Secondary Math I Name_____

Unit 4 Test REVIEW - Functions

Date_____ Period____

Evaluate each function.

1) $p(a) = -2a + 3$; Find $p(-2)$

2) $h(x) = x^2 + 4$; Find $h(7)$

3) $g(a) = 2a - 2$; Find $g(-4)$

4) $k(x) = 4x + 5$; Find $k(10)$

5) $p(a) = -3a^2 - 4a$; Find $p(-1)$

6) $k(x) = 4x + 1$; Find $k(-5)$

7) $p(n) = 3n + 4$; Find $p(n - 3)$

8) $g(x) = -x - 5$; Find $g(x - 3)$

Perform the indicated operation.

9) $f(n) = -3n + 3$
$g(n) = -n + 1$
Find $f(-1) + g(-1)$

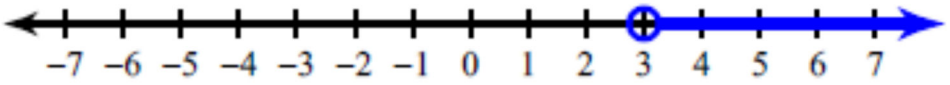
10) $f(x) = 3x - 2$
$g(x) = -4x + 1$
Find $f(x) + g(x)$

11) $g(x) = x^2 - 1$
$f(x) = 4x + 3$
Find $g(f(-3))$

12) $h(a) = 3a - 4$
$g(a) = -2a - 1$
Find $h(g(a))$

Write the given inequality in interval notation.

13.



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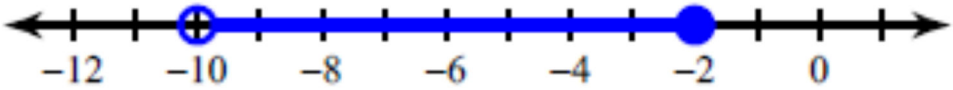

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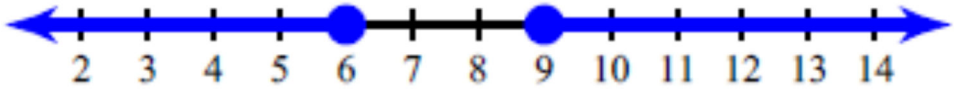

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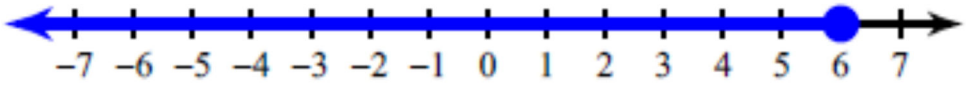
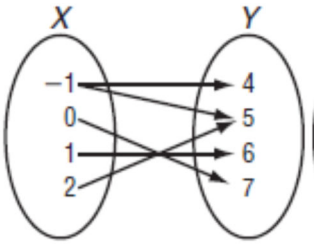


Determine if the given relation is a function.

17. $\{(2,5),(4,-2),(3,3),(5,4),(-2,5)\}$

18.



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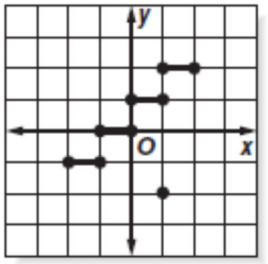
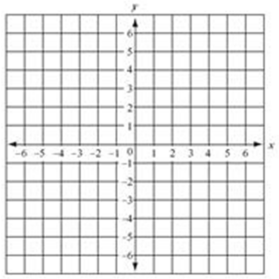


20. $x = -3$

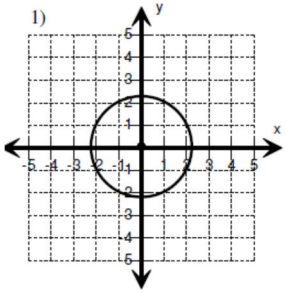
21. $y = 6x - 5$



22.

x	y
3	7
−1	1
1	0
3	5
7	3

23.



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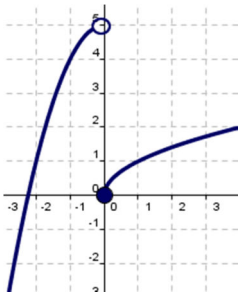


Determine the independent and dependent variable for each situation.

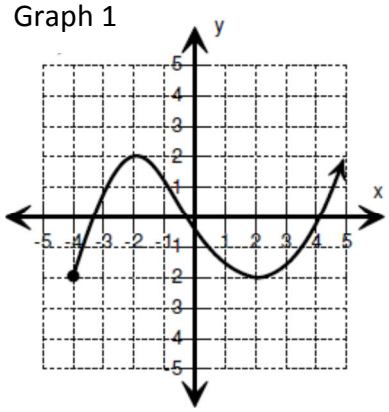
25. The more hours you study, the higher your score is on a test.

26. As it gets colder, it costs more to heat your home.

27. The further you drive, the more gas your car uses.

For #28 – 31, Use the graph below. Use the second graph for #32 – 34.

Graph 1



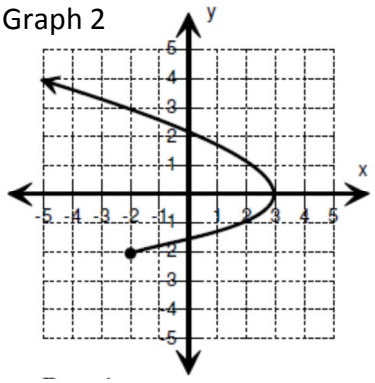
28. What is the domain and range of Graph 1?

29. Where are the extrema on Graph 1?

30. Where is Graph 1 positive and negative?

31. Where is Graph 1 increasing and decreasing?

Graph 2



32. What is the domain and range of Graph 2?

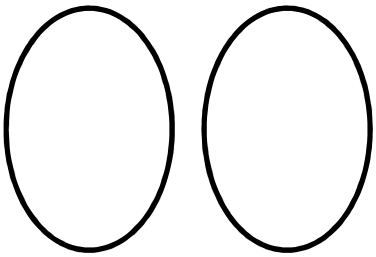
33. Where is Graph 2 positive and negative?

34. Is Graph 2 a linear function? If it is not, tell why it is not.

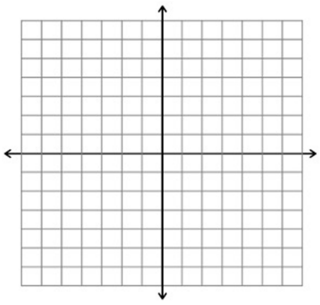
Compare the maximum and minimum of the two graphs.

Show the relation as a mapping, a table, and a graph.

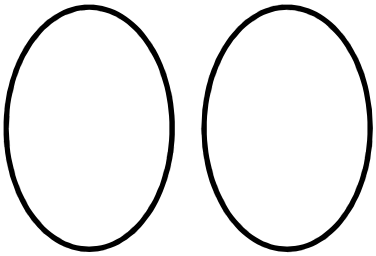
36. $\{(-2,6),(3,6),(2,3),(8,6),(-2,5)\}$



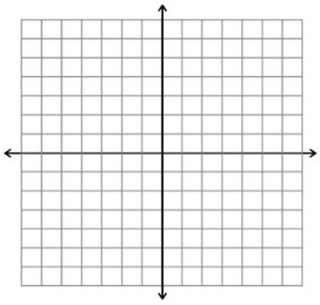
x	y



37. $\{(0,0),(-5,2),(-5,7),(6,0),(-1,1)\}$



x	y



Draw a graph that could describe the given situation. Be sure to label your axes (ind. and dep. variable)

38. A basketball is thrown down the court, bouncing as it goes.

39. A taxi picks up a passenger, drives to their destination and drops them off. A few minutes later, they pick up another passenger and drives them to their destination.

40. An airplane takes off from the SLC airport, levels off at 32,000 feet, travels 600 miles, and then lands at a lower altitude.