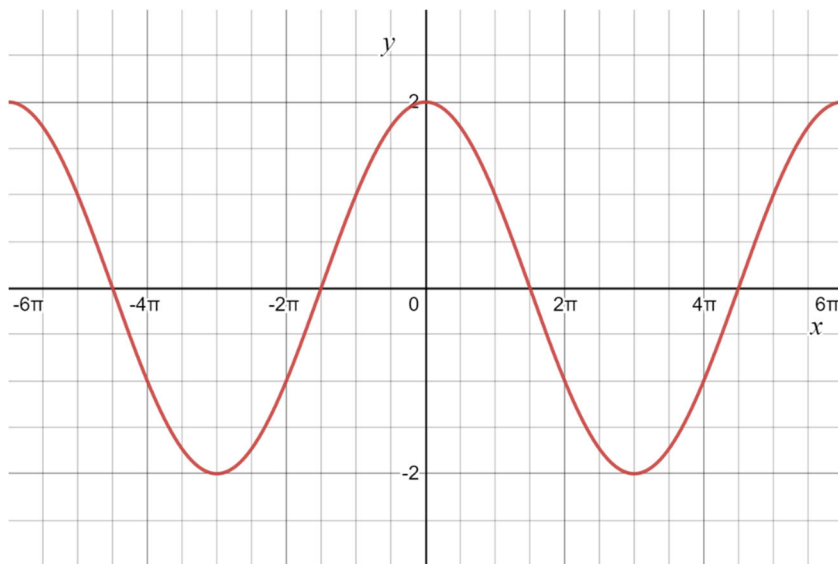
Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Learning Goal 5.1**Graphing primary trigonometric functions, including  
transformations and characteristics**More Questions - Solutions**

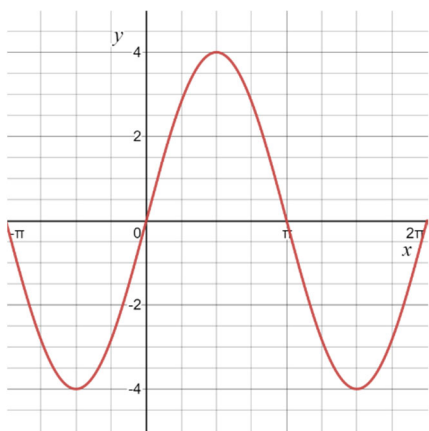
1. Determine the amplitude and the period in radians of the function  $y = 2 \cos(x/3)$ . Graph this function to verify your answers.

$$\begin{aligned} \text{amplitude} &= 2 \\ \text{period} &= 6\pi \end{aligned}$$

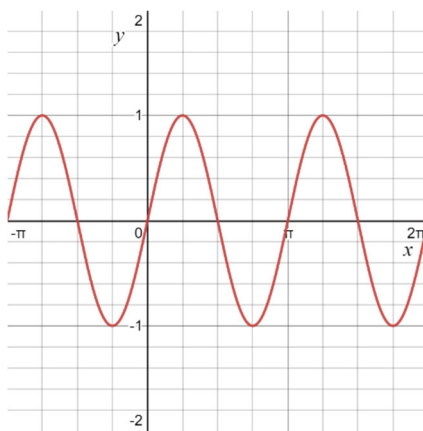


2. Graph one complete period of the following functions.

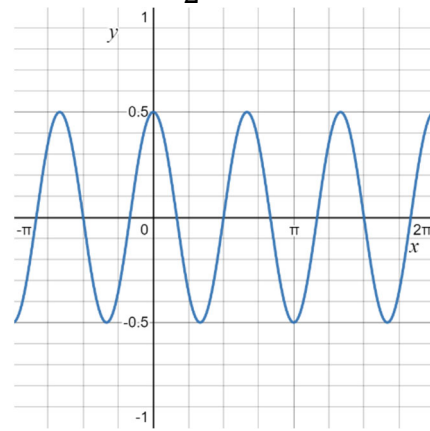
a.  $y = 4 \sin x$



b.  $y = \sin(2x)$



c.  $y = \frac{1}{2} \cos(3x)$



3. Write the equation of the following transformed sinusoidal graphs.

- a. sine function with amplitude 2.8 and period  $60^\circ$ .

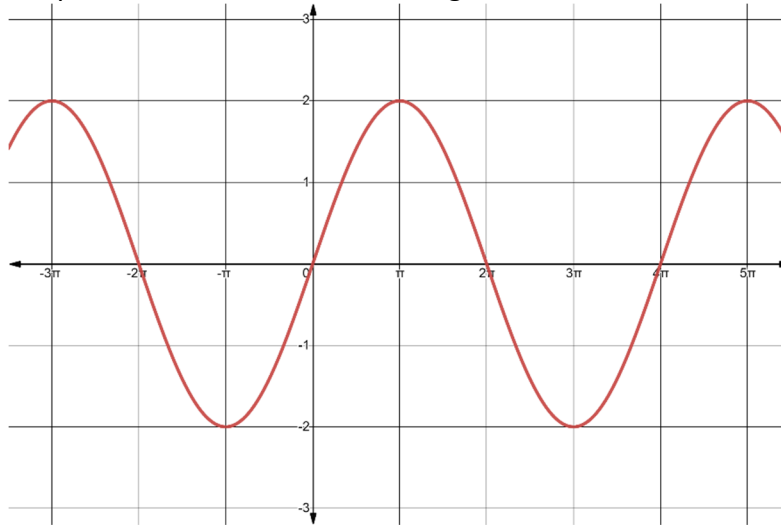
$$y = \frac{14}{5} \sin(6x)$$

- b. cosine function with amplitude 3, and period  $2\pi$

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

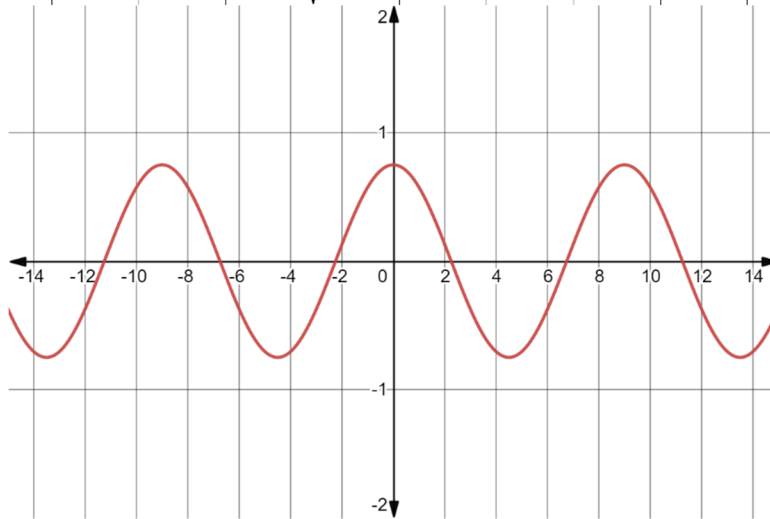
4. What is the equation of each of the following functions?

a.



$$y = 2 \sin\left(\frac{1}{2}x\right)$$

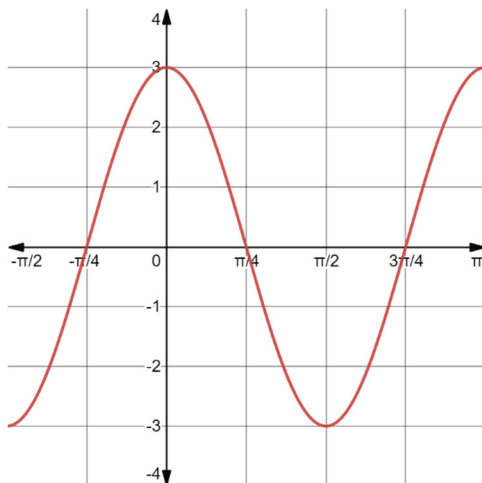
b.



$$y = \frac{3}{4} \cos\left(\frac{2\pi}{9}x\right)$$

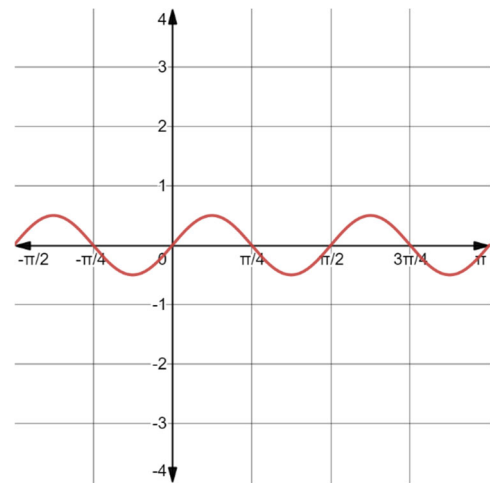
5. Give the amplitude and period of the following functions.

a.



amplitude = 3  
period =  $\pi$

b.



amplitude = 0.5  
period =  $\pi/2$