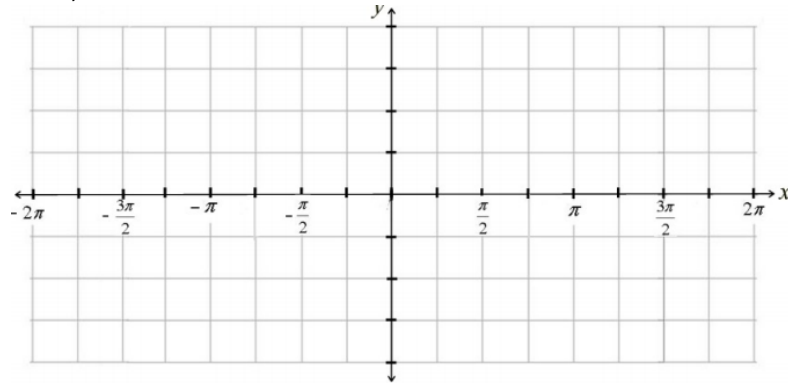Without using your calculator or unit circle make a rough sketch of each of the following graphs. You need to have correct maximums, minimums, and zeros.
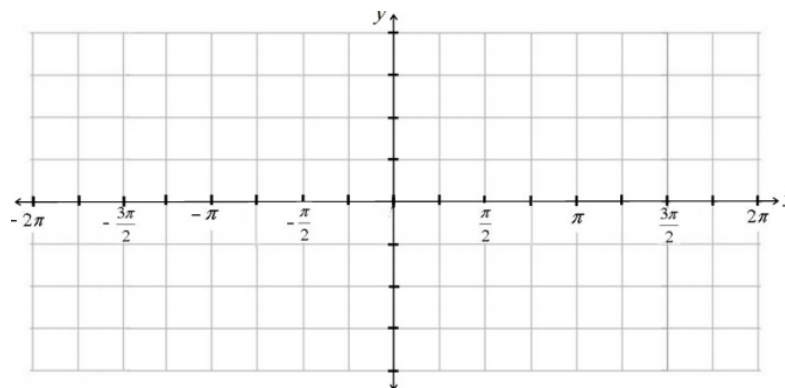
$y = \sin(\theta)$

To graph the sine function you may need to reference your unit circle (ferris wheel) until you recognize the pattern. Follow these directions to make a proper graph.

1) Fill in the missing values BETWEEN the given values on the x-axis. (For example, $-\frac{3\pi}{4}$, $-\frac{\pi}{4}$, $\frac{\pi}{4}$, $\frac{3\pi}{4}$, etc.)
2) There are five x-intercepts on this graph. Where are they?
3) Place the x-intercepts on the graph.
4) This graph has two maximum points. Where are they?
5) Place these on your graph.
6) This graph has two minimum points. Where are they?
7) Place these points on your graph.
8) BETWEEN these key points we can approximate values at the intervals that are multiples of $\frac{\pi}{4}$. The height of the graph at these points is $\pm\frac{\sqrt{2}}{2} \approx \pm0.7$. Place these approximations on your graph.
9) Connect your points with a smooth curve.

$y = \cos(\theta)$

To graph the cosine function you may need to reference your unit circle (ferris wheel) until you recognize the pattern. Follow these directions to make a proper graph.

1) Fill in the missing values BETWEEN the given values on the x-axis. (For example, $-\frac{3\pi}{4}$, $-\frac{\pi}{4}$, $\frac{\pi}{4}$, $\frac{3\pi}{4}$, etc.)
2) There are four x-intercepts on this graph. Where are they?
3) Place the x-intercepts on the graph.
4) This graph has three maximum points. Where are they?
5) Place these on your graph.
6) This graph has two minimum points. Where are they?
7) Place these points on your graph.
8) BETWEEN these key points we can approximate values at the intervals that are multiples of $\frac{\pi}{4}$. The height of the graph at these points is $\pm\frac{\sqrt{2}}{2} \approx \pm0.7$. Place these approximations on your graph.
9) Connect your points with a smooth curve.