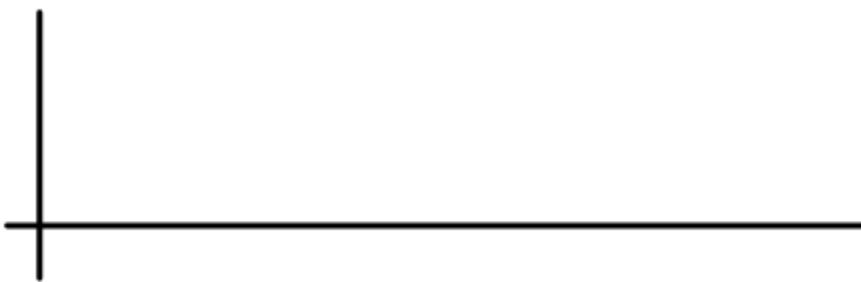


Chapter 5 Review

1. A mini Ferris wheel has a radius of 3m and makes one complete revolution every 16 seconds. The bottom of the wheel is 2m above the ground. ***If a person gets on at the bottom and goes up,*** determine the following:

- a) Amplitude: b) Period: c) b:
d) Minimum Height: e) Maximum Height: f) Vertical Displacement:
g) Equation: _____.
h) Sketch the graph for two revolutions (periods):



- i) Find a time when the person will be 6m high?

2. A weight attached to the end of a spring is bouncing up and down. As it bounces, its distance from the floor varies sinusoidally with time. You start a stopwatch, when the watch reads 0.4 sec, the weight first reaches a high point 50 cm above the floor. The next low point, 30 cm above the floor, occurs at 1.8 sec.

- (a) Predict the distance the weight will be from the floor when the stopwatch reads 17.2 sec.

- (b) How high was the weight above the floor when the stopwatch was initially started?

3. Find a , b , c , d , P , and the equation of the sinusoidal axis for each of the following

a) $5(y-1) = 25 \cos(x-25)$

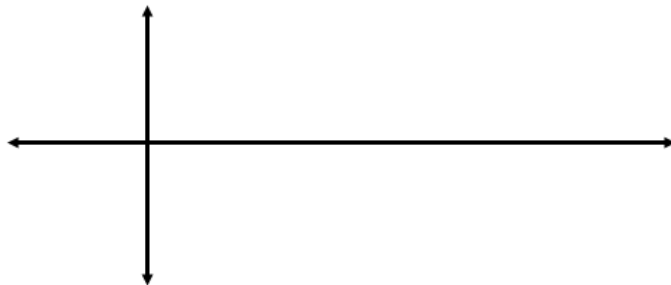
b) $\frac{y+3}{4} = \sin\left[\frac{1}{2}(4x+200)\right] + 2$

4. Graph the following Sinusoidal Functions: (One Period)

$$y = 3 \sin\left[2\left(x - \frac{\pi}{4}\right)\right] + 1$$

θ	y

θ	y



5. Find the first positive sine and cosine equation from the graph below.