ALGEBRA 1 Name _____
CHAPTER 4 REVIEW Date _____ Per____

1. Draw a graph indicating the temperature of the water in a tea kettle. The water is initially room temperature, then heated up to boiling for a minute, then the kettle is taken off of the stove. Be sure to label both axes with a title.

2. Determine it the relation in the table is "linear" or "not linear."
If linear, write the equation represented.

a.

x	y
-2	-1
-1	4
0	9
1	14
2	19

b.

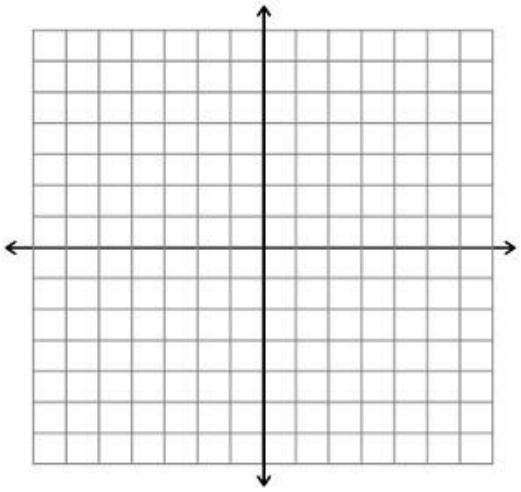
x	y
-4	-1
-2	4
0	9
2	14
4	19

_____ _____

In problem 3, graph each function rule. Be sure to <u>label axes</u> and <u>label units</u>!

3. $y = -3x + 2$

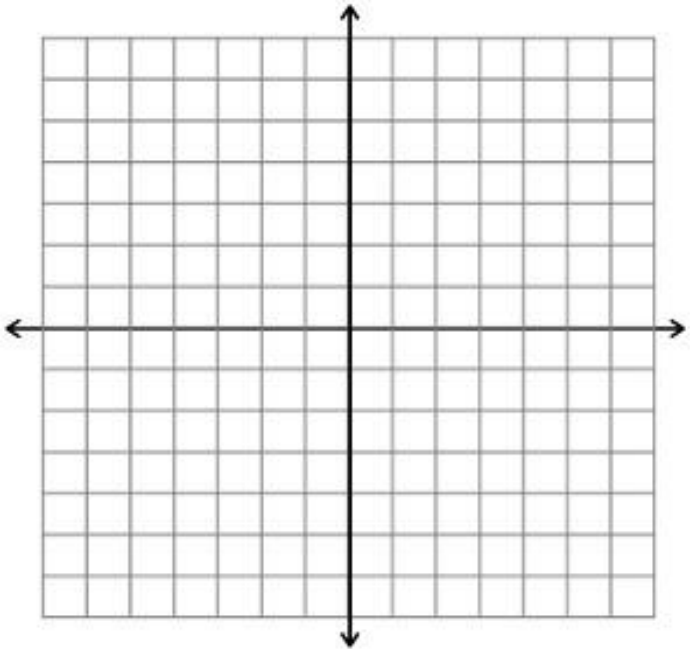
x	$y = -3x + 2$	(x, y)
-2		
-1		
0		
1		
2		



4. Create a table of values and graph the equation $y = -\frac{1}{4}x - 1$

x	$y = \frac{1}{4}x - 1$	(x, y)

Be sure to <u>label axes</u> and <u>label units</u>!



In 5 and 6, write a function that represents each situation.

5. Eight less half a number x is twelve. 5. _____

6. The quotient of a number m and two equals twelve. 6. _____

7. Write a function rule for the area of a triangle whose base is 2 inches less than its height.

a. Define a variable._____

b. Write an equation to represent the area of the triangle._____

c. Find the area of the triangle if the height is 6 inches.

8. Given the set of numbers $\{(-4,5),(-2,6),(0,5),(1,3)\}$:

a. State the domain:_____

State the range:_____

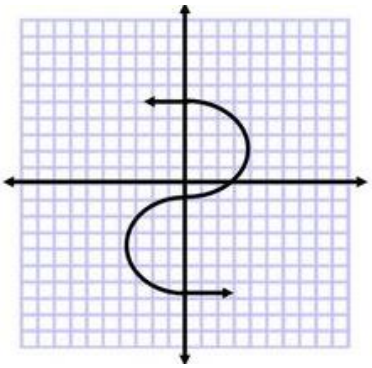
b. Create a mapping:

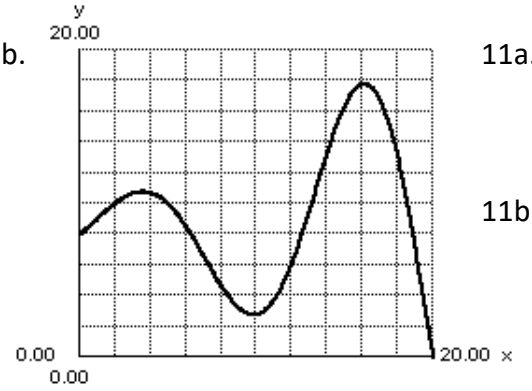
Determine if the relation is a "function" or "not a function."_____

9. $If\ f(x) = -x^2 + 5, find\ f(-2)$ 9._____

10. $If\ p(m) = \frac{3}{4}m + 5, find\ p(-8).$ 10. _____

11. Using the vertical line test, state if the graph is a "function" or "not a function."

a. 

b. 

11a._____

11b. _____

12. i. Based on the equation, name the type of function.
ii. Explain what the graph would look like.

a. $y = x^2 - 3$ b. $y = -\frac{6}{7}x + 4$ c. $y = 2|x| - 5$