

Day 12 HW Graphing Cosine Functions

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

Amplitude = 2

Period = 2π

Phase shift = $-\pi/4$

Vertical Shift = 0

$x_1 = -\pi/4$ $x_2 = \pi/4$

$x_3 = 3\pi/4$

$x_4 = 5\pi/4$

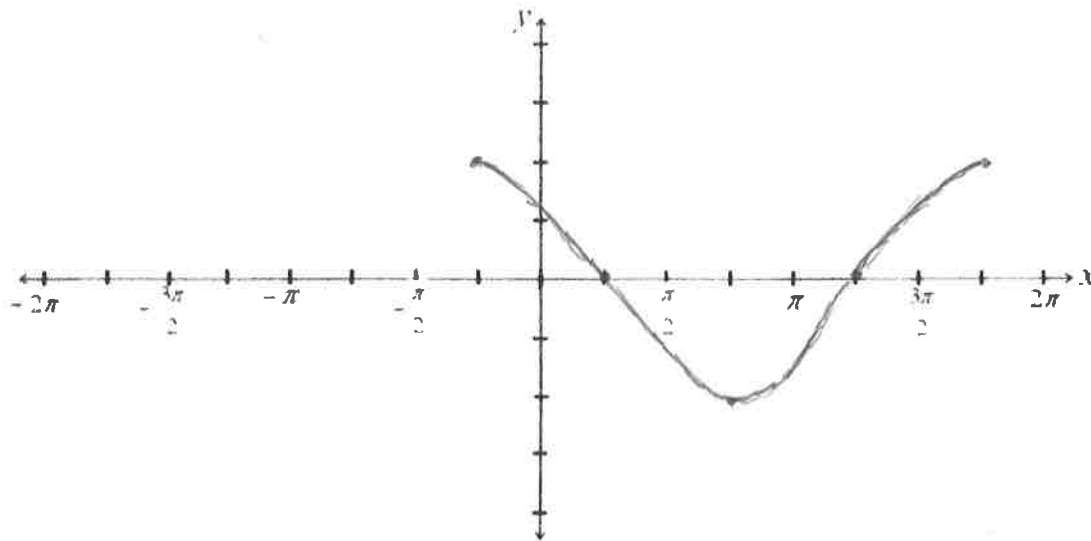
$x_5 = 7\pi/4$

$y_1 = 2$ $y_2 = 0$

$y_3 = -2$

$y_4 = 0$

$y_5 = 2$



$$y = -4 \cos(x + \pi) - 2$$

Amplitude = 4

Period = 2π

Phase shift = $-\pi$

Vertical Shift = -2

$x_1 = -\pi$ $x_2 = -\pi/2$

$x_3 = 0$

$x_4 = \pi/2$

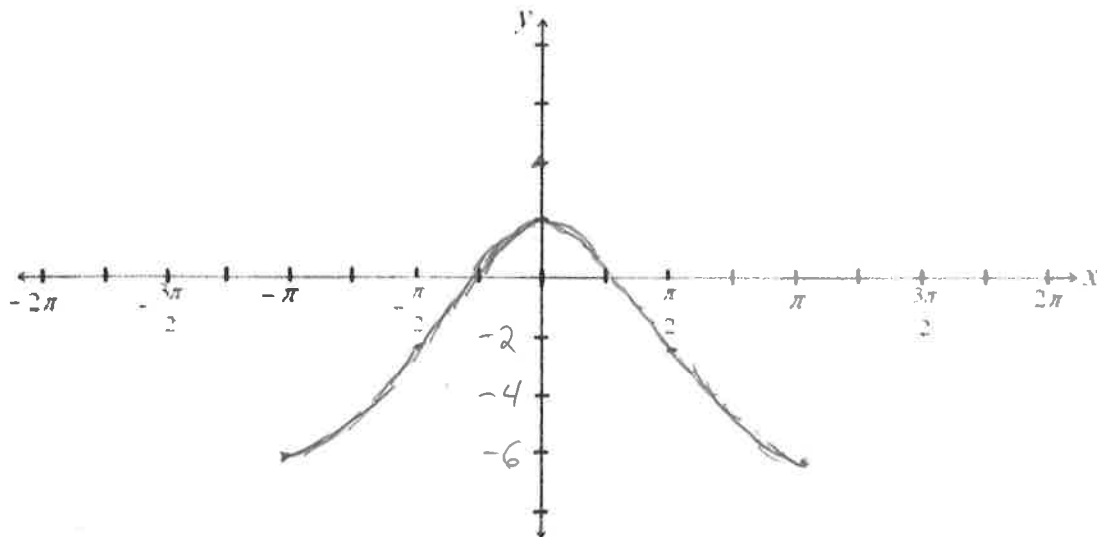
$x_5 = \pi$

$y_1 = -6$ $y_2 = -2$

$y_3 = 2$

$y_4 = -2$

$y_5 = -6$



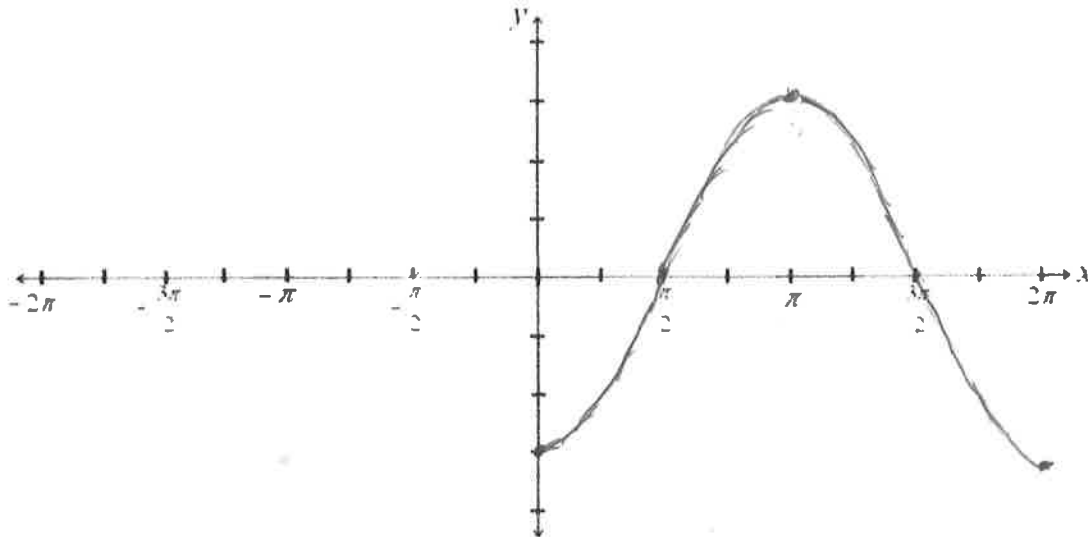
Day 12 HW Graphing Cosine Functions

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

Amplitude = -3 Period = 2π Phase shift = none Vertical Shift = none

$x_1 = 0$ $x_2 = \pi/2$ $x_3 = \pi$ $x_4 = 3\pi/2$ $x_5 = 2\pi$

$y_1 = -3$ $y_2 = 0$ $y_3 = 3$ $y_4 = 0$ $y_5 = -3$



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

Amplitude = 1 Period = $\frac{2\pi}{1/4} = 8\pi$ Phase shift = none Vertical Shift = -1

$x_1 = 0$ $x_2 = 2\pi$ $x_3 = 4\pi$ $x_4 = 6\pi$ $x_5 = 8\pi$

$y_1 = 0$ $y_2 = -1$ $y_3 = -2$ $y_4 = -1$ $y_5 = 0$

