C12 - 5.1 - Sin Cos and Tan Graphs HW

Draw y = sinx
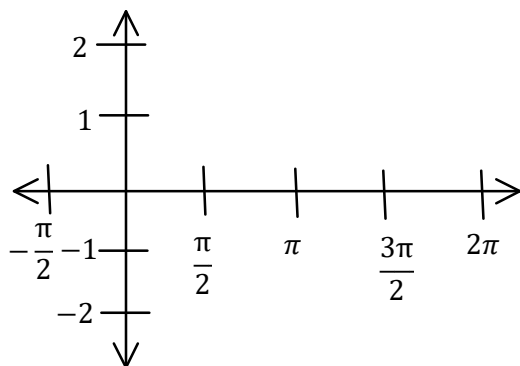
x	y
0	
$\dfrac{\pi}{2}$	
π	
$\dfrac{3\pi}{2}$	
2π	

Draw y = cosx

x	y
0	
$\dfrac{\pi}{2}$	
π	
$\dfrac{3\pi}{2}$	
2π	

Draw y = tanx

x	y
0	
$\dfrac{\pi}{4}$	
$\dfrac{\pi}{2}$	
$\dfrac{3\pi}{4}$	
π	

C12 - 5.1 - Sin Cos and Tan Graphs HW

Draw y = cscx

x	y
0	
$\dfrac{\pi}{2}$	
π	
$\dfrac{3\pi}{2}$	
2π	

Draw y = secx

x	y
0	
$\dfrac{\pi}{2}$	
π	
$\dfrac{3\pi}{2}$	
2π	

Draw y = cotx

x	y
0	
$\dfrac{\pi}{4}$	
$\dfrac{\pi}{2}$	
$\dfrac{3\pi}{4}$	
π	

C12 - 5.2 - "a" Find Equation WS
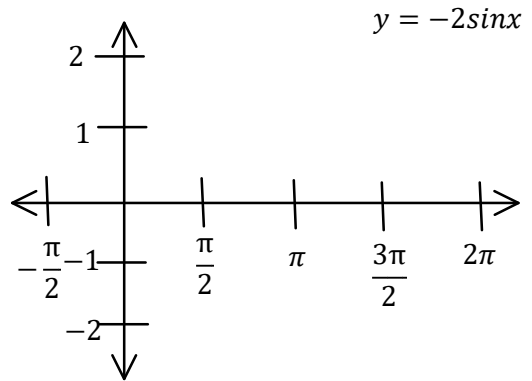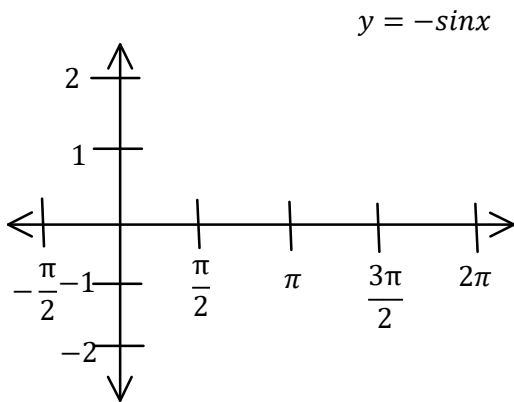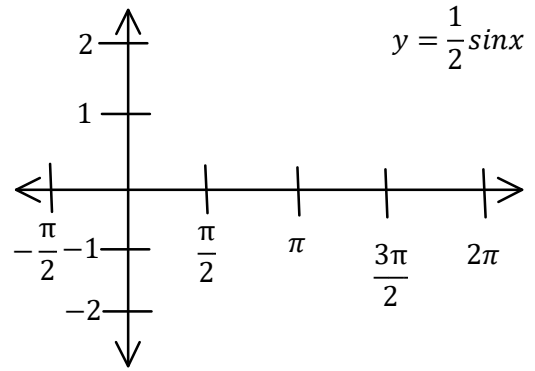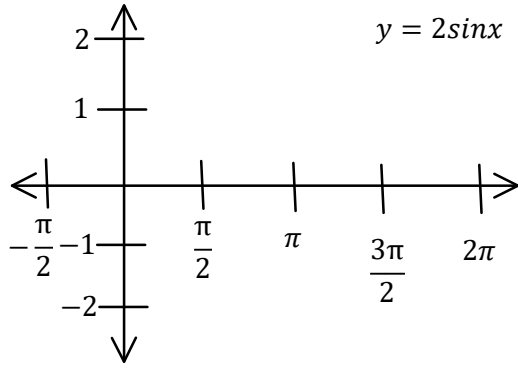
Determine a, and the equation $y = a\sin x$
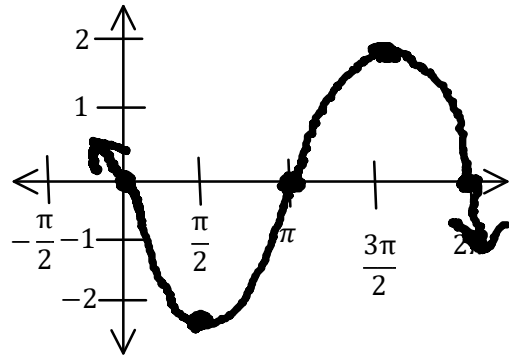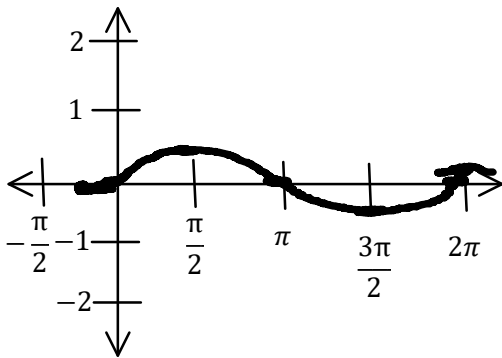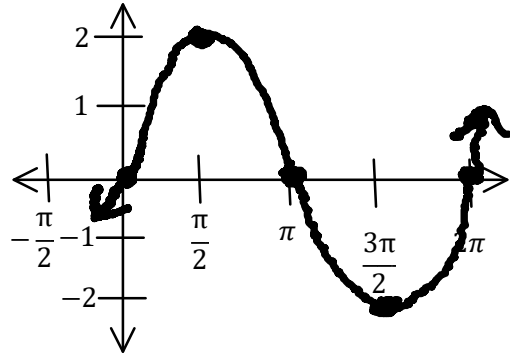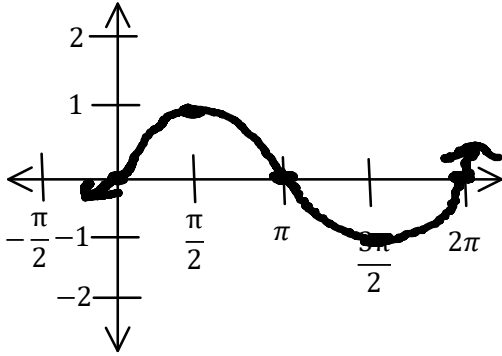
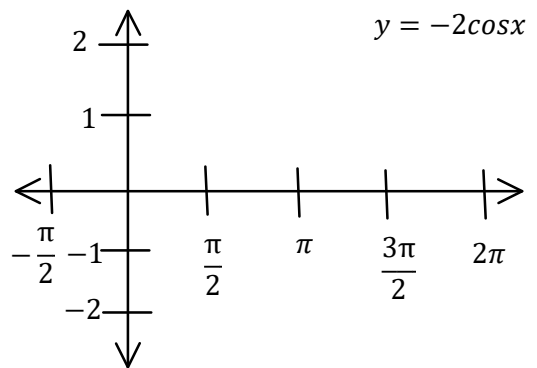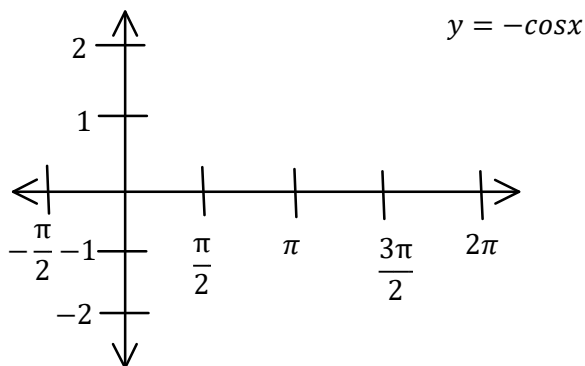**Determine a, and the equation** $y = a\cos x$
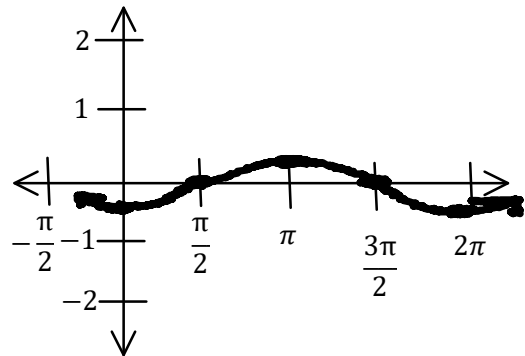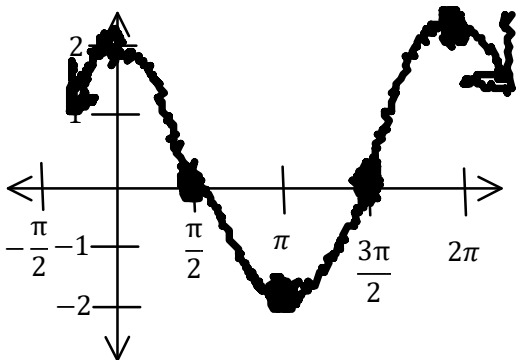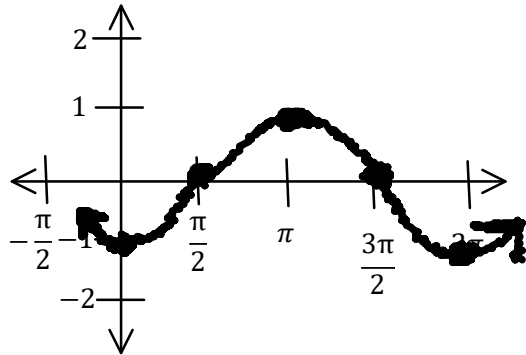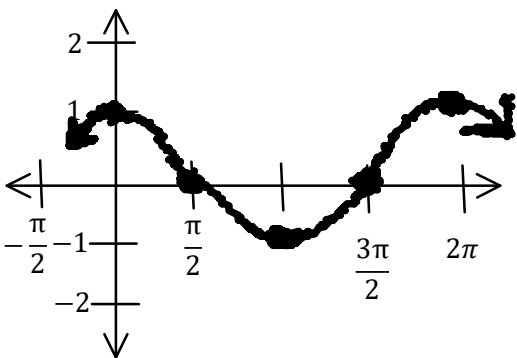
C12 - 5.2 - "a" Graphing WS
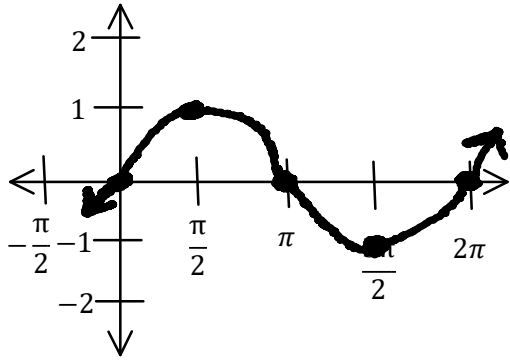
Determine a, and graph the equation $y = a \sin x$

$y = 2\sin x$

$y = \frac{1}{2}\sin x$

$y = -\sin x$

$y = -2\sin x$

$y = \frac{1}{2}\cos x$

Determine a, and graph the equation $y = a\cos x$
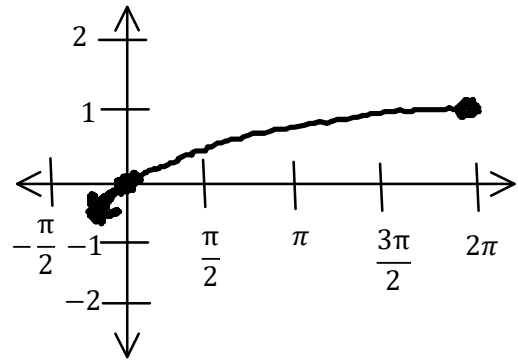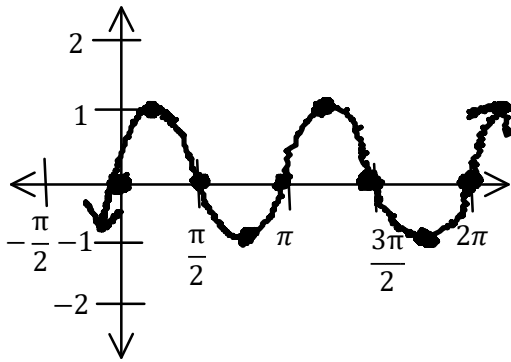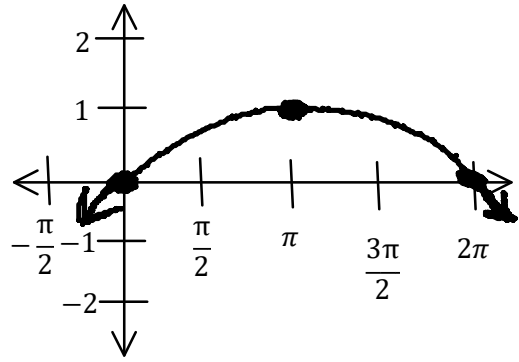
$y = 2\cos x$

$y = -\cos x$

$y = -2\cos x$
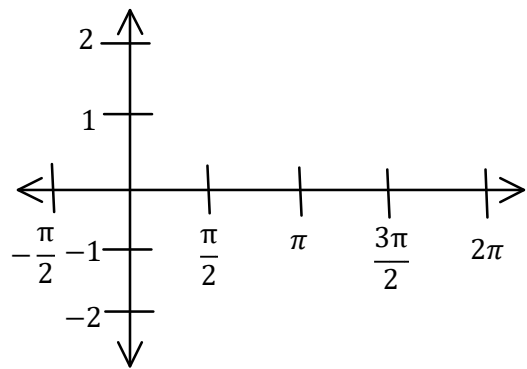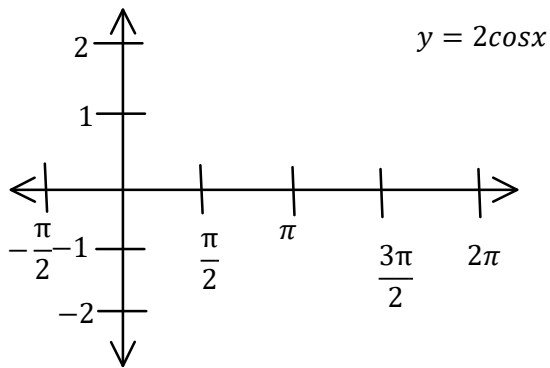
C12 - 5.2 - "b" Find Equation WS
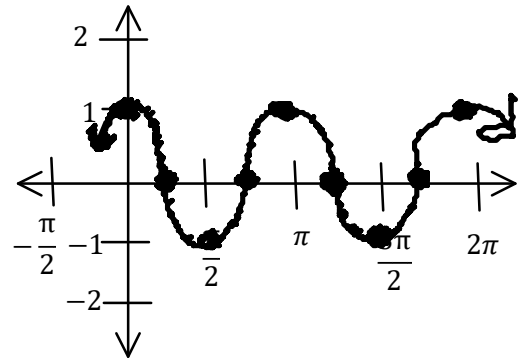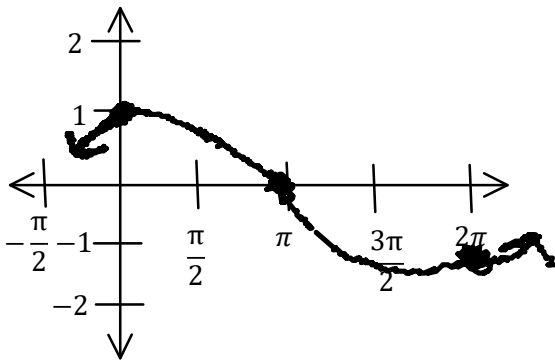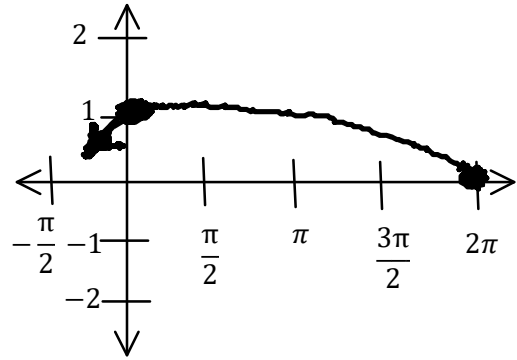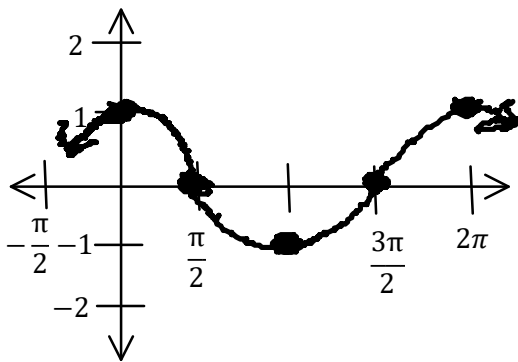
Determine b, and the equation $y = sinbx$
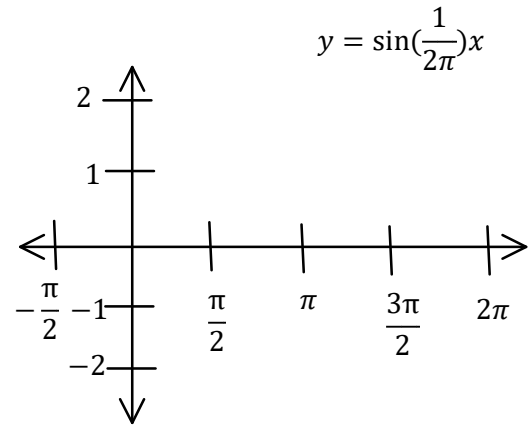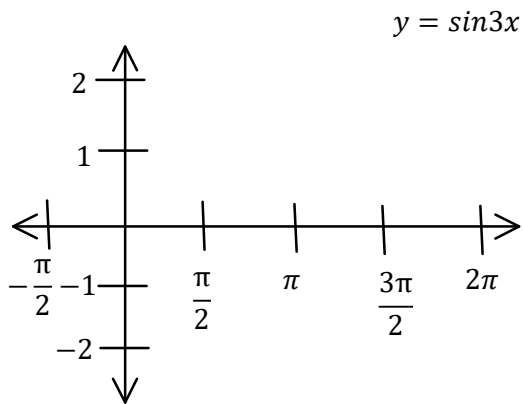
$$p = \frac{2\pi}{b}$$

$$b = \frac{2\pi}{p}$$

$$b =$$

Determine b, and the equation $y = cosbx$

C12 - 5.2 - "b" Graphing WS

Determine b, and graph the equation $y = sinbx$

$y = sin2x$

$$p = \frac{2\pi}{b}$$

$$p =$$

$y = \sin\left(\frac{1}{2}\right)x$

$y = sin3x$

$y = \sin\left(\frac{1}{2\pi}\right)x$

Determine b, and graph the equation $y = cosbx$

$y = cos2x$

$y = \cos\left(\frac{1}{2}\right)x$

$y = cos3x$

$y = \cos\left(\frac{1}{2\pi}\right)x$
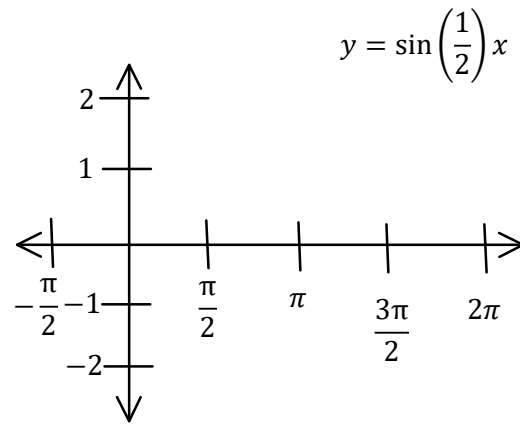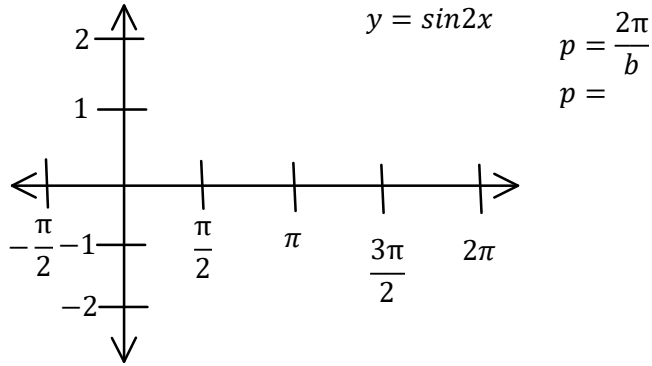
C12 - 5.3 - "d" Find Equation WS

Determine b, and the equation $y = sinx + d$
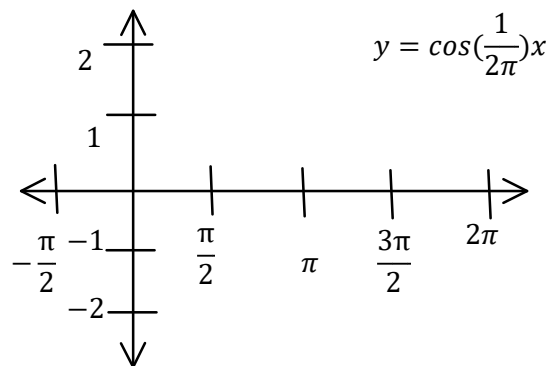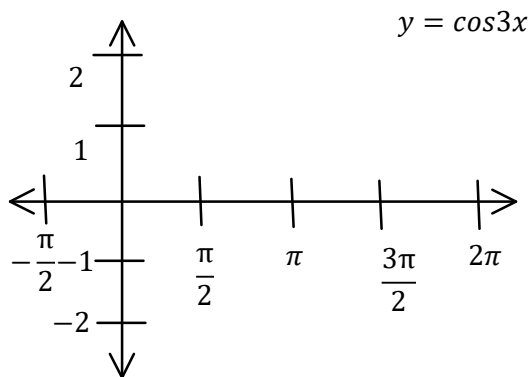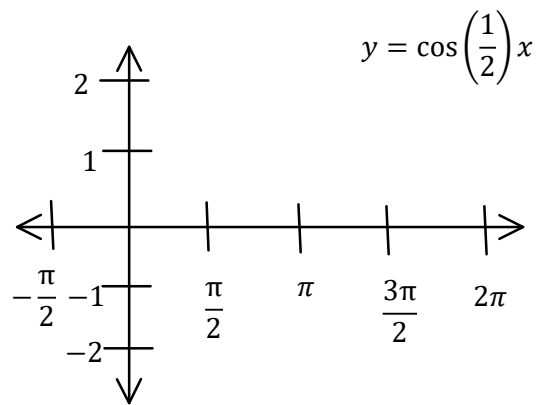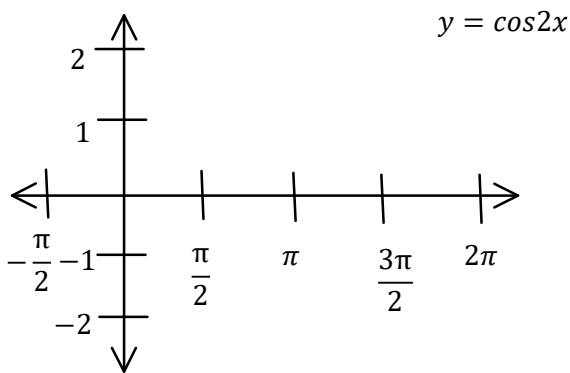

Determine b, and the equation $y = cosx + d$

C12 - 5.3 - "d" Graphing WS

Determine b, and graph the equation $y = sinx + d$

$$y = sinx - 1$$

$$y = sinx - \frac{1}{2}$$

$$y = sinx + 1$$

$$y = sinx + 2$$

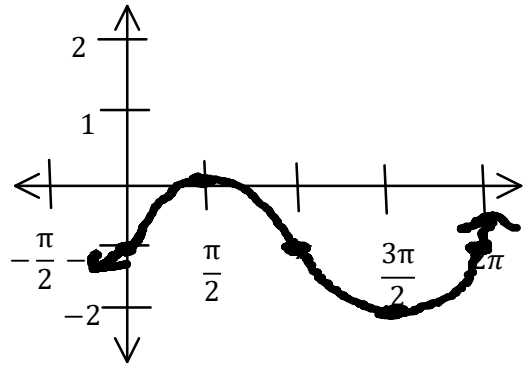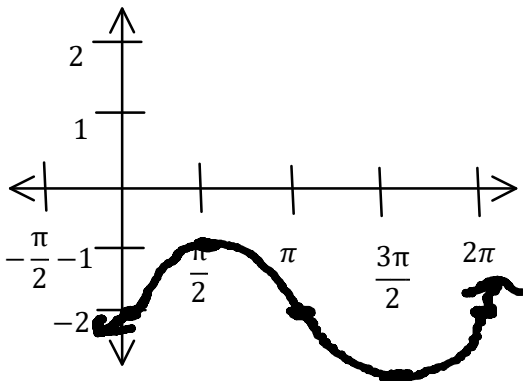**Determine b, and graph the equation** $y = cosx + d$

$$y = cosx - 1$$

$$y = cosx - \frac{1}{2}$$

$$y = cosx + 1$$

$$y = cosx + 2$$
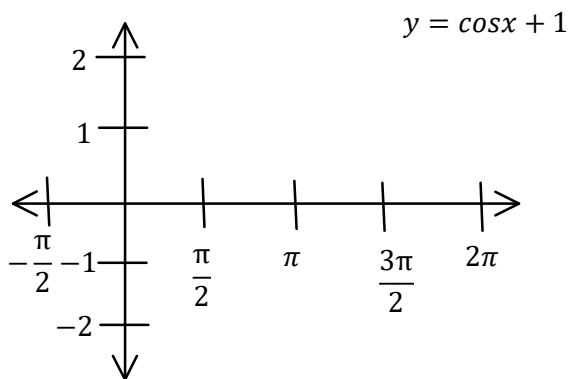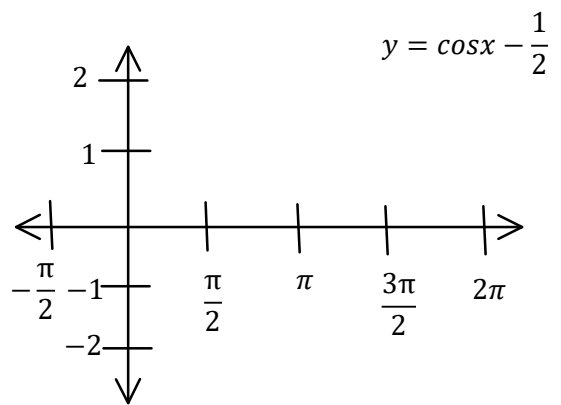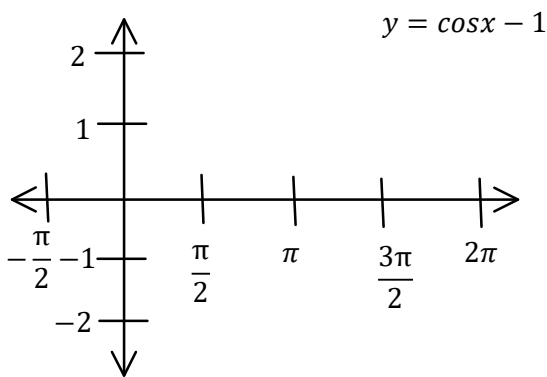
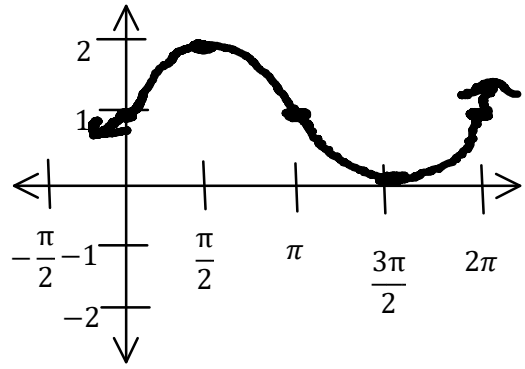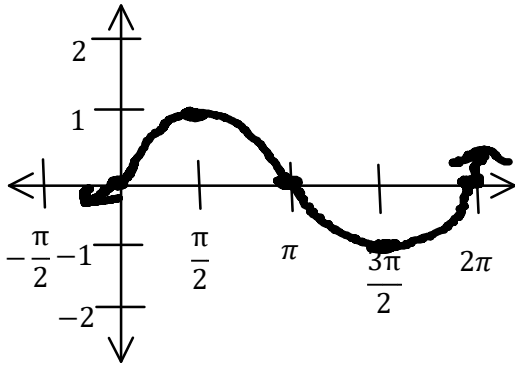# C12 - 5.3 - "c" Find Equation WS

Determine c, and graph the equation $y = sin(x \pm c)$
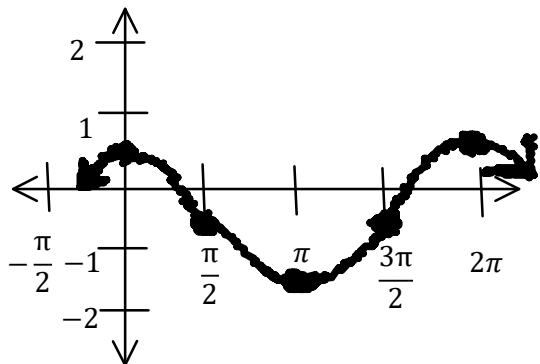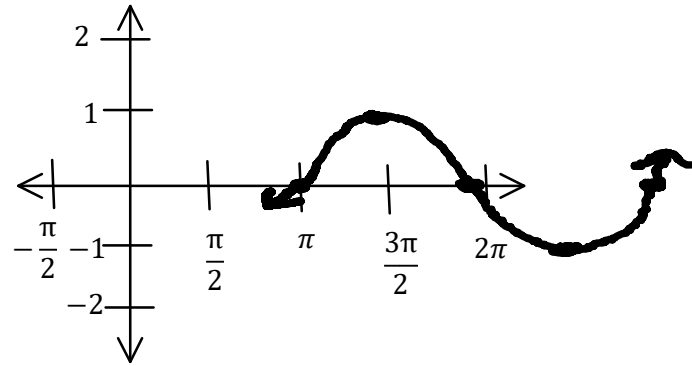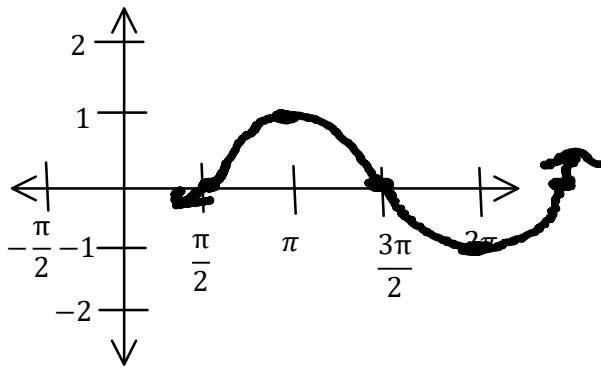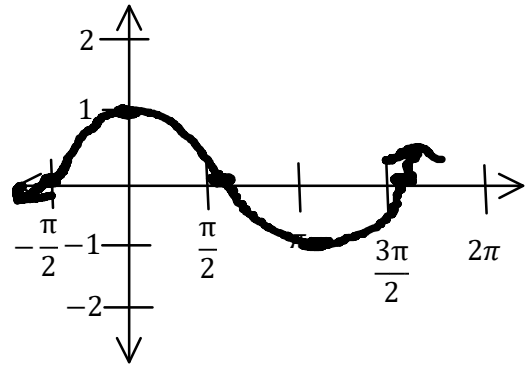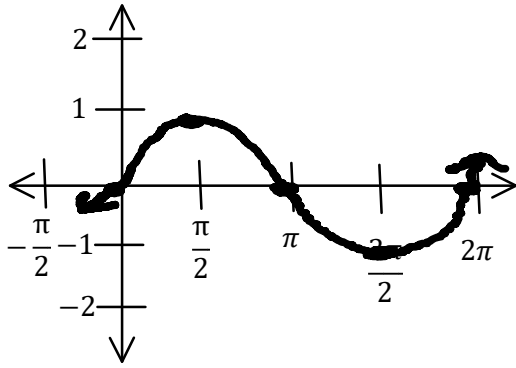

Determine b, and graph the equation $y = cos(x \pm c)$
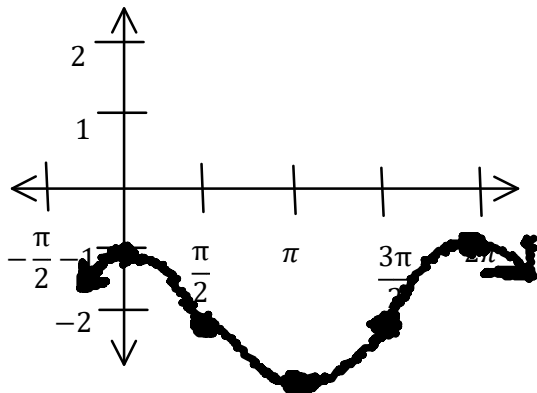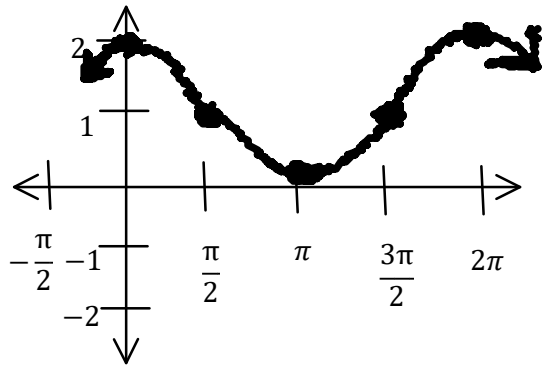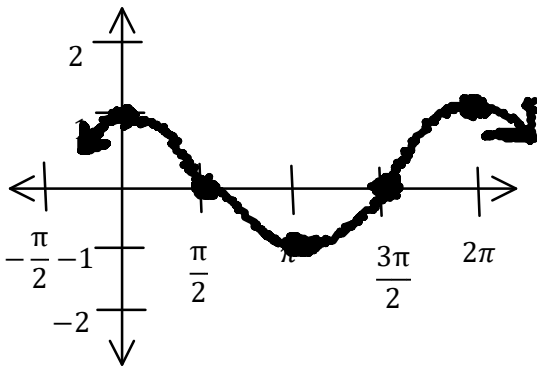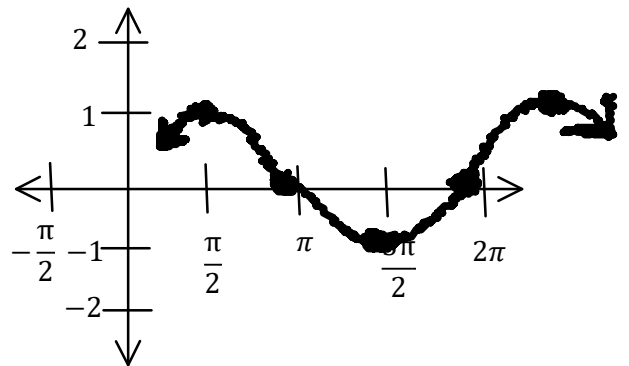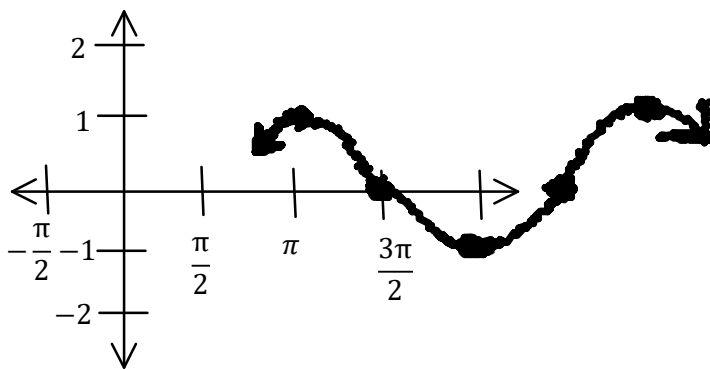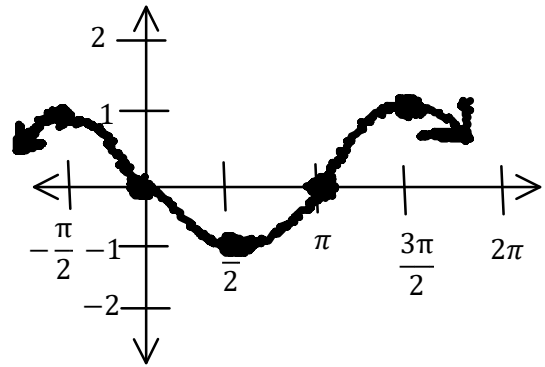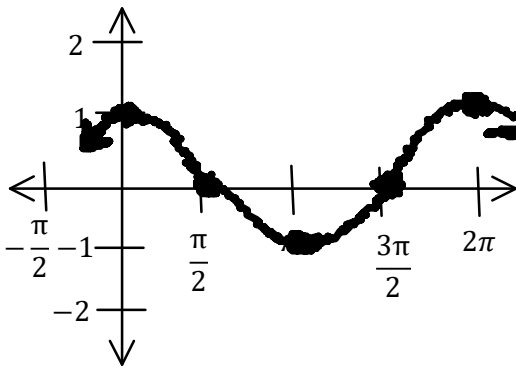
C12 - 5.3 - "c" Graphing WS

Determine c, and the equation $y = sin(x - c)$

$$y = sin\left(x - \frac{\pi}{2}\right)$$

$$y = sin\left(x + \frac{\pi}{2}\right)$$
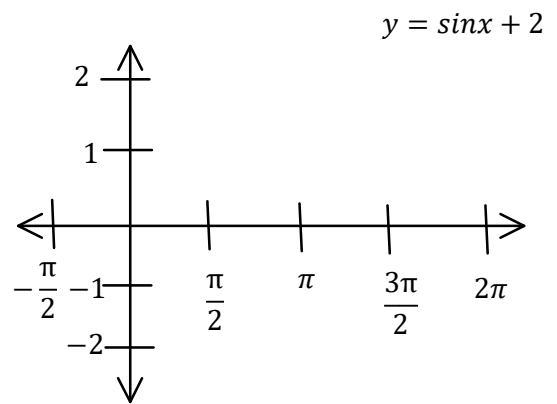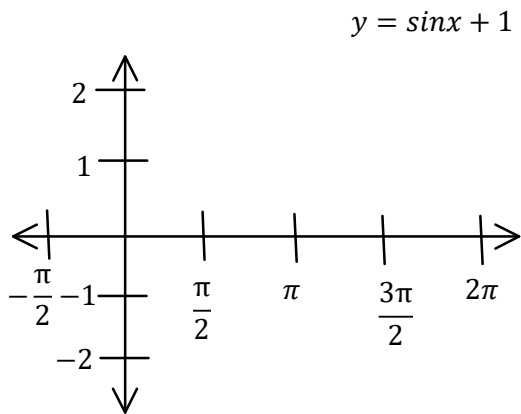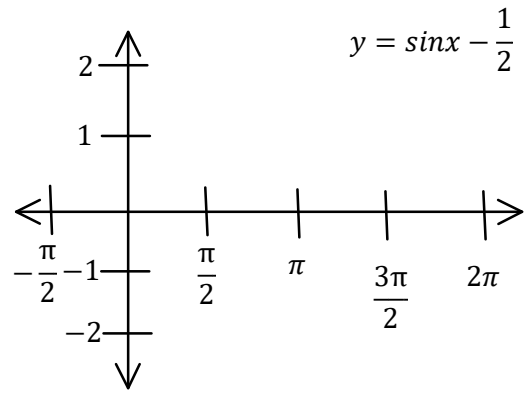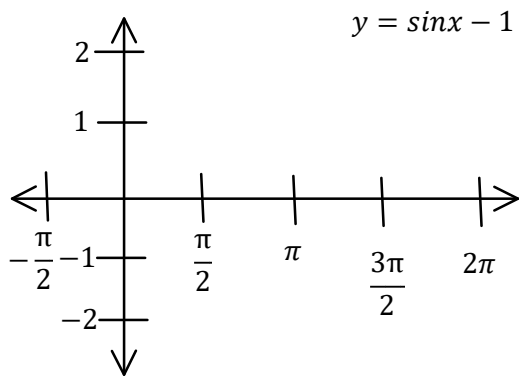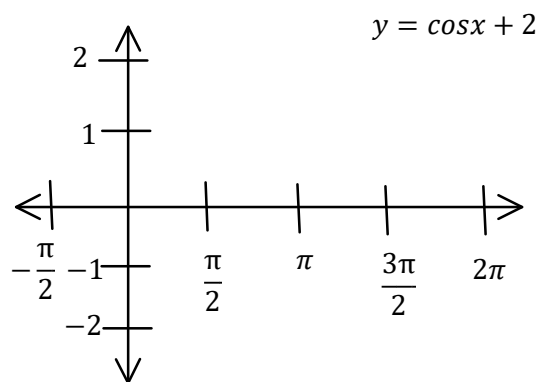

$$y = sin(x - \pi)$$
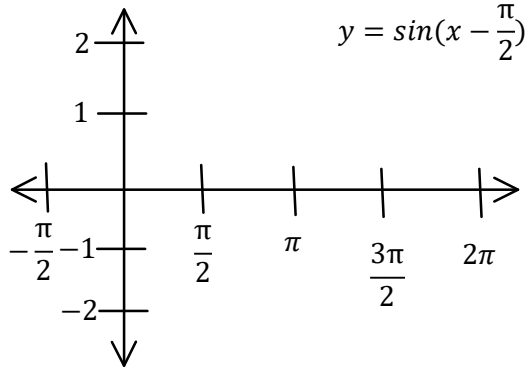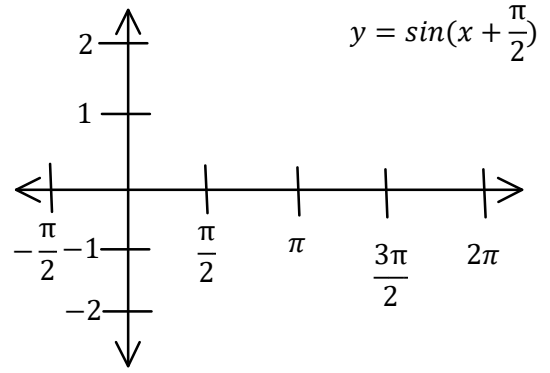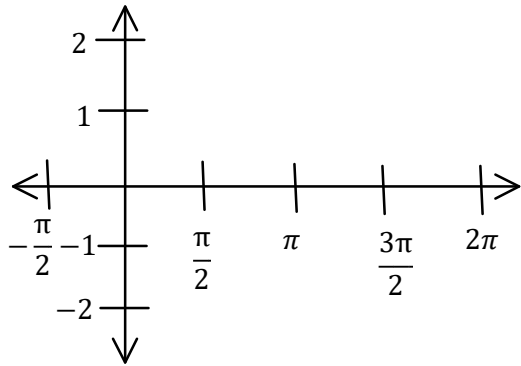
$$y = sin\left(x - \frac{3\pi}{2}\right)$$

Determine c, and the equation $y = cos(x - c)$

$$y = cos\left(x - \frac{\pi}{2}\right)$$

$$y = cos\left(x + \frac{\pi}{2}\right)$$

$$y = cos(x - \pi)$$
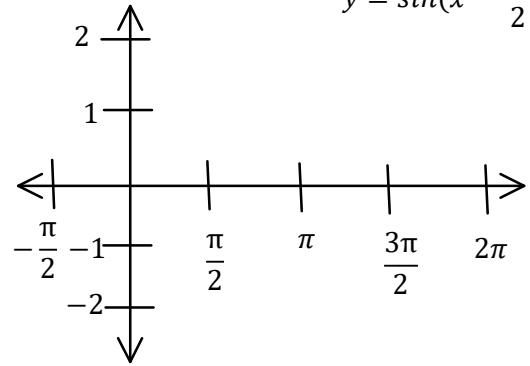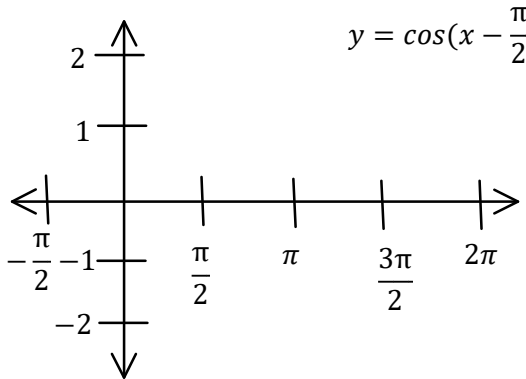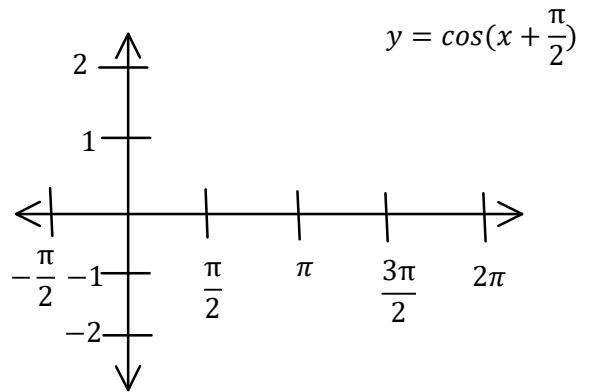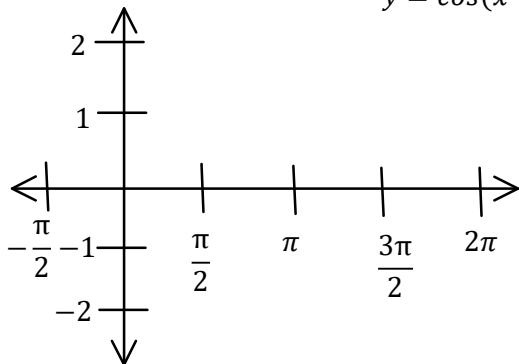
$$y = sin\left(x - \frac{3\pi}{2}\right)$$
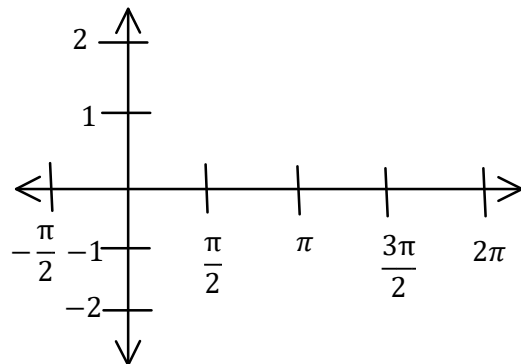
C12 - 5.4 - Graph Homework

$y = 2sinx + 1$

$y = \cos\left(x - \dfrac{\pi}{2}\right) + 2$

$y = -2sinx + 1$

$y = -\cos\left(x - \dfrac{\pi}{2}\right) + 2$

$y = 3\cos(x - \pi) + 1$

$y = 3\sin\left(x + \dfrac{\pi}{3}\right) - 2$

$y = 3\sin(2x) + 1$

$y = 3\cos\left(\dfrac{1}{2}(x - \dfrac{\pi}{2})\right) + 1$

$y = \sin(2x + \dfrac{\pi}{2})$

$y = \sin(2\left(x + \dfrac{\pi}{4}\right))$

C12 - 5.4 - Max Min Points HMK

A sinusoidal function has a maximum at $(2,9)$ and a minimum at $(6,-1)$. Find the equation.

A sinusoidal function has a maximum at $(-4,12)$ and a minimum at $(8,-4)$. Find the equation.

C12 - 5.5 - Ferris Wheel WS

A Ferris wheel with radius 12 m is 2 m off the ground. It takes 20 seconds for one complete revolution. Draw a diagram of the Ferris wheel, graph the height of a passenger starting at the bottom with a table of values and write the equation. How high at 6 second in. How many seconds above 18m in one cycle.

A Ferris wheel with radius 14 m is 1 m off the ground. It takes 30 seconds for one complete revolution. Draw a diagram of the Ferris wheel, graph the height of a passenger starting at the bottom with a table of values and write the equation. How high at 10 second in. How many seconds above 25m in one cycle.

C12 - 5.5 - Tide HMK

Graph and find Equation. High tide of 20 m at noon, Low tide of 8 m at 6:30 pm. Find depth at 1:12 pm.
Find time above 10m in one cycle.

Graph and find Equation. High tide of 18 m at 10am, Low tide of 2 m at 4:24 pm. Find depth at 7:30 am.
Find time above 12m in one cycle.
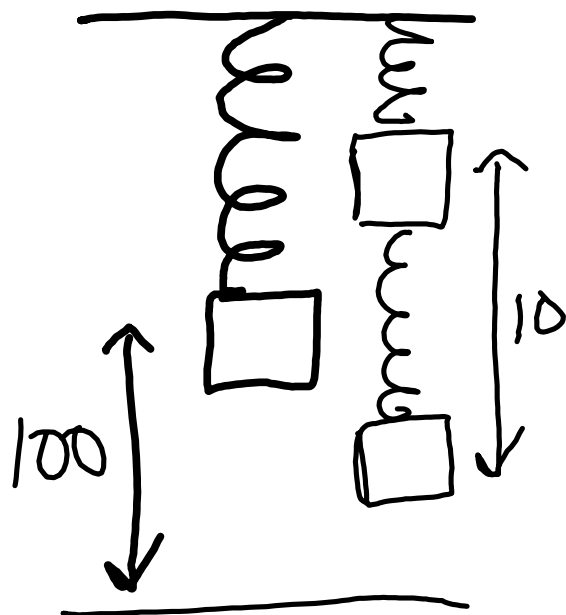
t	h
0	100
.5	105
1	100
1.5	95
2	100

$T = 2$

$$\frac{P}{4} = \frac{2}{4} = 0.5$$