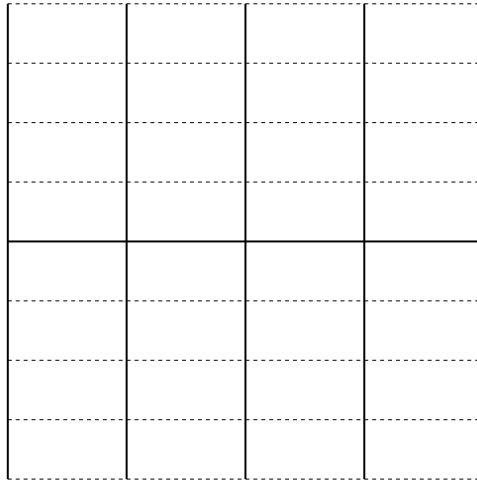


**Classwork 10**  
Precalculus MTH 130  
Instructor: Abhijit Champanerkar

Name: \_\_\_\_\_

Find the amplitude, period, frequency and phase shift for the following functions. Plot them on the given grid by carefully choosing the scale on both the axes.

1.  $y = -3 \cos 2x$



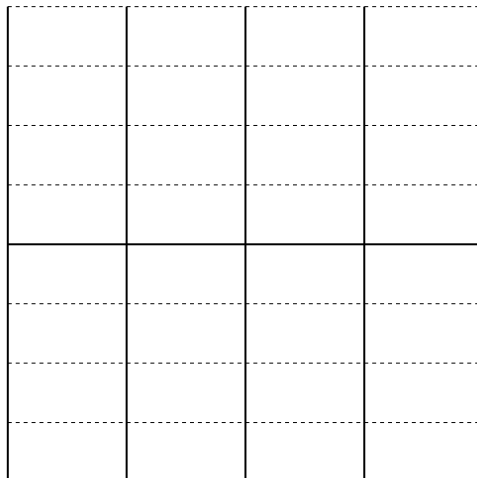
Amplitude= \_\_\_\_\_

Period = \_\_\_\_\_

Frequency = \_\_\_\_\_

Phase shift = \_\_\_\_\_

2.  $y = \sin \frac{1}{2}(x + \pi)$



Amplitude= \_\_\_\_\_

Period = \_\_\_\_\_

Frequency = \_\_\_\_\_

Phase shift = \_\_\_\_\_

**3.** A ferris wheel has a radius of  $11m$  and the bottom of the wheel passes  $1m$  above the ground. If the ferris wheel makes one complete revolution every  $20s$ , find an equation that gives the height above the ground of a person on the ferris wheel as a function of time, assuming at  $t = 0$  person starts at bottom (i.e. height  $1m$ ). (Hint: draw pictures).