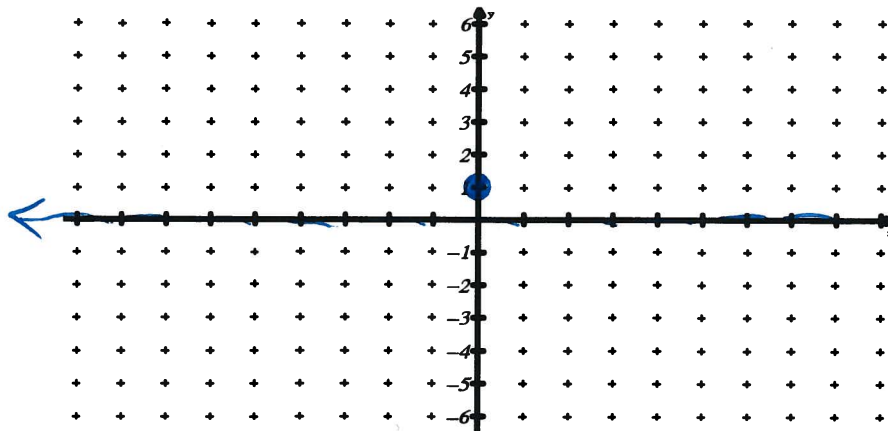


HOMWORK: GRAPHING TRIG FUNCTIONS

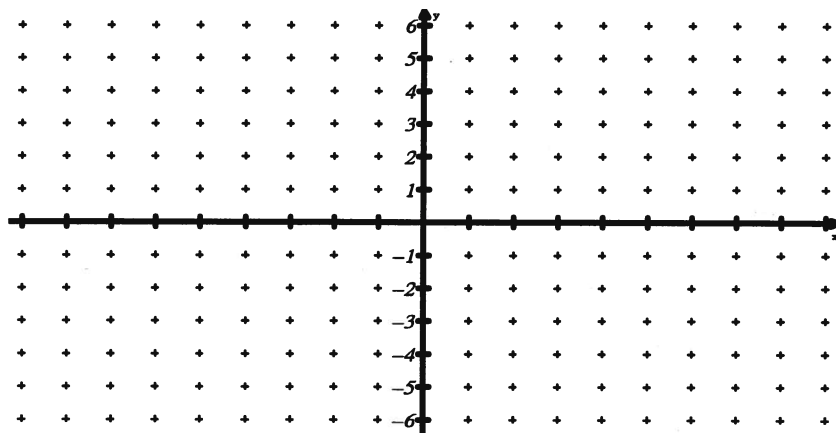
NAME: _____ DAY 5 DUE: _____

#1 Function: $y = \cos(4x)$ (0, 1)



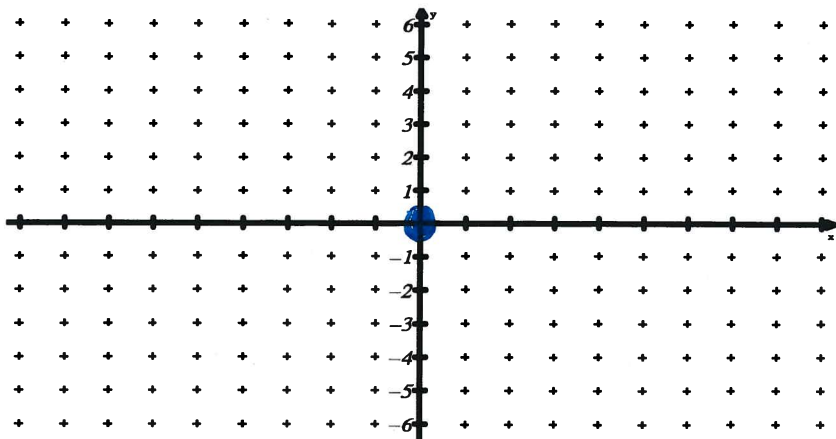
Amplitude: _____
 Period: _____
 Unit: _____
 Phase Shift: _____
 Vertical Shift: _____
 Domain: _____
 Range: _____

~~#2~~ Function: $f(x) = 5 \tan(2x)$



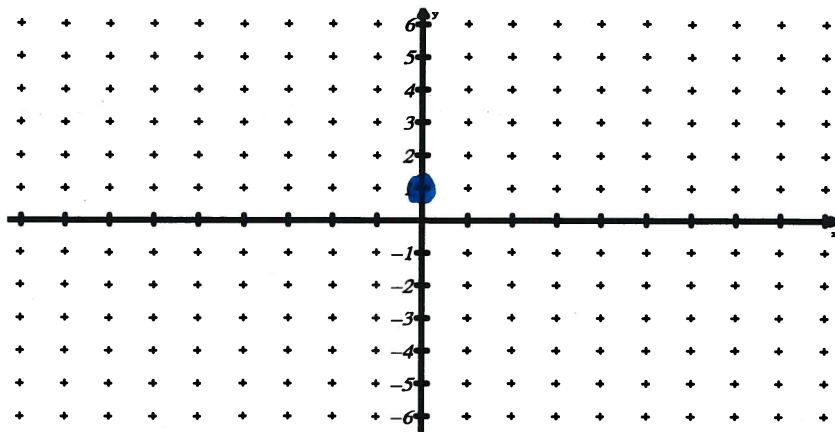
Amplitude: _____
 Period: _____
 Unit: _____
 Phase Shift: _____
 Vertical Shift: _____
 Domain: _____
 Range: _____

#3 Function: $y = 2 \sin(3x)$



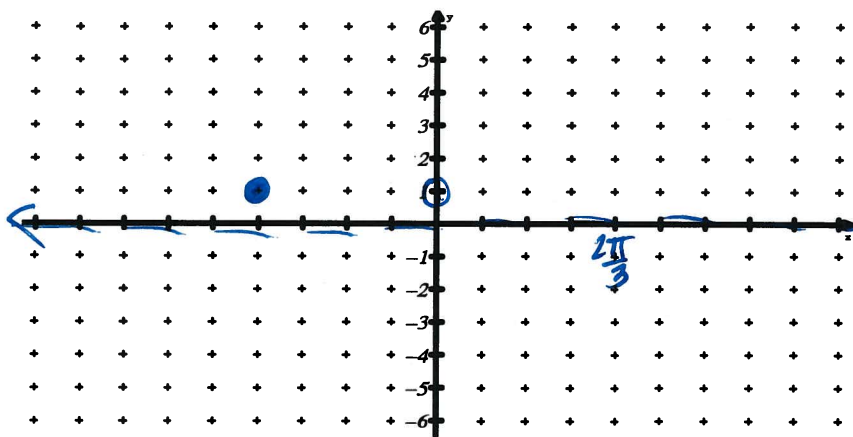
Amplitude: _____
 Period: _____
 Unit: _____
 Phase Shift: _____
 Vertical Shift: _____
 Domain: _____
 Range: _____

#4 Function: $f(x) = \cos(3x)$ $(0, 1)$



Amplitude: _____
 Period: _____
 Unit: _____
 Phase Shift: _____
 Vertical Shift: _____
 Domain: _____
 Range: _____

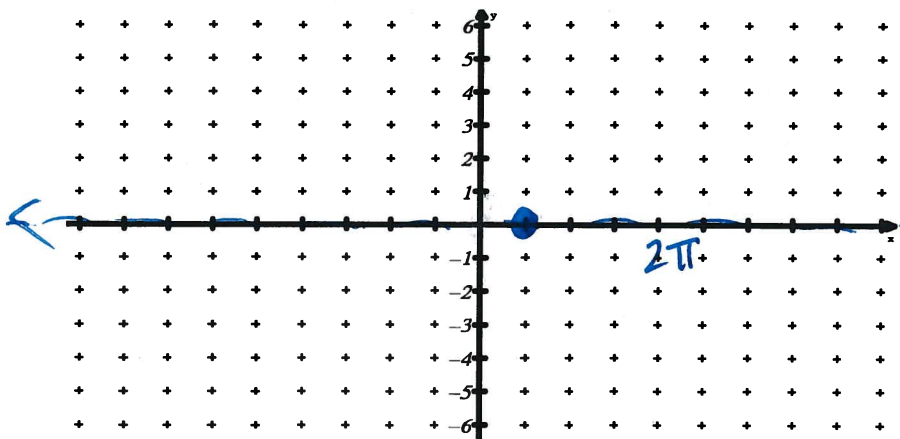
#5 Function: $y = \cos(3x + 2\pi)$ $(0, 1)$



Amplitude: _____
 Period: $\frac{2\pi}{3}$
 Unit: $\frac{2\pi}{12}$
 Phase Shift: $-\frac{2\pi}{3}$
 Vertical Shift: 0
 Domain: _____
 Range: _____

$3x + 2\pi = 0$
 $x = -\frac{2\pi}{3}$

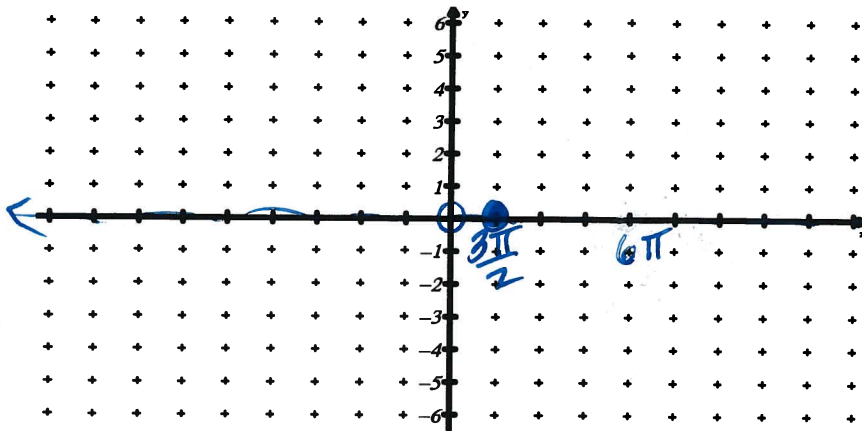
#6 Function: $y = 3 \sin\left(x - \frac{\pi}{2}\right) + 0$



Amplitude: _____
 Period: $\frac{2\pi}{1} = 2\pi$
 Unit: $\frac{2\pi}{4} = \frac{\pi}{2}$
 Phase Shift: $\frac{\pi}{2}$
 Vertical Shift: 0
 Domain: _____
 Range: _____

$x - \frac{\pi}{2} = 0$
 $x = \frac{\pi}{2}$

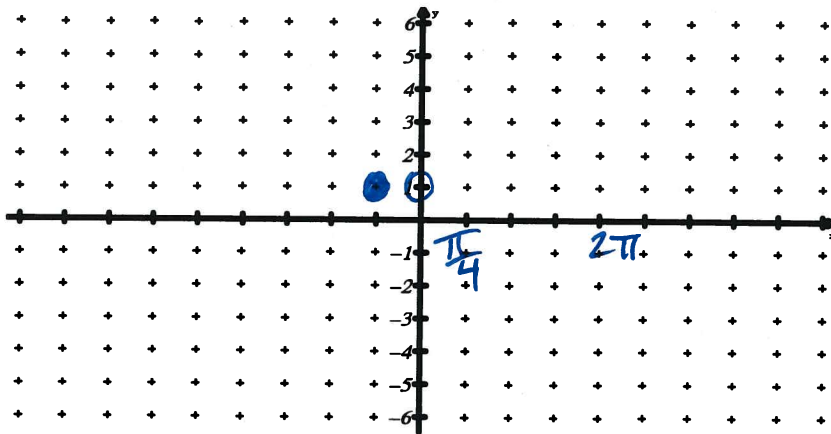
#7 Function: $y = \frac{1}{4} \sin \left(\frac{1}{3}x - \frac{\pi}{2} \right) + 0$



Amplitude: _____
 Period: $\frac{2\pi}{1/3} = 6\pi$
 Unit: $\frac{6\pi}{4} = \frac{3\pi}{2}$
 Phase Shift: $\frac{3\pi}{2}$
 Vertical Shift: 0
 Domain: _____
 Range: _____

$$\begin{aligned} \frac{1}{3}x - \frac{\pi}{2} &= 0 \\ \frac{1}{3}x &= \frac{\pi}{2} \\ x &= \frac{3\pi}{2} \end{aligned}$$

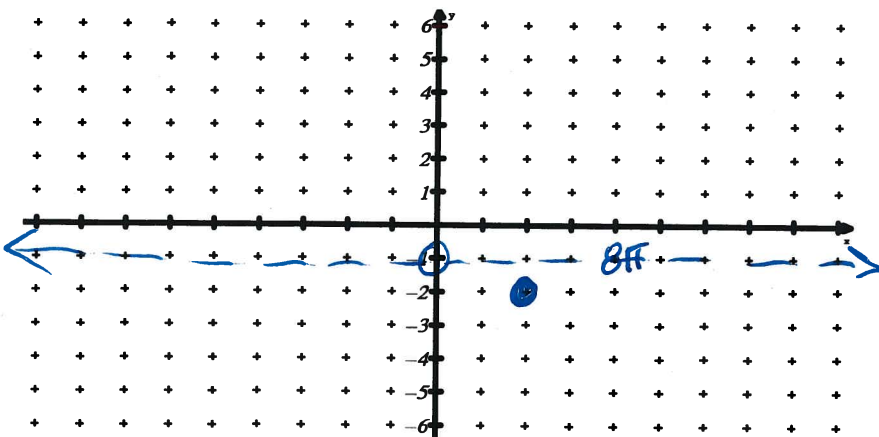
#8 Function: $y = \cos \left(x + \frac{\pi}{4} \right) + 0$ (0, 1)



Amplitude: _____
 Period: $\frac{2\pi}{1} = 2\pi$
 Unit: $\frac{\pi}{4}$
 Phase Shift: $-\frac{\pi}{4}$
 Vertical Shift: 0
 Domain: _____
 Range: _____

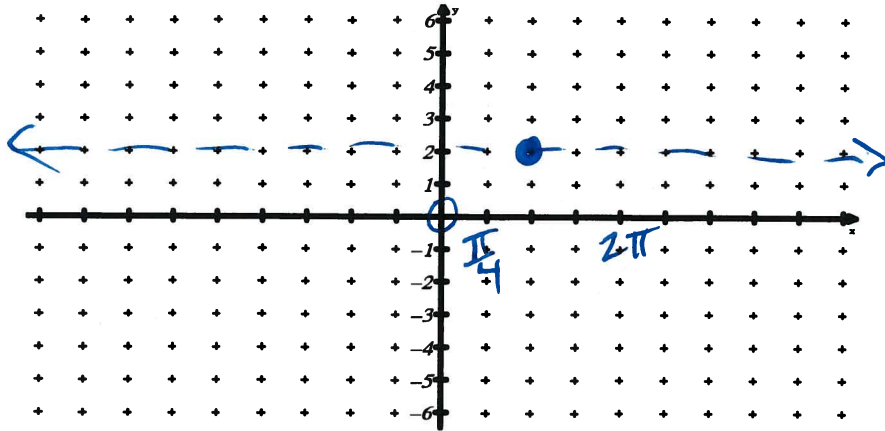
$$\begin{aligned} x + \frac{\pi}{4} &= 0 \\ x &= -\frac{\pi}{4} \end{aligned}$$

#9 Function: $y = \cos \left(\frac{1}{4}x - \pi \right) - 1$ (0, -1)



Amplitude: _____
 Period: $\frac{2\pi}{1/4} = 8\pi$
 Unit: $\frac{8\pi}{4} = 2\pi$
 Phase Shift: 4π
 Vertical Shift: -1
 Domain: _____
 Range: _____

#10 Function: $y = 5 \sin (x - \pi) + 2$



Amplitude: _____

Period: $\frac{2\pi}{1}$

Unit: $\frac{2\pi}{4} = \frac{\pi}{2}$

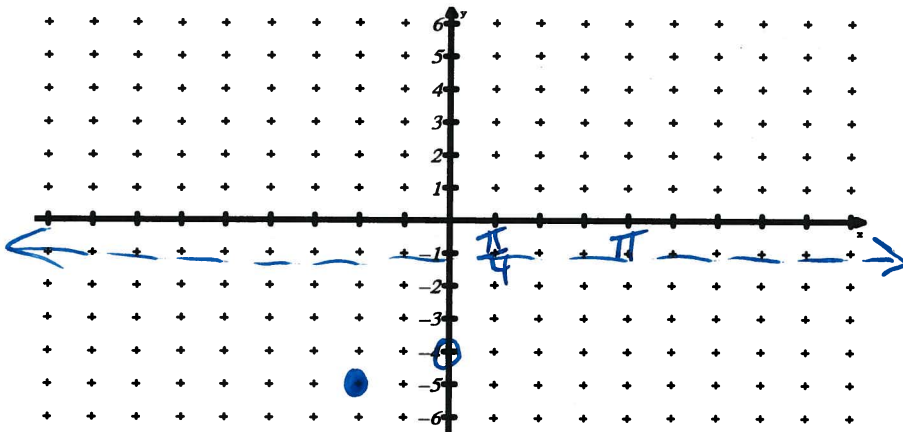
Phase Shift: π

Vertical Shift: 2

Domain: _____

Range: _____

#11 Function: $f(x) = -4 \cos (2x + \pi) - 1$ $(0, -4)$



Amplitude: _____

Period: $\frac{2\pi}{2} = \pi$

Unit: $\frac{\pi}{4}$

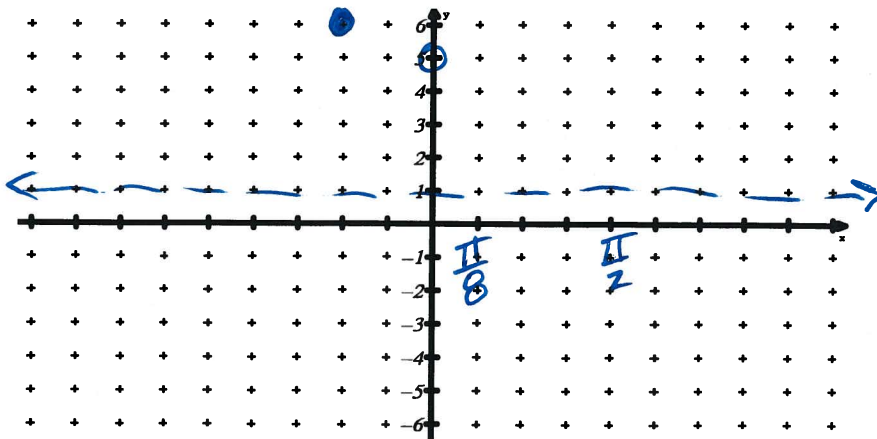
Phase Shift: $-\frac{\pi}{2}$

Vertical Shift: -1

Domain: _____

Range: _____

#12 Function: $f(x) = 5 \cos (4x + \pi) + 1$ $(0, 5)$



Amplitude: _____

Period: $\frac{2\pi}{4} = \frac{\pi}{2}$

Unit: $\frac{\pi}{8}$

Phase Shift: $-\frac{\pi}{4}$

Vertical Shift: 1

Domain: _____

Range: _____