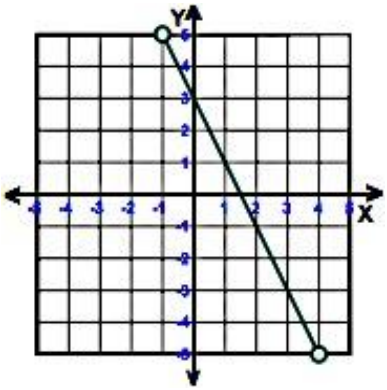
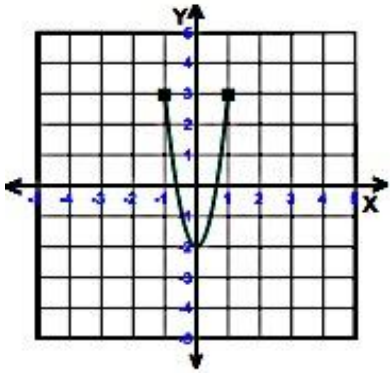
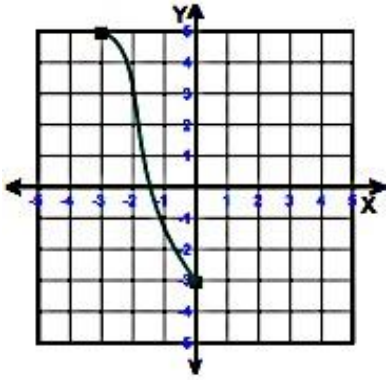
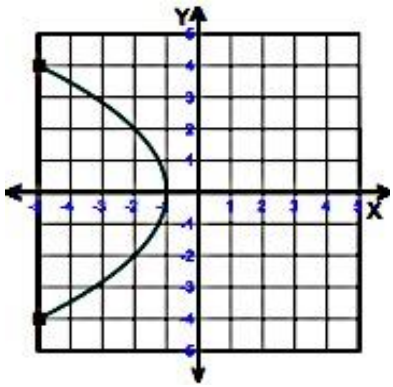
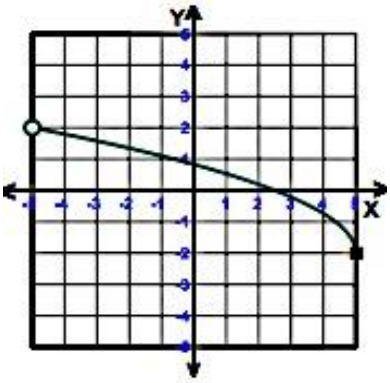
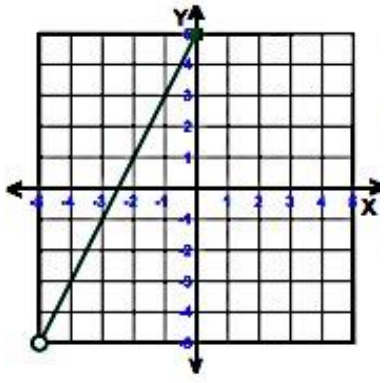
6B Domain/Range & Increase/Decrease Name _____ Per: _____
SHOW YOUR WORK AND WORK IN PENCIL.

1. Define Domain:_____
2. Define Range:_____
3. Explain when you would use a [Bracket] or a (parenthesis)_____

_____

For each graph, determine if the relation represents a function. If it's NOT a function, show on the graph why. State the key features of each graph.

	4. Function? Yes / No Explain: _____ Continuous / Discrete Domain: _____ Range: _____ What's the domain if there where arrows at both ends? _____ Mark + increasing and – when decreasing		5.Function? Yes / No Explain: _____ Continuous / Discrete Domain: _____ Range: _____ What's the range if there where arrows at both ends? _____ Mark + increasing and – when decreasing
	6.Function? Yes / No Explain: _____ Continuous / Discrete Domain: _____ Range: _____ What's the domain if there where arrows at both ends? _____ Mark + increasing and – when decreasing		7.Function? Yes / No Explain: _____ Continuous / Discrete Domain: _____ Range: _____ What's the range if there where arrows at both ends? _____ Mark + increasing and – when decreasing
	8.Function? Yes / No Explain: _____ Continuous / Discrete Domain: _____ Range: _____ What's the domain if there where arrows at both ends? _____ Mark + increasing and – when decreasing		9.Function? Yes / No Explain: _____ Continuous / Discrete Domain: _____ Range: _____ What's the range if there where arrows at both ends? _____ Mark + increasing and – when decreasing

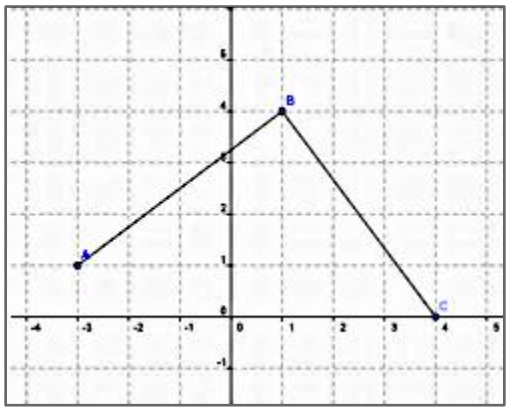
Find the **range** (outputs) for the given **domain** (inputs) of the functions. USE **FUNCTION NOTATION.**

10. $f(x) = 3x - 5;\ when\ x = \{-1, 0, 4, 6\}$
    $for\ Ex.\ f(-1) = -8$

11. $f(x) = 5(3x);\ when x = \{-1, 0, 4, 6\}$

For each graph, state the **key features** of the function.

12.



a. Interval(s) where the function is **increasing**

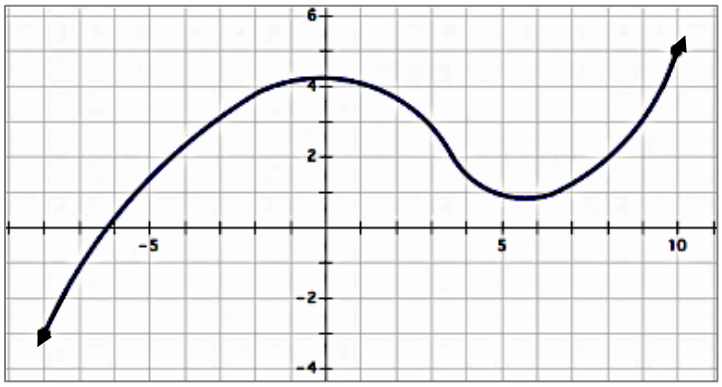
b. Interval(s) where the function is **decreasing**

c. What is the Domain?

d. What is the Range?

e. Is this function discrete or continuous?

13.



a. Interval(s) where the function is **increasing**

b. Interval(s) where the function is **decreasing**

c. What is the Domain?

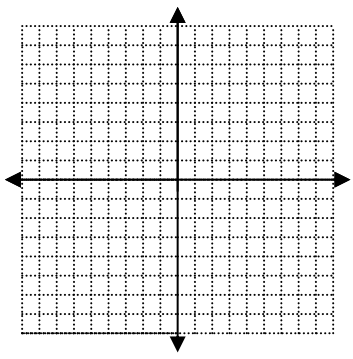
d. What is the Range?

e. Is this function discrete or continuous?

14. For #12a above, the left end of the segment is included in the increasing interval. When listing that interval, use a _____. The right end of the increasing interval is a point that is both increasing and decreasing, so use a _____.

15. Given $f(x) = 3 - 4x$. Fill in the table and then graph it.

x	$f(x)$
-3	
-2	
0	
1	
	-5



a. Should you connect the points on the graph?_____
   Explain why or why not _____
b. Is the above relation a function? _____
c. Explain_____
d. State the Domain _____
e. State the Range_____
f. On what interval is the graph increasing?_____
g. On what interval is the graph decreasing? _____