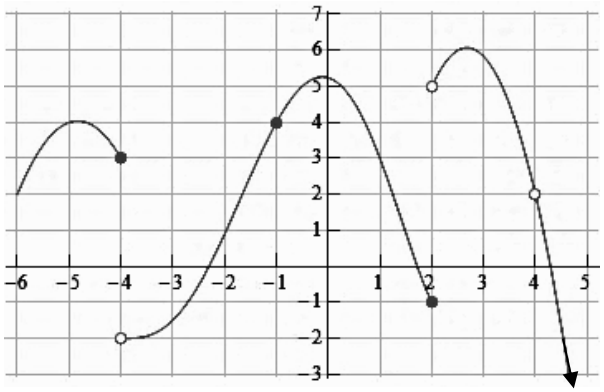
6R Features of Functions Review

Name: _____Per: _____

SHOW YOUR WORK AND WORK IN PENCIL

1. For the graph right, answer the following.



a. Is the graph a function? _____ How do you know?

_____

b. What is the domain of the graph? _____

c. What is the range of the graph? _____

d. What is the absolute minimum? _____

e. What is the absolute maximum? _____

f. On the interval [−2, 2], what is the relative maximum? _____ Relative minimum? _____

g. On the interval from [−6, −4], what is the relative minimum? _____ Relative maximum? _____

h. Is the graph discrete or continuous? _____ Explain: _____

_____

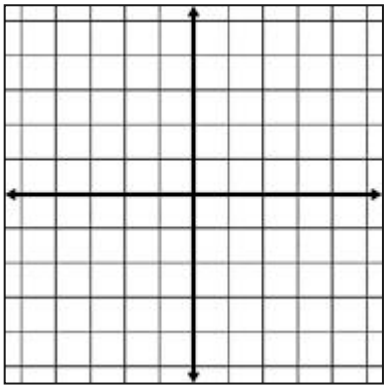
i. What is *f*(1)? _____ What is *f*(–4)? _____ What is *f*(4)? _____

j. What is x at *f*(x) = 6? _____ What is x at *f*(x) = – 2? _____ What is x at *f*(x) = –1? _____

k. List **ONE** interval where the graph is increasing. _____ Decreasing: _____

l. List the y-intercept(s): _____ m. List the x-intercept(s): _____

2. If is $f(x) = 3x + 2$ and $g(x) = -2x + 7$, graph and label the equations. Circle where $f(x) = g(x)$.



3. Show how to find *f*(x) = *g*(x) from #2 algebraically.

4. $g(x) = 2x - 4$

   a. $g(-3) =$

   b. $g(-2) =$

   c. $g(a) =$

   d. $g(x) = 36$

   e. $g(x) = 16$

5. $h(x) = x^2 + 3$

   a. $h(-2) =$

   b. $h(2) =$

   c. $h(4) =$

   d. $h(x) = 35$

   e. $h(x) = 28$

6. Answer the following questions about the table to the right.

X	$g(x)$
3	6
-2	16
-4	20
1	10

a. Does the table represent a function? _____ How do you know?

_____

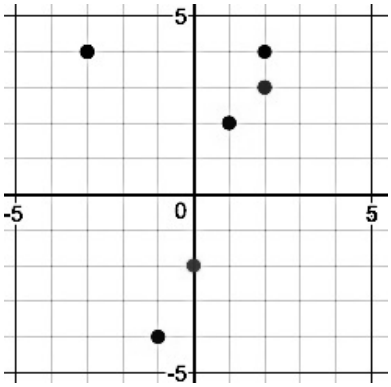
b. Is the data discrete or continuous? _____ How do you know? _____

c. What is the domain of the data set? _____ What is the range of the data set?_____

d. Find $g(1) =$ e. Find x when $g(x) = 20$ f. Find $g(-3)$

g. Find the equation of the data in the table. _____ SYW.

7. Answer the following questions about the graph to the right.



a. Does the graph represent a function? _____ How do you know? _____

b. Is the data set discrete or continuous?_____

Explain:_____

c. What is the Absolute Maximum?_____

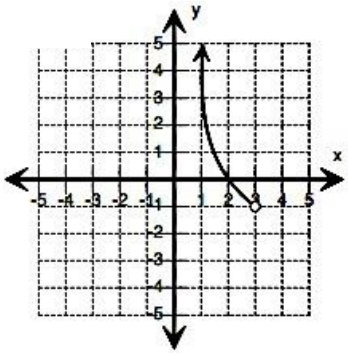
d. What is the Absolute Minimum?_____

e. What is the domain of the data set? _____

f. What is the range of the data set? _____

g. Find $f(1) =$ h. Find x when $f(x) = 3$ i. Find $f(-1)$

8. For each graph, determine if the relation represents a function. State the key features of each graph.



***This graph will get closer and close to the y-axis, but never get there.**

Function? YES/NO

Increasing on interval:

_____

Decreasing on interval:

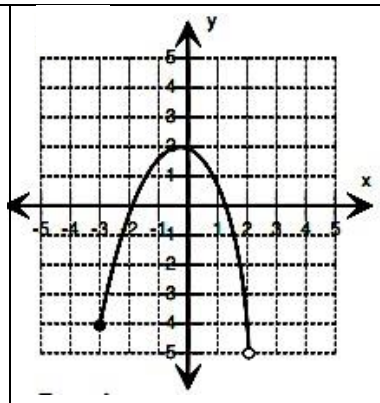
_____

Domain: _____

Range: _____

x-intercept: _____

y-intercept: _____



Function? YES/NO

Increasing: _____

Decreasing: _____

Domain: _____

Range: _____

y-intercept: _____

If there were arrows on both ends, list the

Domain: _____

Range: _____

9. If the first of the figures below is figure or stage #1, make a **table** with at least 4 x values showing the growth of the number of toothpicks.

a. What is the equation that represents the growth?