Accel Precalc Handout: Graphing Sine and Cosine Name:_____
Unit #6: Graphs and Inverses of Trig Functions
Lesson #3: Graphs of Sine and Cosine

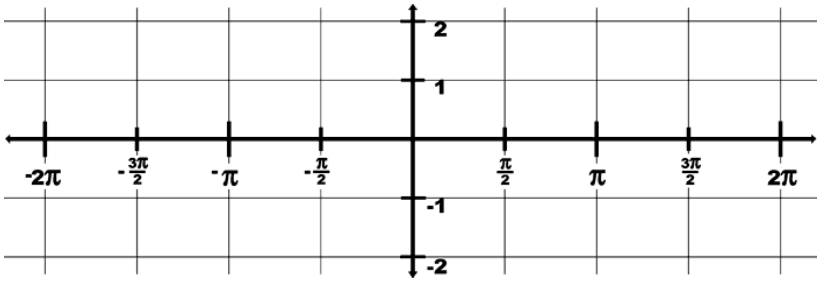
EQ:

Part I: $f(x) = \sin(\theta)$ The ordered pairs will be (_____,_____). The domain, θ, will represent _____ measures. The range, $\sin(\theta)$, will represent the _____value for sine at θ.

Use your UNIT CIRCLE to complete each table then create the graphs.

x	y = sin(x)	(x, y)
0	0	(0,0)
$\pi/6$	0.5	($\pi/6$, 0.5)
$\pi/4$		
$\pi/3$		
$\pi/2$		
$2\pi/3$		
$3\pi/4$		
$5\pi/6$		
π		
$7\pi/6$		
$5\pi/4$		
$4\pi/3$		
$3\pi/2$	-1	($3\pi/2$, -1)
$5\pi/3$		
$7\pi/4$		
$11\pi/6$		
2π		

After you fill in the chart it is time to plot your points. Use the ordered pair you found and plot the points on the given coordinate plane. You will have to estimate some. For instance, $\frac{\sqrt{2}}{2}$ is approximately 0.707. Once you are done plotting your points, use a curve to connect the points



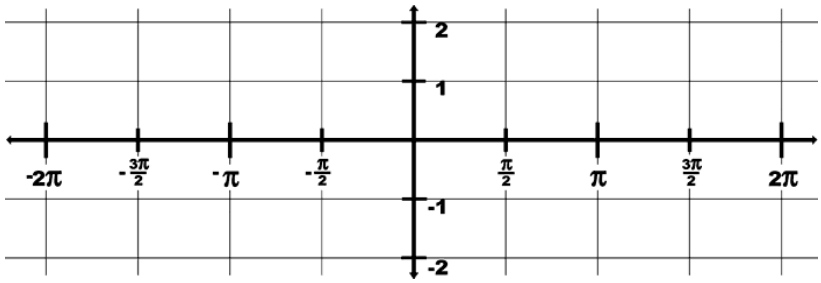
Facts to know about the graph of sin(θ):

1. The domain is from (_____,_____). You can put input any _____ measure and find sin(θ) .
2. The range is from [_____, _____].
3. Sine is symmetric to the _____. Therefore sine is an _____ function.
4. The sine function is periodic. It cycles every _____ or _____°.
5. List at least 3 x-intercepts. _____ 6. The y-intercept is _____.
7. The maximum value is _____, it when x = _____(list 2).
8. The minimum value is _____, it occurs when x =_____(list 2)

Part II: $f(x) = \cos(\theta)$ The ordered pairs will be (_____,_____). The domain, θ, will represent _____ measures. The range, $\cos(\theta)$, will represent the _____ value for cosine at θ.

Now graph the function $f(x) = \cos(\theta)$. Repeat the steps you performed to graph $f(x) = \sin(\theta)$.

x	y=cos(x)	(x, y)
0	1	(0,1)
$\pi/6$		
$\pi/4$		
$\pi/3$	1/2	($\pi/3$, 0.5)
$\pi/2$		
$2\pi/3$		
$3\pi/4$		
$5\pi/6$		
π		
$7\pi/6$		
$5\pi/4$		
$4\pi/3$		
$3\pi/2$	0	($3\pi/2$, 0)
$5\pi/3$		
$7\pi/4$		
$11\pi/6$		



Facts to know about the graph of $\cos(\theta)$:

1. The domain is from (___,___). You can put input any _____ measure and find $\cos(\theta)$.
2. The range is from [_____, _____].
3. Cosine is symmetric to the _____. Therefore cosine is an _____ function.
4. The cosine function is periodic. It cycles every _____ or _____°.
5. List at least 3 x-intercepts. _____ 6. The y-intercept is _____.
7. The maximum value is _____, it when x = _____(list 2).
8. The minimum value is _____, it occurs at x =_____(list 2).