

Graphing Sine & Cosine  
Review #2  
Algebra 2

Name \_\_\_\_\_

Hour \_\_\_\_\_ Date \_\_\_\_\_

Sine and cosine functions can be written in the following forms:

$$y = a \sin b(\theta - h) + k \text{ or } y = a \cos b(\theta - h) + k$$

Describe how  $a$ ,  $\sin/\cos$ ,  $b$ ,  $h$ , and  $k$  affect the graph of the function.

$a$  \_\_\_\_\_

$\sin/\cos$  \_\_\_\_\_

$h$  \_\_\_\_\_

$k$  \_\_\_\_\_

1. Graph the function. After, list the  $x$  &  $y$ -intercepts, domain, range, maximum(s), and minimum(s).

$$y = -3 \sin \theta$$

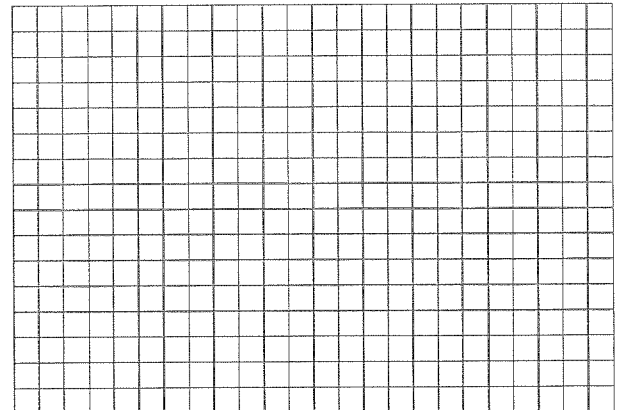
$x$ -intercept(s): \_\_\_\_\_

$y$ -intercept: \_\_\_\_\_

Domain: \_\_\_\_\_ Range: \_\_\_\_\_

Maximum(s) \_\_\_\_\_

Minimum(s) \_\_\_\_\_



For question #2-5, graph each function. List the midline equation, domain, range, maximum(s), minimum(s), and midline intercepts.

2.  $y = \cos \theta - 2$

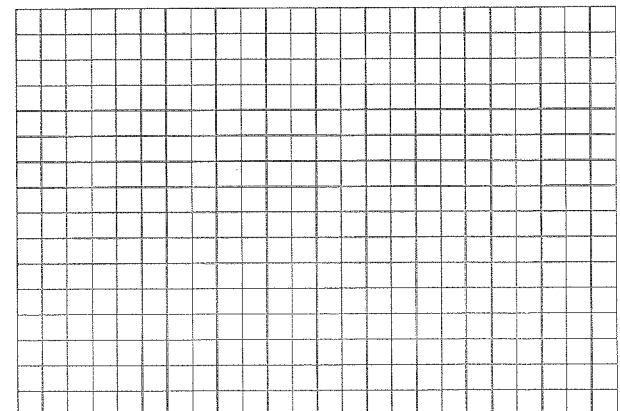
Midline Equation: \_\_\_\_\_

Domain: \_\_\_\_\_ Range: \_\_\_\_\_

Maximum(s) \_\_\_\_\_

Minimum(s) \_\_\_\_\_

Midline Intercepts \_\_\_\_\_



For question #3-5, graph each function. List the midline equation, domain, range, maximum(s), minimum(s), and midline intercepts.

3.  $y = -5 \sin \theta + 2$

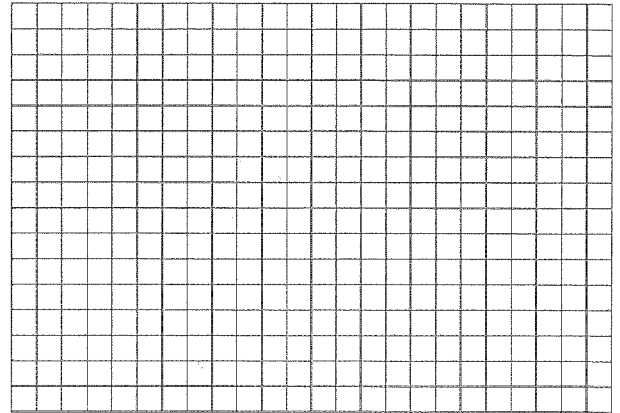
Midline Equation: \_\_\_\_\_

Domain: \_\_\_\_\_ Range: \_\_\_\_\_

Maximum(s) \_\_\_\_\_

Minimum(s) \_\_\_\_\_

Midline Intercepts \_\_\_\_\_



4.  $y = -2 \cos\left(\theta - \frac{5\pi}{2}\right) - 1$

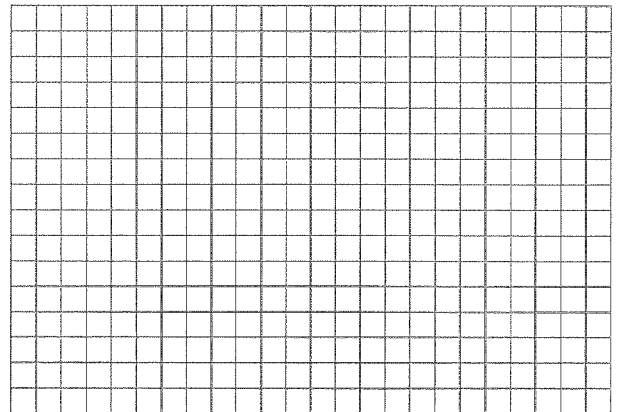
Midline Equation: \_\_\_\_\_

Domain: \_\_\_\_\_ Range: \_\_\_\_\_

Maximum(s) \_\_\_\_\_

Minimum(s) \_\_\_\_\_

Midline Intercepts \_\_\_\_\_



5.  $y = 4 \sin\left(\theta + \frac{3\pi}{2}\right) + 3$

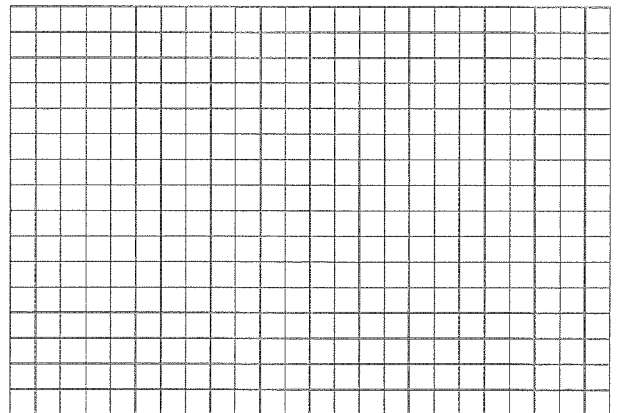
Midline Equation: \_\_\_\_\_

Domain: \_\_\_\_\_ Range: \_\_\_\_\_

Maximum(s) \_\_\_\_\_

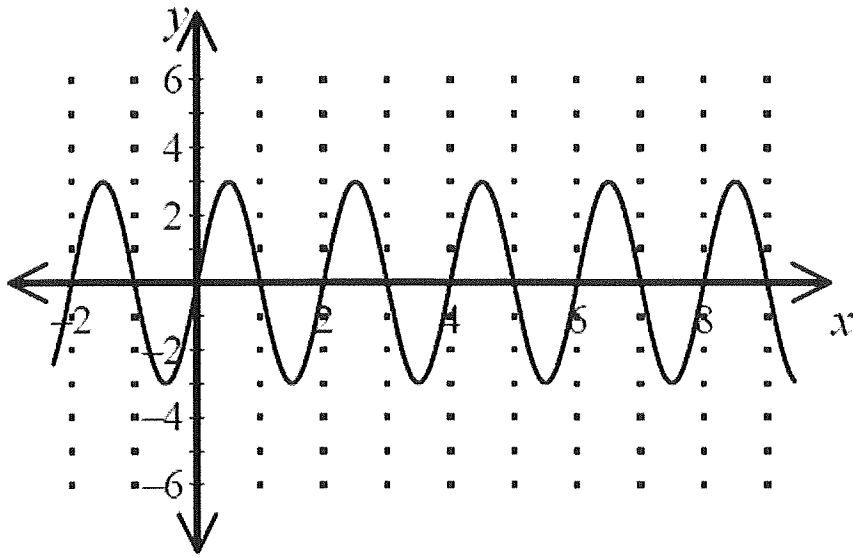
Minimum(s) \_\_\_\_\_

Midline Intercepts \_\_\_\_\_



For #6 & 7, determined the number of periods and period length.

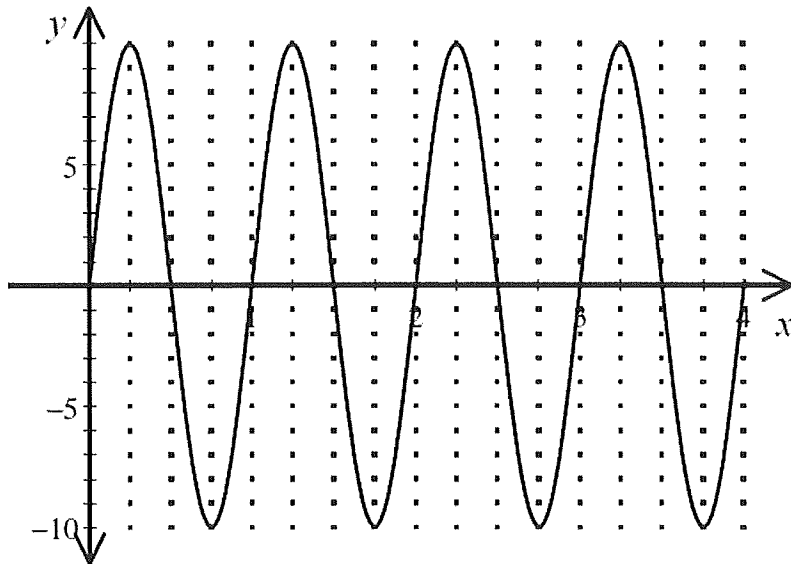
6.



a. # of Periods \_\_\_\_\_

b. Period Length \_\_\_\_\_

7.

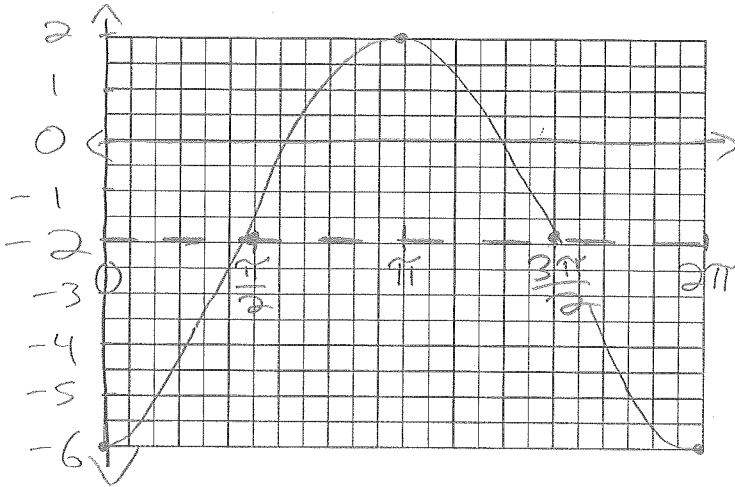


a. # of Periods \_\_\_\_\_

b. Period Length \_\_\_\_\_

For #8 & 9, write the equation for each function graphed below. It will help to identify the key information for the graph first: Type, Sign (+/-), Phase Shift, Midline Shift, and amplitude.

8.



Type \_\_\_\_\_

Sign (+/-) \_\_\_\_\_

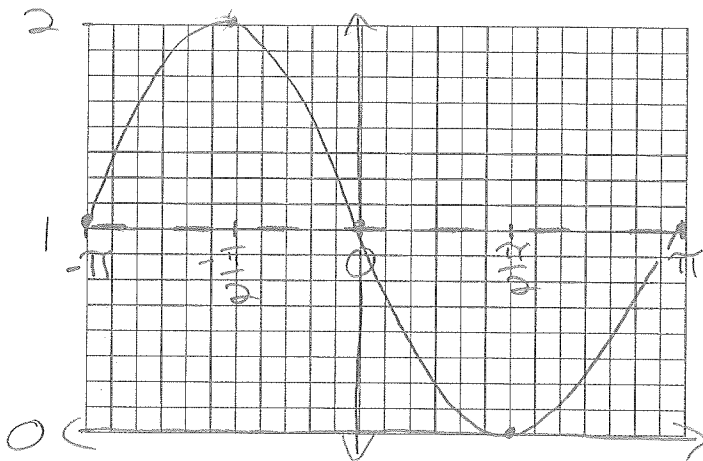
Phase Shift \_\_\_\_\_

Midline Shift \_\_\_\_\_

Amplitude \_\_\_\_\_

Equation \_\_\_\_\_

9.



Type \_\_\_\_\_

Sign (+/-) \_\_\_\_\_

Phase Shift \_\_\_\_\_

Midline Shift \_\_\_\_\_

Amplitude \_\_\_\_\_

Equation \_\_\_\_\_