UNIT 3 TEST REVIEW: FUNCTIONS NAME_____

ALGEBRA 1 DATE _____BLOCK_____

Section 1: SOL A.7a

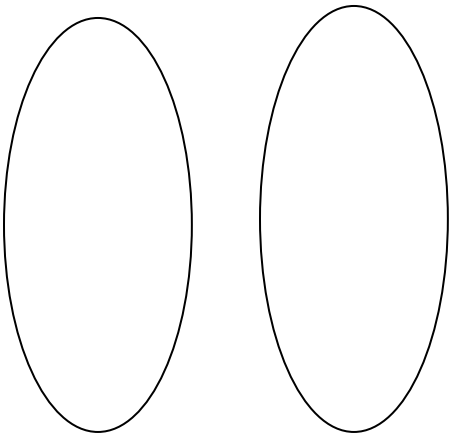
Represent the relation as a table, graph, and mapping:

$\{(-2,3),(5,0),(5,3),(0,-2),(3,-4),(-1,3)\}$

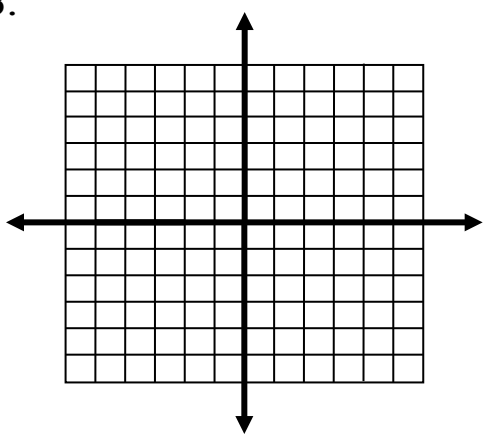
1.

Input (x)	Output (y)

2.



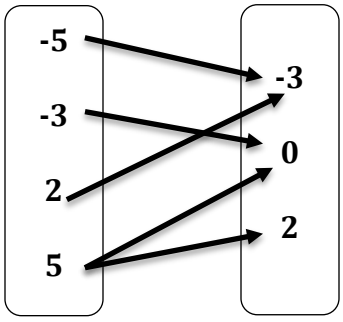
3.



4. Is this relation a function? _____

Directions: Determine whether each relation is a function. Write "yes" or "no" on the line. If it is not a function, state why.

5.

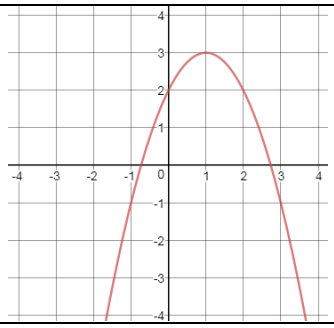


6.

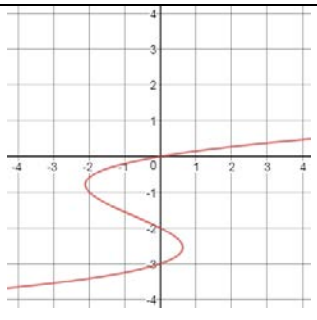
x	-3	0	3	5
y	2	2	1	6

7.

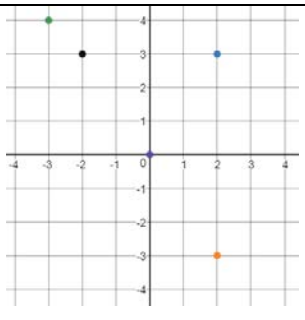
a.



b.



c.



7. Which of the following sets of ordered pairs is a function? For the one(s) that are not functions, state why it is not a function.

A. $\{(-2,3),(0,4),(3,7),(-4,-5),(-2,0)\}$

B. $\{(-4,5),(3,0),(-2,0),(6,-2),(-3,-4)\}$

C. $\{(-3,2),(0,5),(2,5),(0,-3),(3,-2)\}$

D. $\{(-2,4),(0,4),(3,4),(5,4),(7,4)\}$

Section 2: SOL A.7e

Given $f(x) = 3x + 2$, $g(x) = 2x^2 + 3$, and $h(x) = -\frac{3}{2}x - 4$, find each of the following.

8. $f(0)$

9. $g(4)$

10. $h(6)$

11. $g(-2)$

12. $f(-\frac{1}{3})$

13. $h(-10)$

14. Find the range of $f(x) = \frac{3x-1}{2}$ when the domain is {-5, -1, 0, 3, 6}. Write the range in the box.

Range: _____

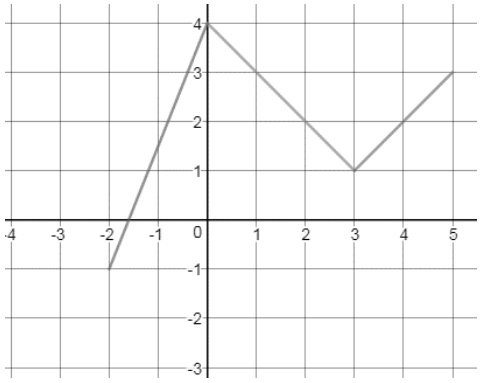
15. What is g(-3) for the function $g(x) = \frac{2}{3}x^2 - 4x$

Section 3: SOL A.7 b, c, d, f

16. Write the domain for the following relation:

x	y
-7	3
-3	4
2	-6
1	7
5	12

17. What is the domain for the function shown on the graph?



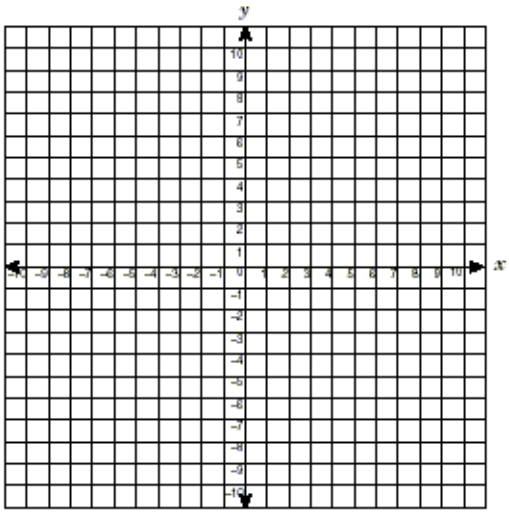
18. Define each of the following terms:

x-intercept	
Zero	
Domain	
Range	
y-intercept	
vertex	

Represent the function on a table and a graph. Identify the domain, range, zero(s), y-intercept(s), and vertex.

19. $f(x) = -2x^2 + 32$

x	y
-4	
-2	
0	
2	
4	



D = {x:_____}

R = {y:_____}

Zero(s):_____

y-intercept(s):_____

vertex: _____

A student earns $20 a week for cutting their grass. They can earn an additional $25 a week for each neighbor's yard that they cut.

19. Write a function to show the student's total weekly earnings in terms of how many additional yards they cut.

20. Find the range when the domain is {0, 3, 5}.

21. What do the domain and range represent in this situation?