2.07c Review WS #3 Graphing Sine and Cosine

1. Describe the transformations that change the graph of the first function into the graph of the second. y = cos θ and $y = -2\cos\left(\frac{\theta}{4} + 3\pi\right) - 5$

2. Write a cosine function with amplitude = 2, reflection over x-axis, period = $\frac{2\pi}{3}$, phase shift left $\frac{\pi}{2}$, and vertical shift up 12 units

3. Write a sine equation that completes one quarter of its period in 3π, has been shifted right $\frac{3\pi}{4}$ units, has a minimum value of -7, and a maximum value of 3.

4. Write the amplitude, period, phase shift, and vertical shift of each function. Then graph at least one period of the function.

   a. $y = -3\cos\left(3\theta + \frac{3\pi}{4}\right) - 1$

   amplitude: _____ period: _____ phase shift: _____ vertical shift: _____

   Domain: _____ Range: _____

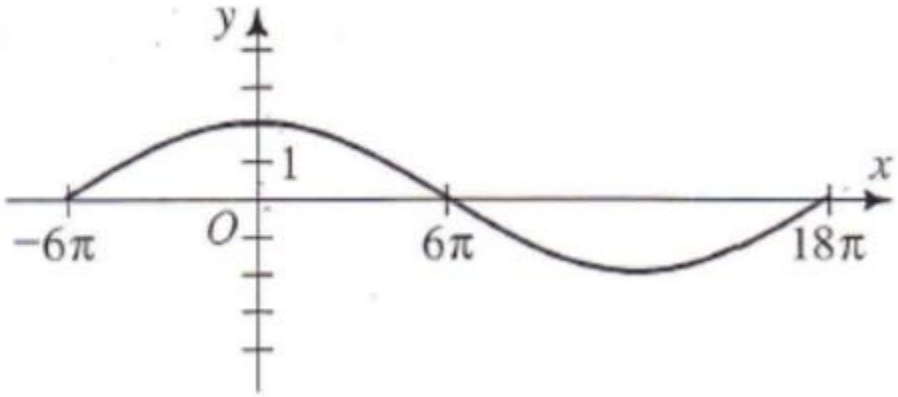
   Graph:

5. For $y = -4\sin(5\theta - 2\pi) - 2.5$, determine the domain & range.

Domain: _____ Range: _____

6. State both a cosine function and sine function that would represent the graph below.

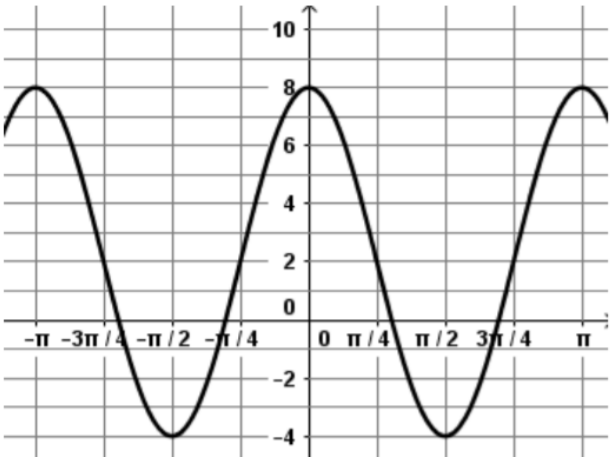
a)



Using cosine: _____

Using sine: _____

b)



Using cosine: _____

Using sine: _____