

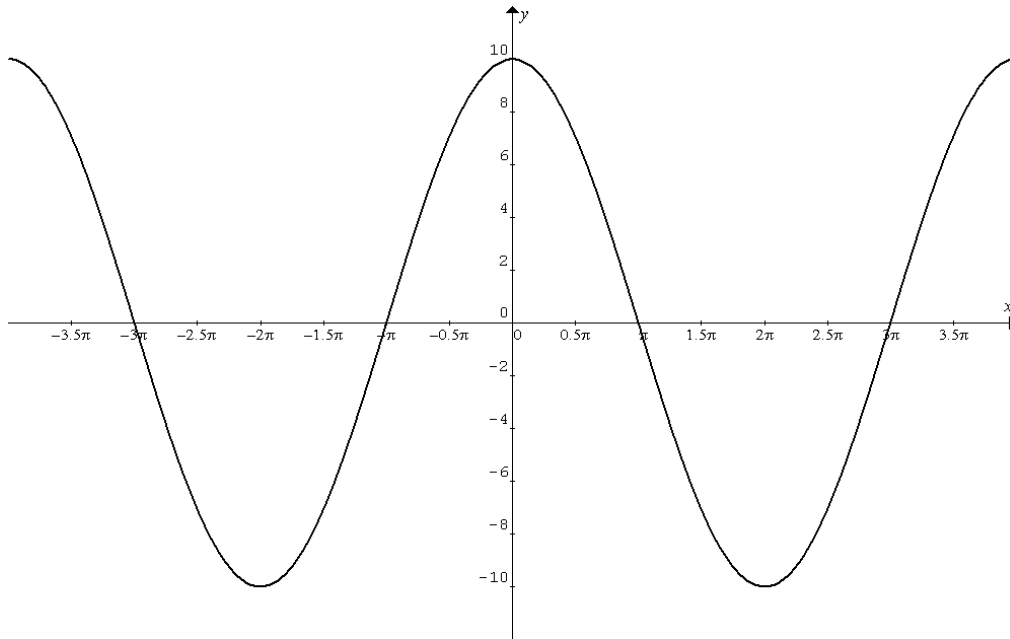
Name: _____ Date: _____

Please visit www.khanacademy.org and search "Graphing trig functions" to view the video lessons

Unit 4-2 Trig Graphs Worksheet

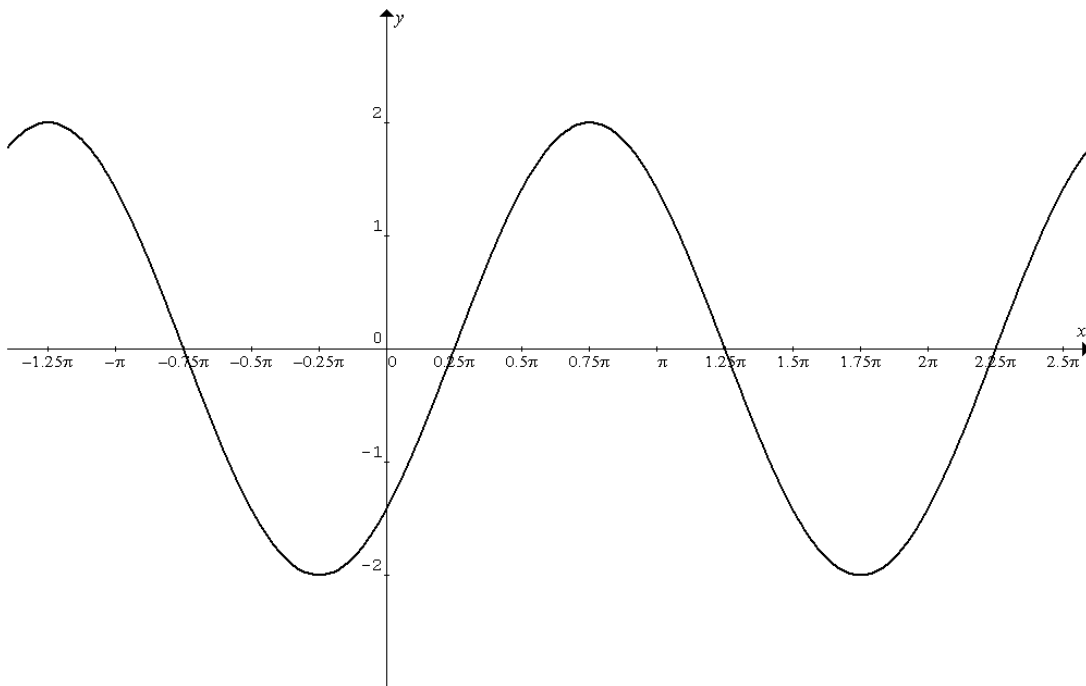
Solutions available on THS website.

State the equations for the following graphs.



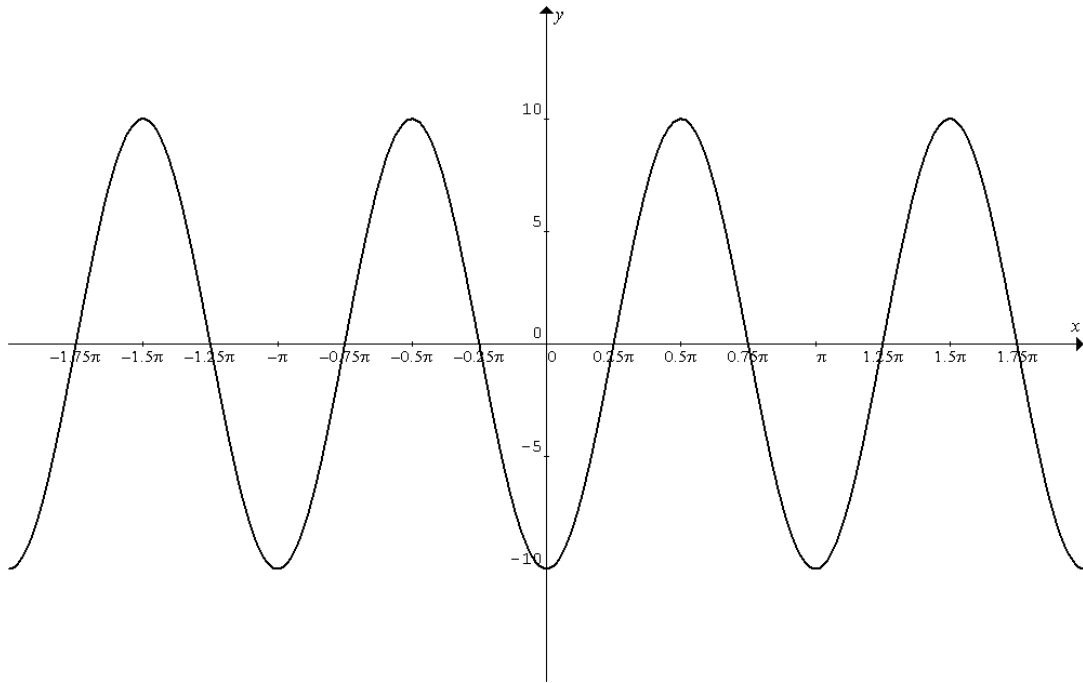
Amplitude = _____ Period = _____ Phase Shift = _____

Equation (1) = _____ (in terms of the **cosine** function)



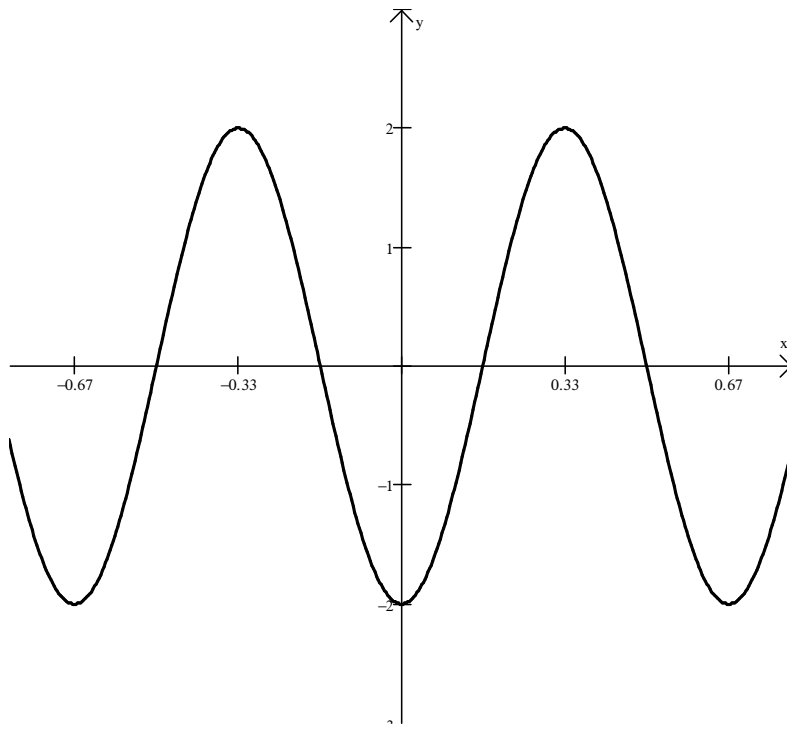
Amplitude = _____ Period = _____ Phase Shift = _____

Equation (2) = _____ (in terms of the **sine** function)



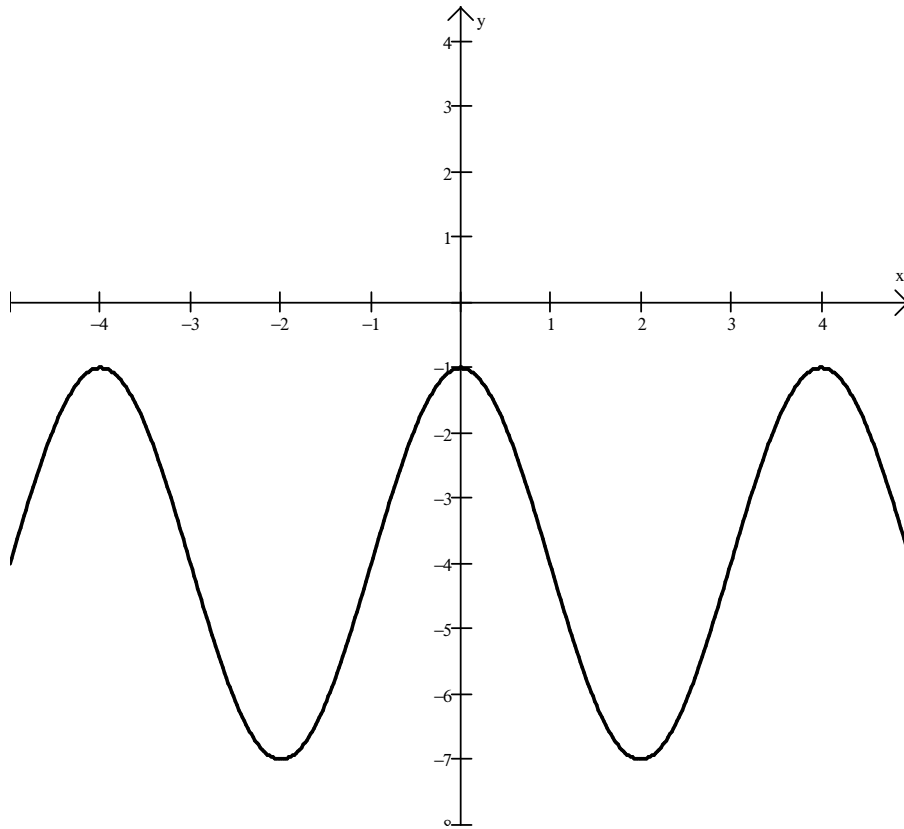
Amplitude = _____ Period = _____ Phase Shift = _____

Equation (3) = _____ (in terms of the **sine** function)



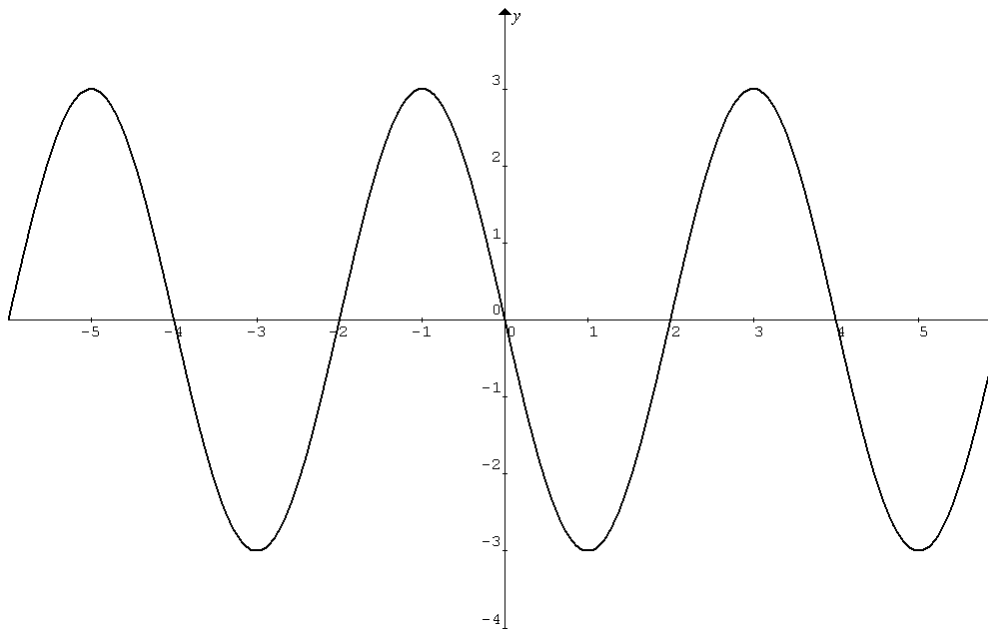
Amplitude = _____ Period = _____ Phase Shift = _____

Equation (4) = _____ (in terms of the **cosine** function)



Amplitude = _____ Period = _____ Phase Shift = _____

Equation (5) = _____ (in terms of the **cosine** function)



Amplitude = _____ Period = _____ Phase Shift = _____

Equation (6) = _____ (in terms of the **sine** function)

Graph one complete period of the given sine or cosine curve. (Check your answer with your graphing calculator!)

$$f(x) = -2 + \sin x$$

Amplitude = _____

Period = _____

Phase Shift = _____



$$f(x) = 2 \sin\left(\frac{2}{3}x - \frac{\pi}{6}\right)$$

Amplitude = _____

Period = _____

Phase Shift = _____



$$f(x) = 5 \sin\left(2\pi x + \frac{\pi}{2}\right)$$

Amplitude = _____

Period = _____

Phase Shift = _____



$$f(x) = \frac{1}{10} \cos 2\left(x + \frac{\pi}{4}\right)$$

Amplitude = _____

Period = _____

Phase Shift = _____



ANSWERS:

(1) $y = 10 \cos \frac{1}{2}x$

(2) $y = 2 \sin \left(x - \frac{\pi}{4} \right)$

(3) $y = 10 \sin \left(2x - \frac{\pi}{2} \right)$ or $y = 10 \sin 2 \left(x - \frac{\pi}{4} \right)$

(4) $y = -2 \cos(3\pi x)$ or $y = 2 \cos 3\pi \left(x - \frac{1}{3} \right)$

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

(6) $y = 3 \sin \frac{\pi}{2}(x+2)$ or $y = 3 \sin \left(\frac{\pi}{2}x + \pi \right)$