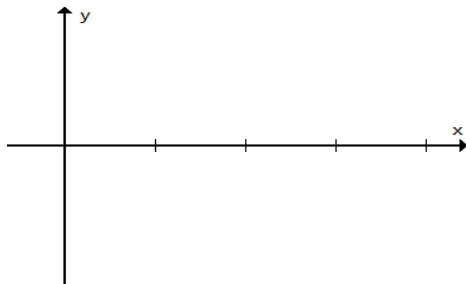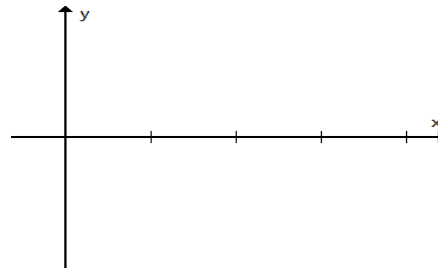## 1) Parent graphs:

$$y = \sin(x)$$

$$y = \cos(x)$$

MID-HIGH-MID-LOW-MID   HIGH-MID-LOW-MID-HIGH

Graphing requirements:
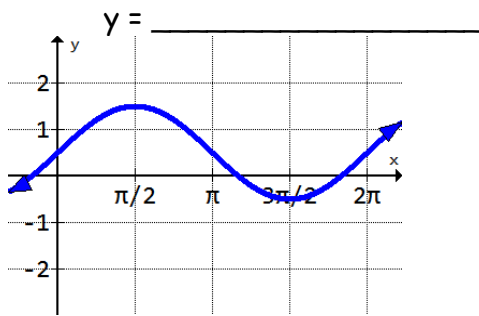Always include a scale on both axes. (Don't move the axes!)
At least 5 points must be plotted: the maximums (high), minimums (low) and the "mids"
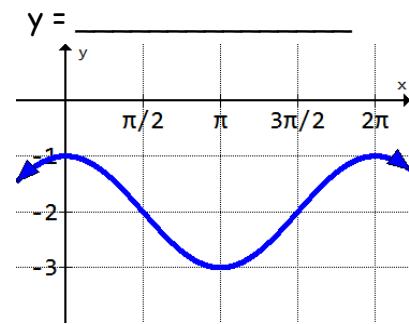One full period must be graphed
The y-intercept must be shown.

2) Change in k. Note where the **midline** is and give an equation for each of the following graphs.
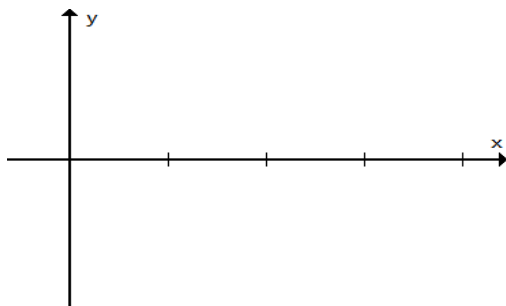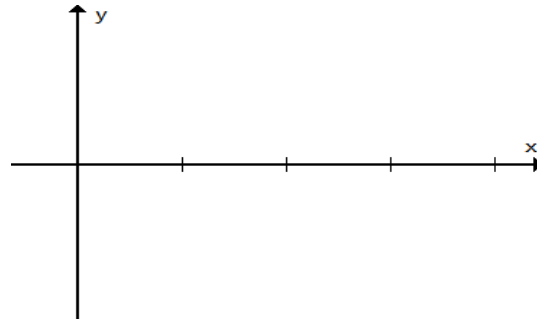
a) Where is the midline? _____

b)   _____

y = _____

y = _____

Sketch each of the following graphs. Be sure to scale your axes.
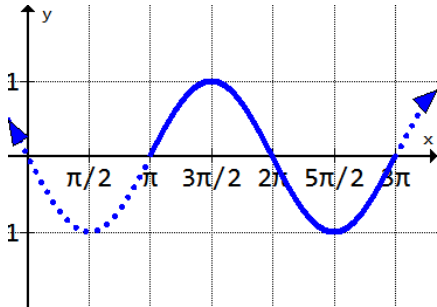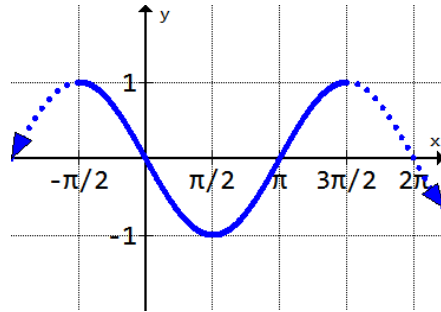**a)** $y = \sin(x) - 2$

b) $y = \cos(x) + 1$

3) Change in h. Remember that subtraction moves the graph to the right, and addition moves the graph to the left. Give an equation for each of the following graphs.
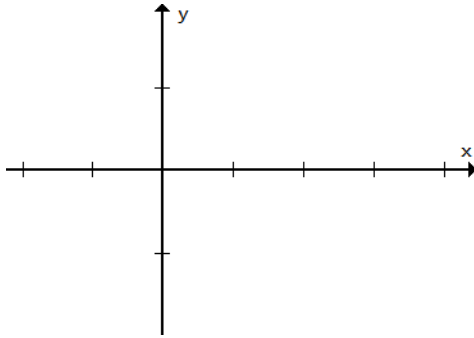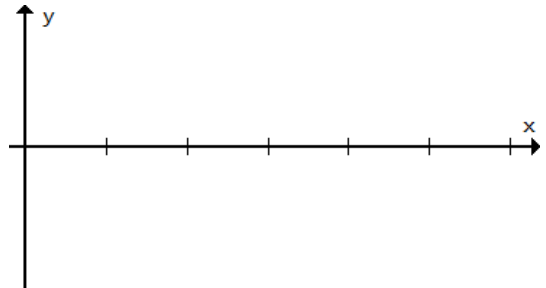
a) y =

b) y =

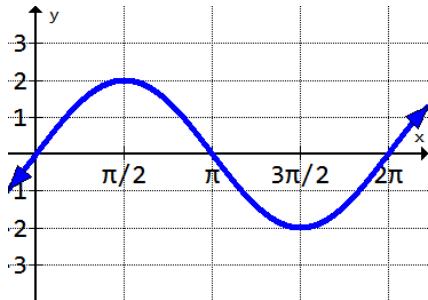Sketch each of the following graphs.

a) $y = \cos(x + \pi)$
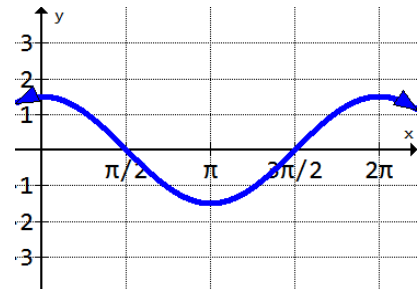

b) $y = \sin(x - \dfrac{\pi}{2}) - 1$

4) Change in a. This "stretches" or "compresses" the graph, which is a change in **amplitude**. Give an equation for each of the following graphs..
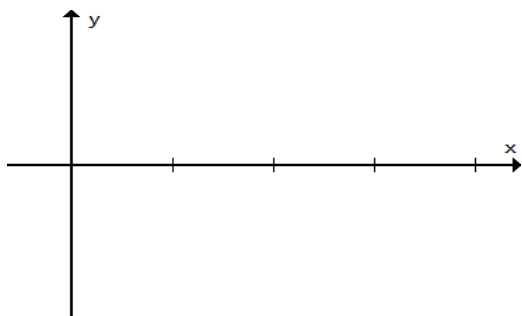
a) y =

b) y =

Sketch these graphs.

b) $y = 3\sin(x)$

c) $y = 2\cos(x)$