Alg 2 Hwk #5 Sec 13-1

Periodic function: A repeating pattern of y-values at regular intervals.

Terms used when discussing periodic functions:

Cycle: One complete pattern

Period: The width of one cycle (x-values)

Axis (also called the Midline): The horizontal line that passes through the middle of the graph.

Amplitude: The vertical distance from the midline to either the maximum or the minimum.

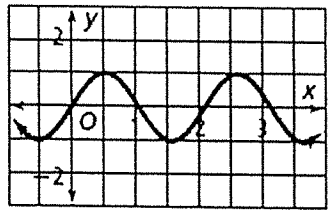
If you can't tell by looking at the graph, this is how you find the Midline and Amplitude mathematically.

Midline (Axis): $y = \frac{Max + Min}{2}$

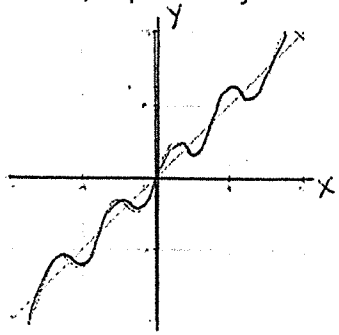
Amplitude = $\frac{Max - Min}{2}$ = half the total height

1. Is each of the below a periodic function? If no, explain why.

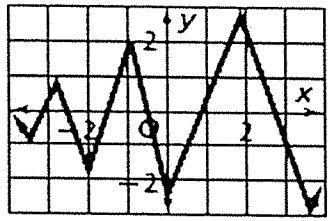
A



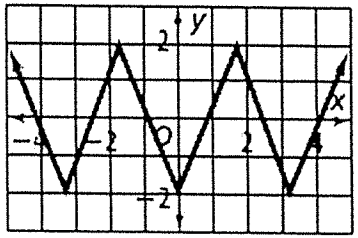
B



C

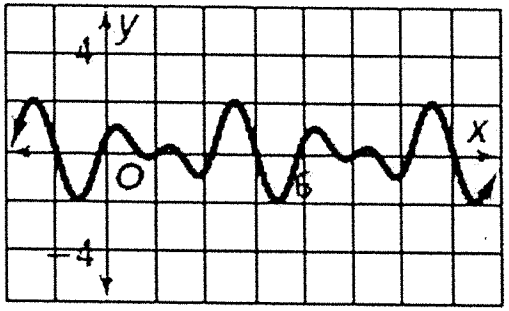


D



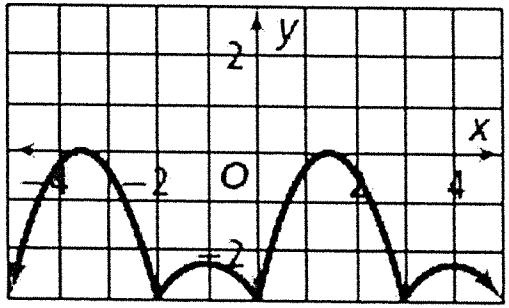
2. Highlight one cycle of each periodic function and find its peric

a.



Period =

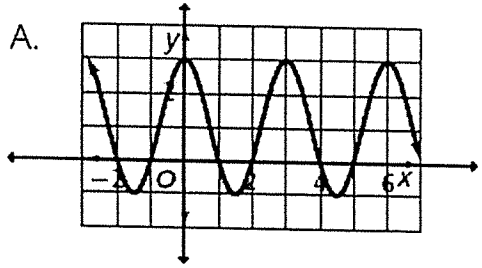
b.



Period =

3. Find the period, amplitude, and the equation of the axis for each periodic function.

A.

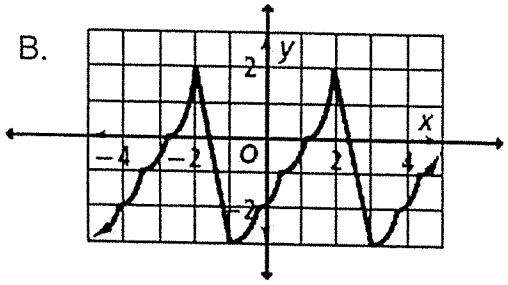


Period =

Amplitude =

EQ of Axis:

B.



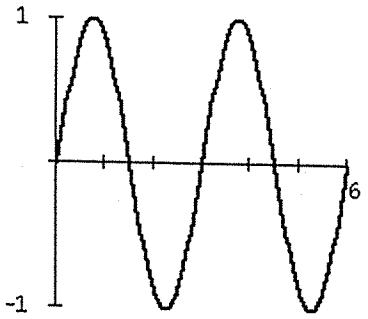
Period =

Amplitude =

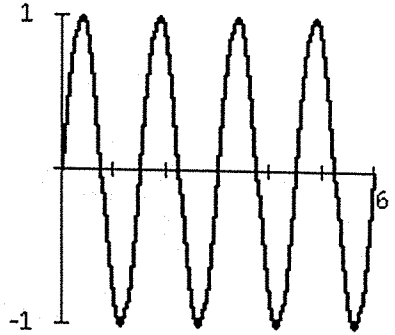
EQ of Axis:

4. What is the period of each function?

A. Period =

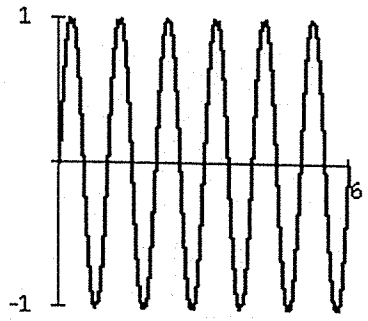


B. Period =

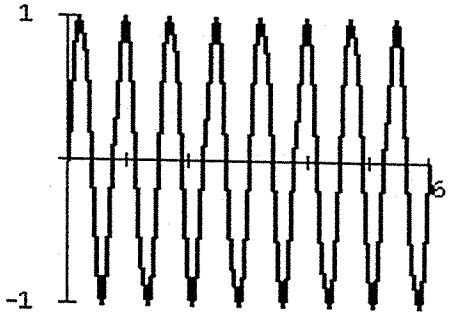


5. What is the period of each function?

a. Period =



b. Period =



6. Draw a periodic function with the following properties:

Period = 6
Amplitude = 4