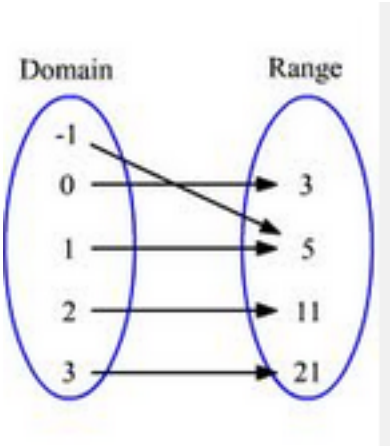
Name:_____ Period:_____ SCORE:_____/_____=_____% = _____

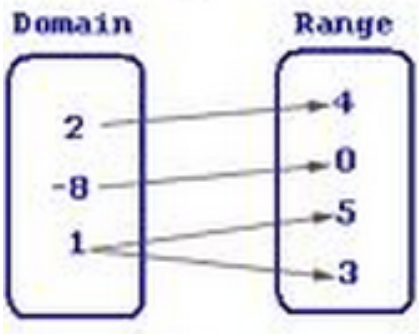
Unit 2 Review – Secondary 1 Honors

Determine whether the following is a function. Explain why or why not?

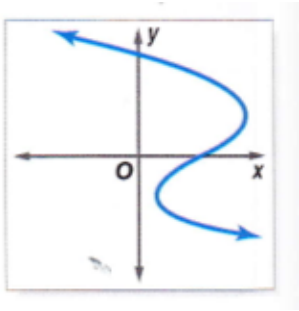
1.



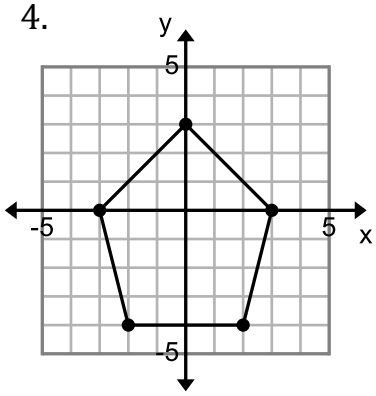
2.



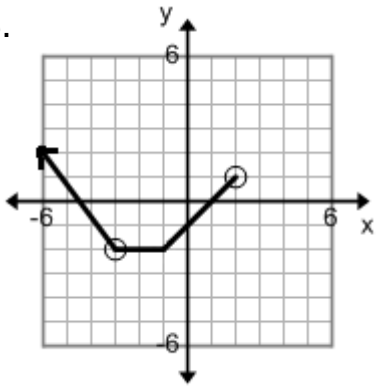
3.



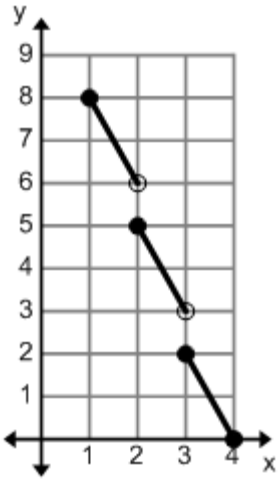
4.



5.



6.



Determine if each set of ordered pairs is a function or not, then state the domain and range.

7. $\{(-4,3),(5,3),(-2,1),(-7,1)\}$

8. $\{(-3,2),(4,5),(-3,7),(4,-9),(5,-3)\}$

Find the average rate of change for the given interval.

9. on the interval $[3,6]$

x	$f(x)$
0	2
1	– 3
2	0
3	2
4	6
5	12
6	20

10. on the interval $[6,8]$

n	$f(n)$
6	23
7	19
8	15
9	11

Determine whether the following is a function. Explain why or why not?

11.

x	$f(x)$
-3	6
2	9
-4	3
2	9

12.

x	$f(x)$
-5	9
-2	1
4	3
1	1

13. $f(x) = 2x - 9$

Use $f(x) = 3x - 4$, $g(x) = x^2 + 5$, & $h(x) = -5x + 3$ to answer questions 14-23.

14. $f(x) + g(x)$

15. $f(-5)$

16. $g(-5)$

17. $f(x) \bullet g(x)$

18. $f(2) - h(-3)$

19. $f(7) - 3$

20. $g(4) + 7$

21. $3 + f(2)$

22. $g(-5) - 3$

23. For what x values does $f(x) = g(x)$

Use $f(x) = -7x + 6$ & $g(x) = 2x + 4$ to answer questions 24-28.

24. $f(x) = -36$

25. $g(7)$

26. $f(5)$

27. $g(0)$

28. $g(x) = 28$

Use the table to answer questions 29-32.

x	$f(x)$
-1	8
2	0
3	8
-2	-1
0	-2
4	2

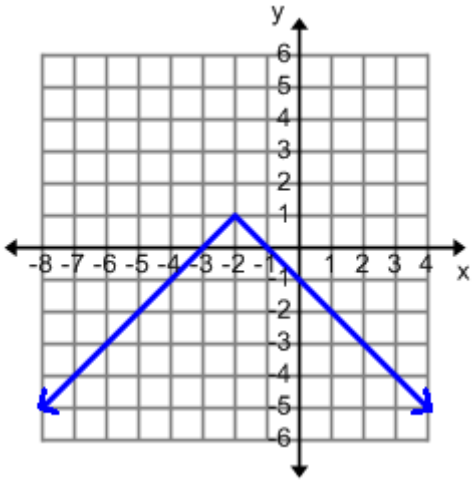
29. $f(-2)$

30. $f(x) = -2$

31. $f(x) = 8$

32. $f(2)$

Use the graph to the right to answer questions 33-37.



33. $f(2)$

34. $f(x) = 0$

35. $f(-4)$

36. $f(x) = 1$

37. $f(x) = -3$

38. Describe the features of the graph **below** using **SET BUILDER** notation

Is this a function?_____ Why?

Domain:_____ Range:_____

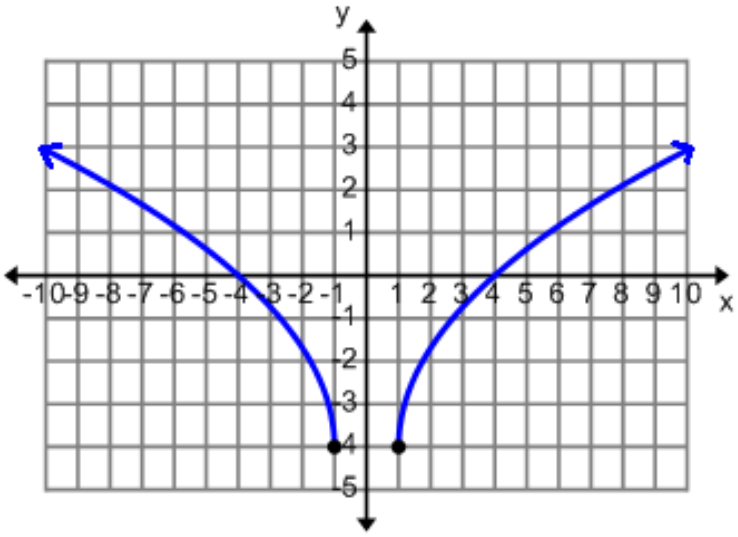
Continuity: (Circle one) Continuous Non-Continuous Discrete

Increasing:_____ Decreasing:_____

Minimum:_____ Maximum: _____

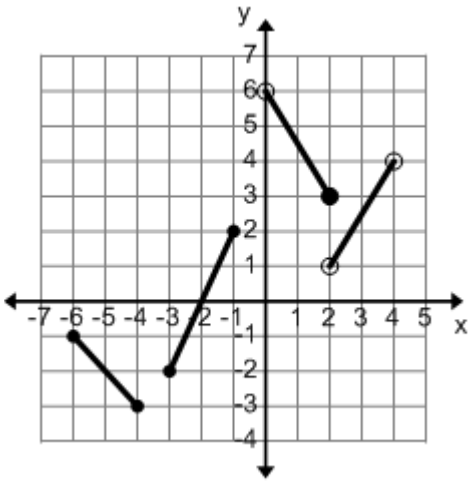
Positive:_____ Negative:_____

x-intercept(s): _____ *y*-intercept(s): _____



39. Find the average rate of change for the graph on the left on the interval $[1,4]$.

40. Describe the features of the graph below using **SET BUILDER** notation



Is this a function?_____ Why?

Domain:_____

Range:_____

Continuity: Continuous Non-Continuous Discrete

Increasing:_____

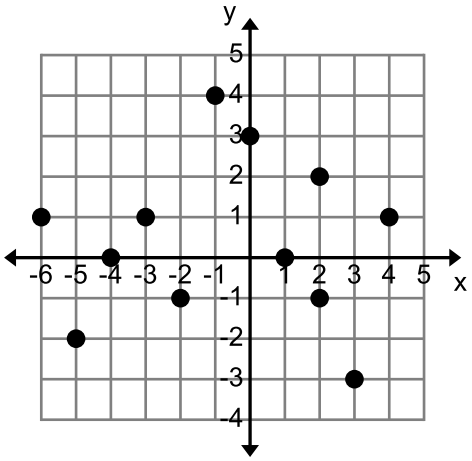
Decreasing:_____

Minimum:_____ Maximum: _____

Positive:_____ Negative:_____

x-intercept(s): _____ *y*-intercept(s): _____

41. Describe the features of the graph below using **SET BUILDER** notation



Is this a function?_____ Why?

Domain:_____

Range:_____

Continuity: Continuous Non-Continuous Discrete

Increasing:_____

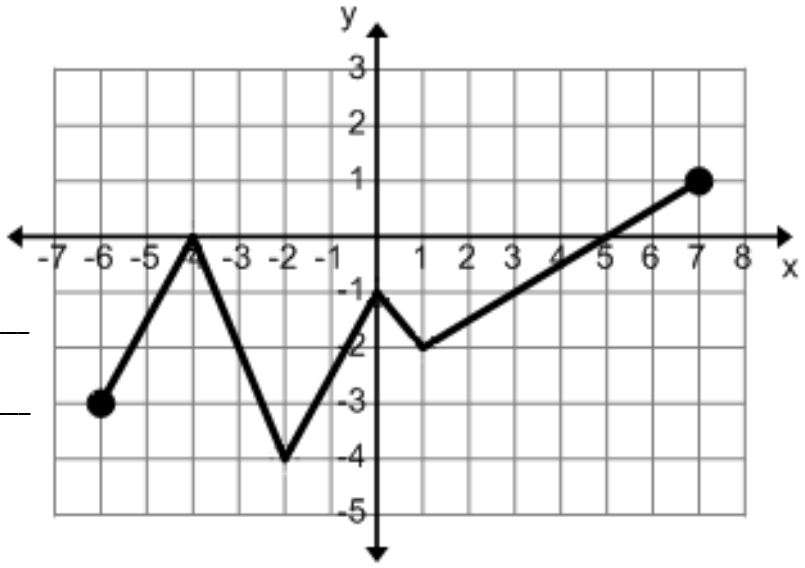
Decreasing:_____

Minimum:_____ Maximum: _____

Positive:_____ Negative:_____

x-intercept(s): _____ *y*-intercept(s): _____

42. Describe the features of the function using **INTERVAL NOTATION.**



Is this a function?_____

Domain:_____

Range:_____

Continuity: Continuous Non-Continuous Discrete

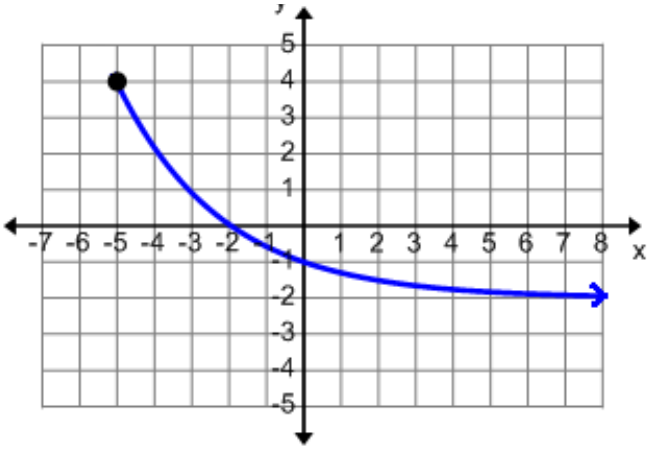
Increasing:_____ Decreasing:_____

Minimum:_____ Maximum: _____

Positive:_____ Negative:_____

x-intercept(s): _____ *y*-intercept(s): _____

43.
Describe the features of the function using **INTERVAL NOTATION**.



Is this a function?_____ Why?

Domain:_____

Range:_____

Continuity: Continuous Non-Continuous Discrete

Increasing:_____ Decreasing:_____

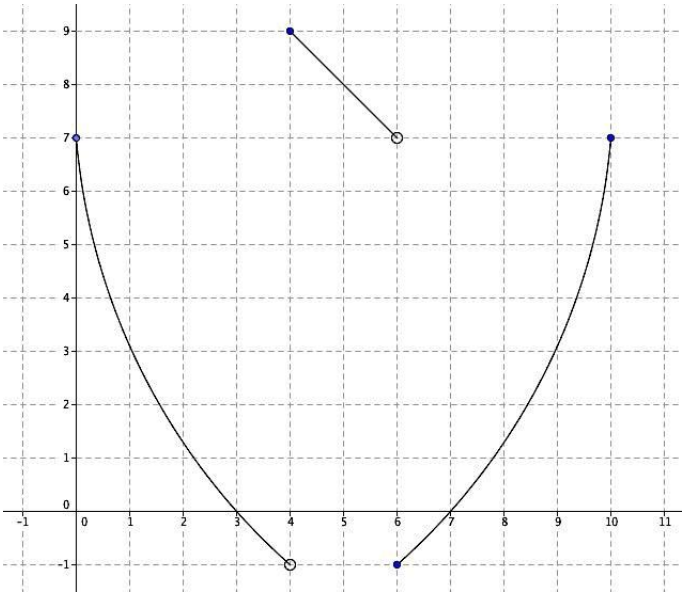
Minimum:_____ Maximum: _____

Positive:_____ Negative:_____

x-intercept(s): _____ *y*-intercept(s): _____

44. Find the average rate of change for the graph above on the interval $[-5,-2]$.

45. Describe the features of the function using **INTERVAL NOTATION**



Is this a function?_____ Why?

Domain:_____

Range:_____

Continuity: Continuous
Non-Continuous
Discrete

Increasing:_____

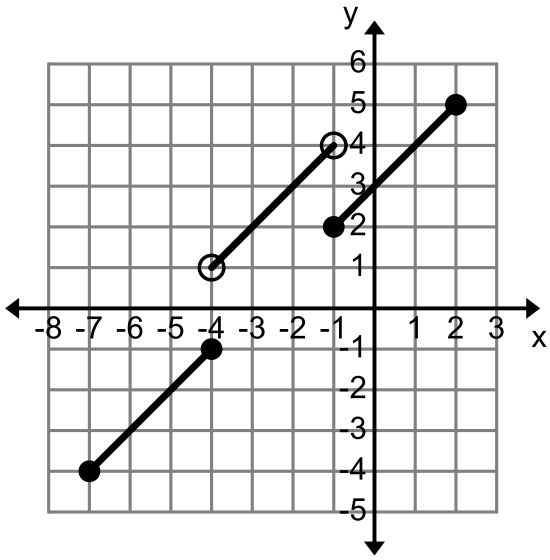
Decreasing:_____

Minimum:_____ Maximum: _____

Positive:_____ Negative:_____

x-intercept(s): _____ *y*-intercept(s): _____

46. Describe the features of the function using **INTERVAL NOTATION**



Is this a function?_____ Why?

Domain:_____

Range:_____

Continuity: Continuous
Non-Continuous
Discrete

Increasing:_____

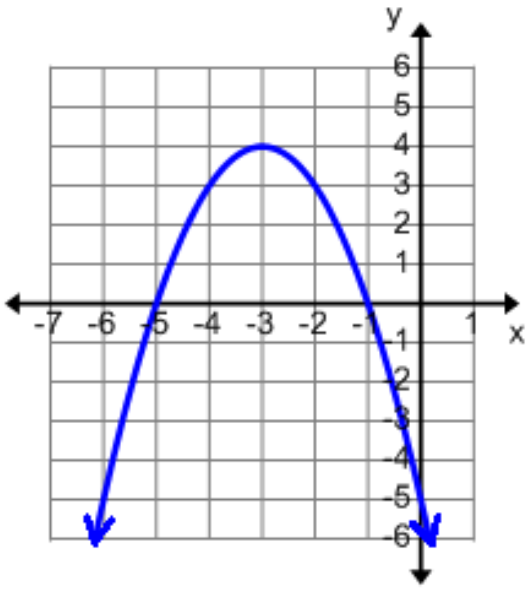
Decreasing:_____

Minimum:_____ Maximum: _____

Positive:_____ Negative:_____

x-intercept(s): _____ *y*-intercept(s): _____

47. Describe the features of the function using **INTERVAL NOTATION**



Is this a function?_____ Why?

Domain:_____

Range:_____

Continuity: Continuous
Non-Continuous
Discrete

Increasing:_____

Decreasing:_____

Minimum:_____ Maximum: _____

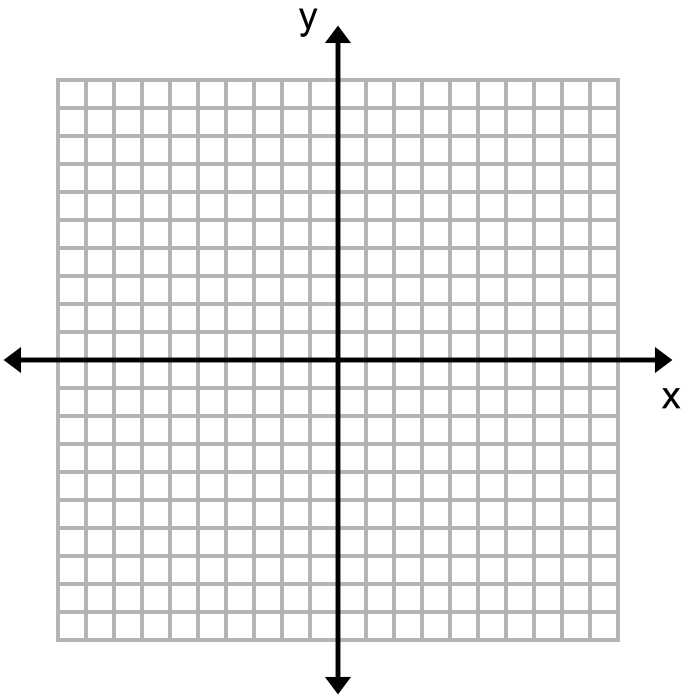
Positive:_____ Negative:_____

x-intercept(s): _____ *y*-intercept(s): _____

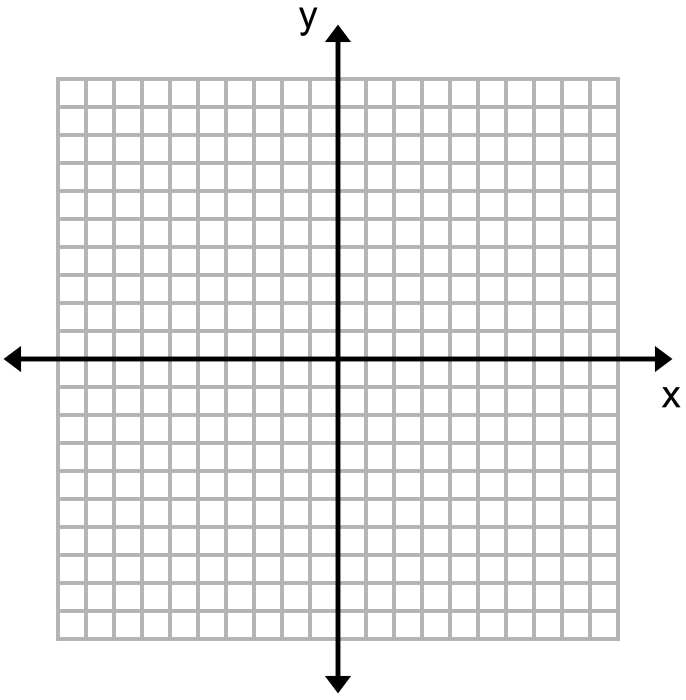
Create a graph that matches the given descriptions:

48. The function has an intercept at $f(-5) = 0$.

The function has no minimum.
The function increases from -5 to 2 and
decreases from 2 to infinity.



49. The function has a domain from -9 to 9.
The function has a range from -2 to 7
The function is non-continuous.
The function is positive between -9 to 3.
The function is negative from right after 3 to 9.



MATCHING

Match the following descriptions to the graph they BEST represent.

_____50. The domain is 0 to infinity
The range is negative infinity to infinity.
The graph is continuous.

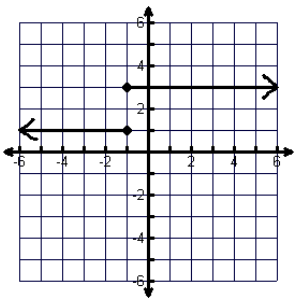
_____51. The domain is from negative infinity to infinity.
The function has a y intercept at f(0)=3
The function never increases and never decreases.
The function is non-continuous.

_____52. The domain is negative infinity to infinity.
The graph is negative from negative infinity to 2.
The graph is always increasing.

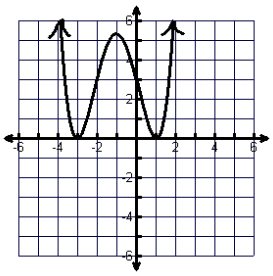
_____53. The domain is -3 and 2.
The range is negative infinity to infinity.
The function has no min and no max
The function is non-continuous.

_____54. The domain is negative infinity to infinity.
The range is 0 to infinity.
The function has two increasing intervals.
The function has minimums at f(-3)=0 and f(1)=0.

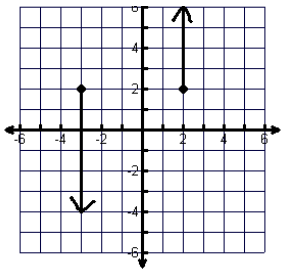
A.



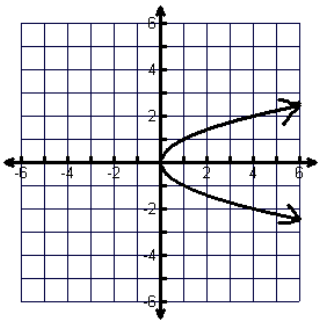
B.



C.



D.



E.