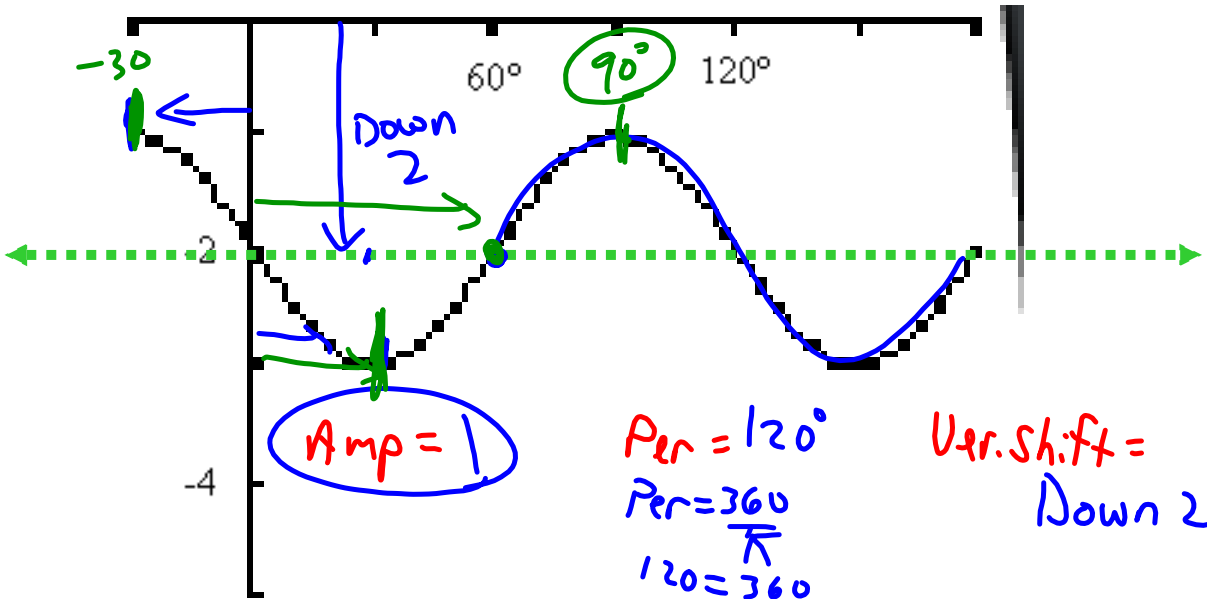
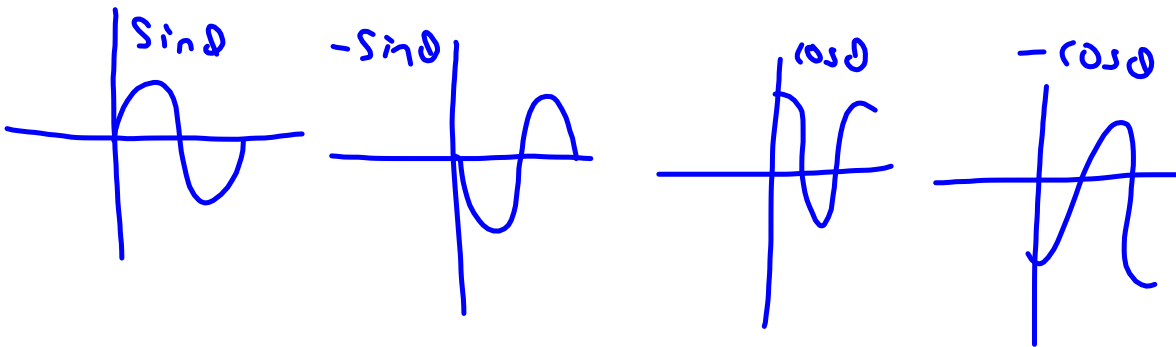


Determine a trigonometric function to describe this graph



$$y = a \sin[k(\theta + c)] + d \quad (k=3)$$



$$y = -\sin[3\theta] - 2$$

$$y = \cos[3(\theta + 30^\circ)] - 2$$

$$y = \sin[3(\theta - 60^\circ)] - 2$$

$$y = -\cos[3(\theta - 30^\circ)] - 2$$

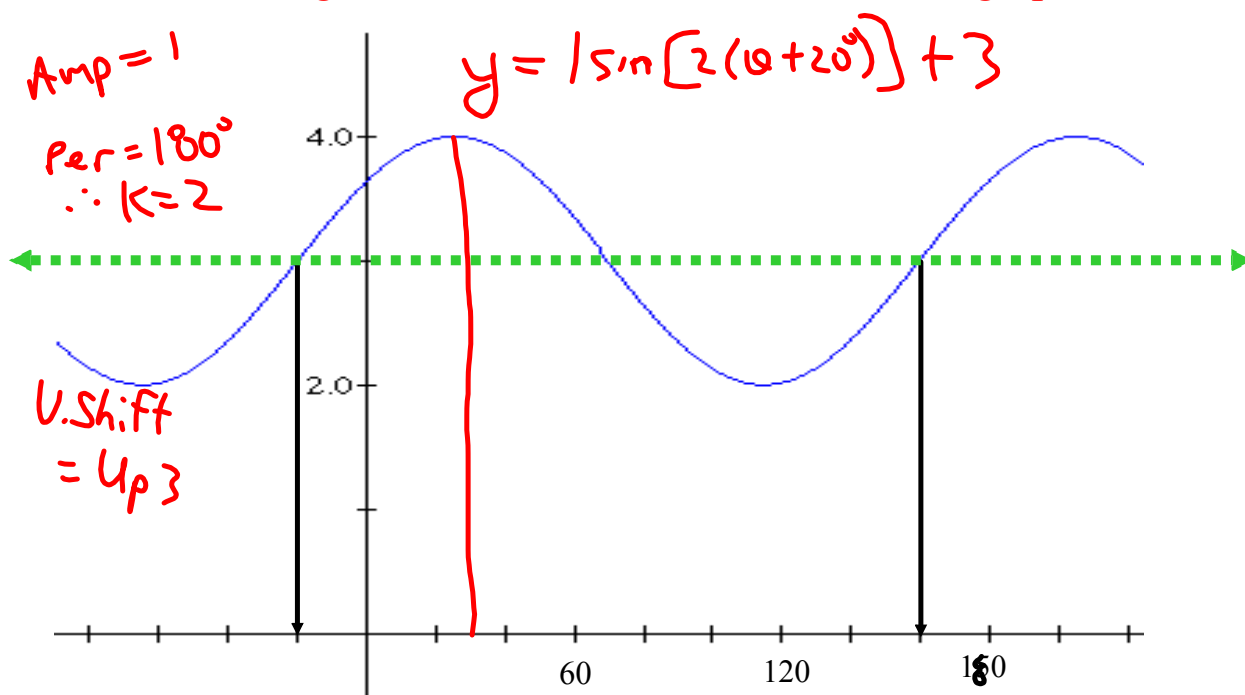
$$y = \sin[3(90^\circ - 60^\circ)] - 2$$

$$y = \sin 90^\circ - 2$$

$$y = 1 - 2$$

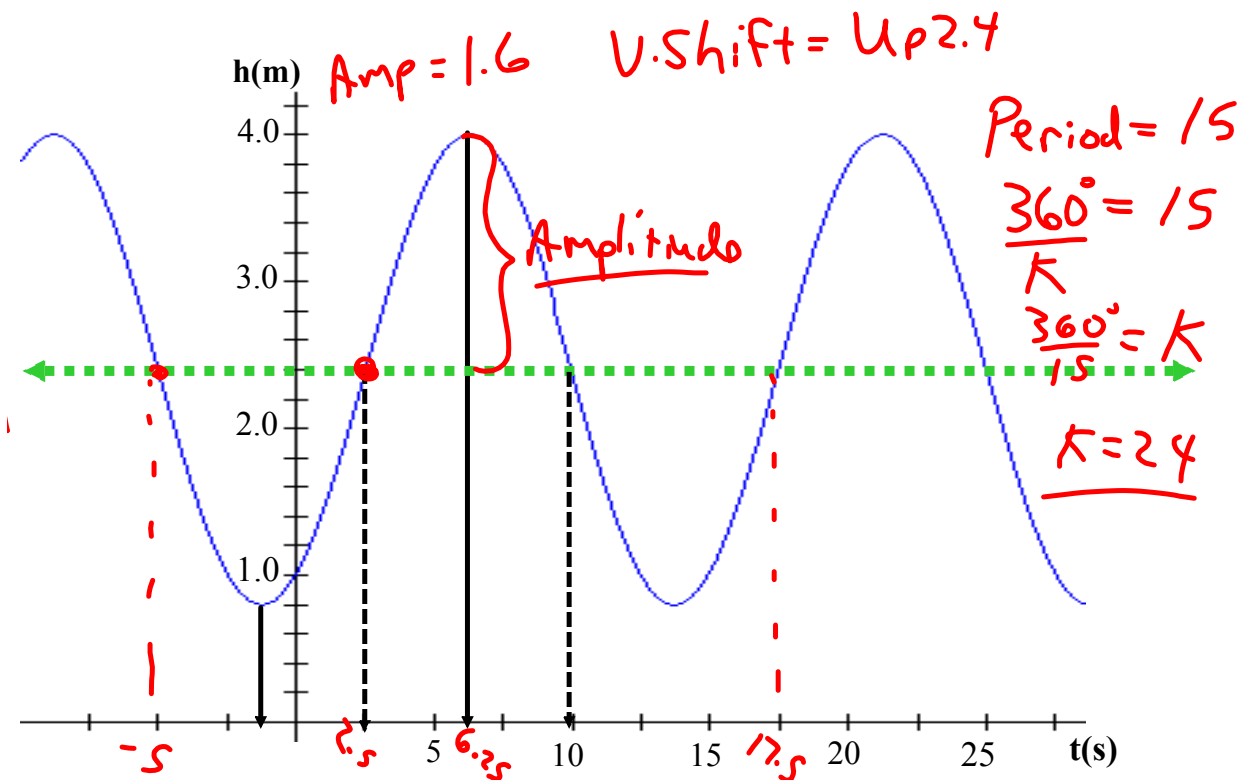
$$y = -1$$

Determine a trigonometric function to describe this graph



What about those not centered around the x-axis?

Find both a sine and cosine equation to describe the graph.



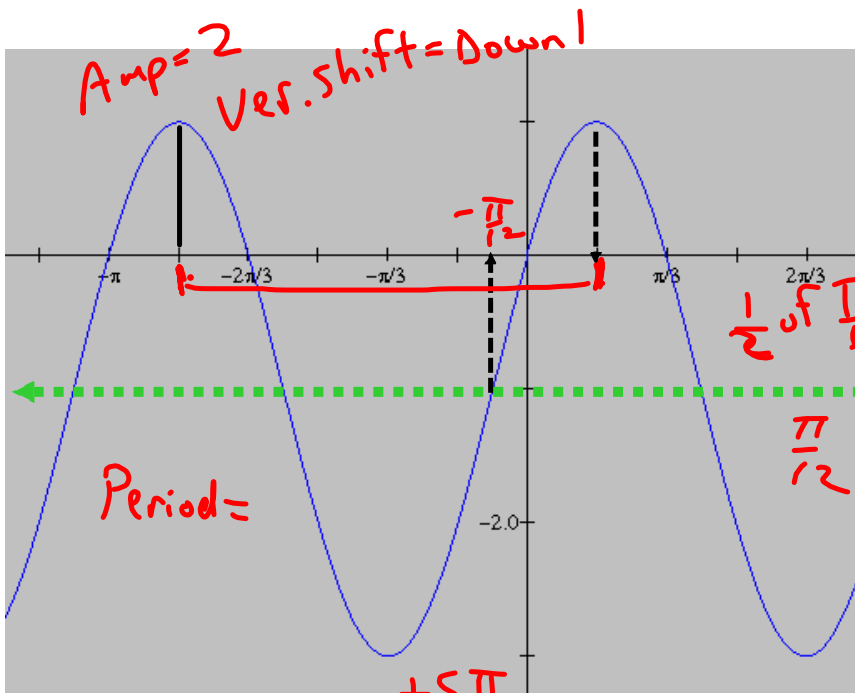
$$y = 1.6 \cos [24(t - 6.25)] + 2.4$$

$$y = 1.6 \cos [24(t + 2.5)] + 2.4$$

$$y = 1.6 \sin [24(t - 2.5)] + 2.4$$

$$y = -1.6 \sin [24(t + 5)] + 2.4$$

Find a Sine and Cosine Equation From the Graph:



$$\frac{\pi}{6} - \left(-\frac{5\pi}{6}\right) = \frac{6\pi}{6} = \pi$$

$$\text{Per} = \pi$$

$$\frac{2\pi}{K} = \text{Per}$$

$$\frac{2\pi}{K} = \pi$$

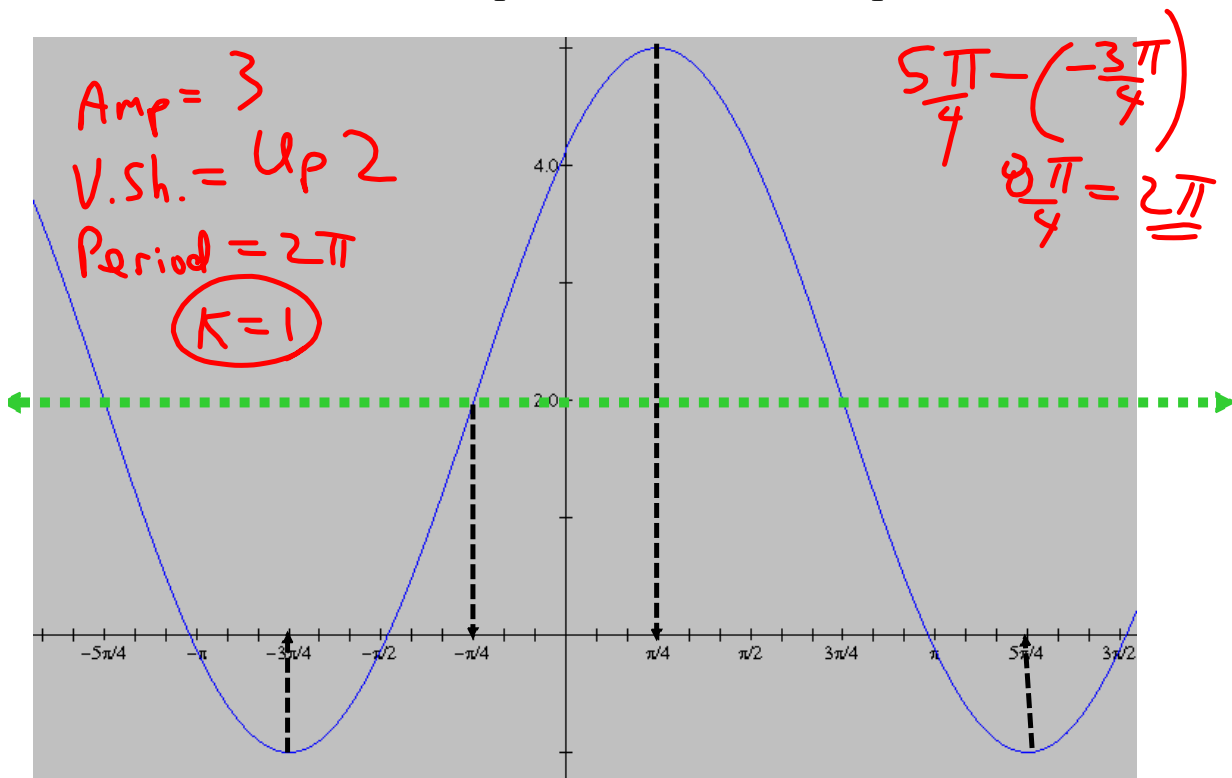
$$\frac{2\pi}{K} = \frac{K\pi}{\pi}$$

$$2 = K$$

$$y = 2 \cos\left[2\left(0 - \frac{\pi}{6}\right)\right] - 1$$

$$y = 2 \sin\left[2\left(0 + \frac{\pi}{12}\right)\right] - 1$$

Find a Sine and Cosine Equation From the Graph:



$$y = 3 \sin\left(\omega + \frac{\pi}{4}\right) + 2$$

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

Textbook....

Page 252  
#14, 15, 16