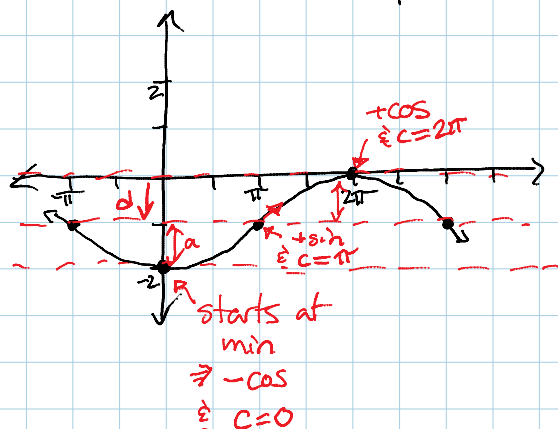


G.6b Determining an Equation from the Graph

Thursday, November 28, 2013
8:47 AM

Write two possible equations for the graph shown.



$$y = a \sin b(x-c) + d \text{ or } y = a \cos b(x-c) + d$$

a = (amplitude) 1

b = (frequency) $\frac{2\pi}{\text{period}} = \frac{2\pi}{4\pi} = \frac{1}{2}$

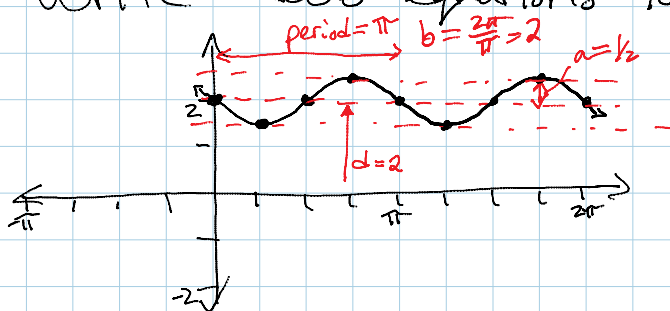
d = (vertical displacement) -1

$$\textcircled{1} y = -1 \cos \frac{1}{2}(x-0) - 1$$

$$\Rightarrow y = -\cos \frac{1}{2}x - 1$$

$$\textcircled{2} y = \sin \frac{1}{2}(x-\pi) - 1$$

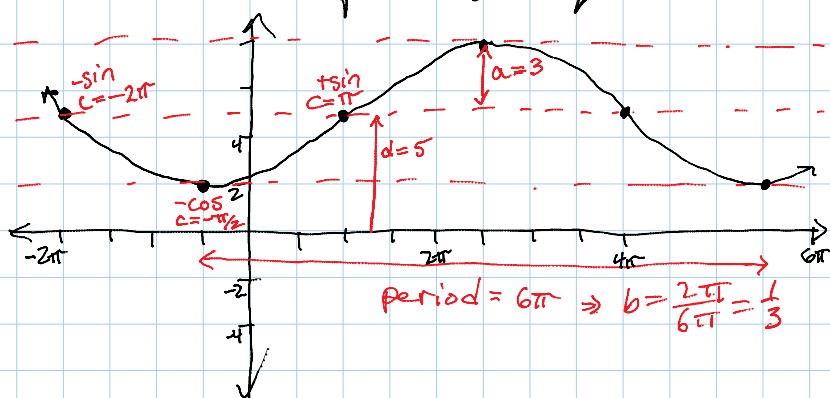
Write two equations for the graph shown.



$$\textcircled{1} y = -\frac{1}{2} \sin 2x + 2$$

$$\textcircled{2} y = -\frac{1}{2} \cos 2(x-\frac{\pi}{4}) + 2$$

Write a possible equation for the graph



$$y = -3 \sin \frac{1}{3}(x+2\pi) + 5$$

or

$$y = -3 \cos \frac{1}{3}(x+\frac{\pi}{2}) + 5$$

$$y = +3 \sin \frac{1}{3}(x-\pi) + 5$$

$$y = +3 \cos \frac{1}{3}(x-\frac{5\pi}{2}) + 5$$

ooo