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. State the key features of each graph.

| Graph	Questions	Graph	Questions
	4. Function? Yes / No Explain: _____ _____ Continuous / Discrete Domain: _____ Range: _____ Mark + increasing and − when decreasing		5.Function? Yes / No Explain: _____ _____ Continuous / Discrete Domain: _____ Range: _____ Mark + increasing and − when decreasing
	6.Function? Yes / No Explain: _____ _____ Continuous / Discrete Domain: _____ Range: _____ Mark + increasing and − when decreasing		7.Function? Yes / No Explain: _____ _____ Continuous / Discrete Domain: _____ Range: _____ Mark + increasing and − when decreasing
	8.Function? Yes / No Explain: _____ _____ Continuous / Discrete Domain: _____ Range: _____ Mark + increasing and − when decreasing		9.Function? Yes / No Explain: _____ _____ Continuous / Discrete Domain: _____ Range: _____ Mark + increasing and − when decreasing

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

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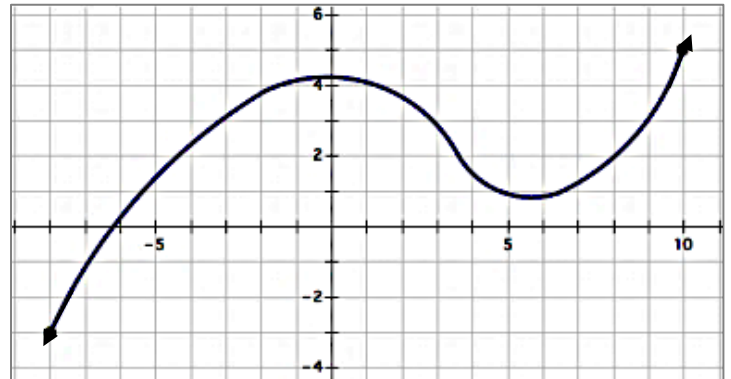
11. $f(x) = 5(3x);\ x = \{-1, 0, 4, 6\}$

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

12.
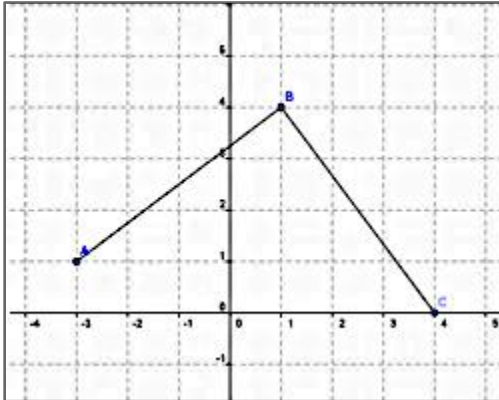
13.

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?

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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 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. Is the above relation a function? _____

b. Explain_____

c. State the Domain _____

d. State the Range_____

e. On what interval is the graph increasing?_____

f. On what interval is the graph decreasing? _____