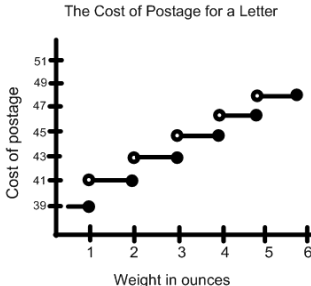
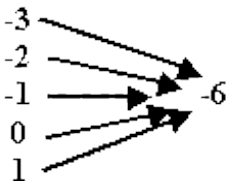
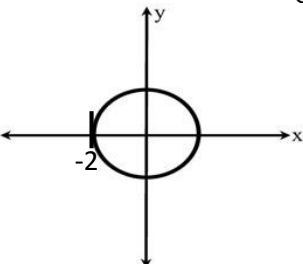
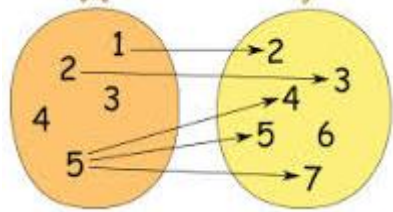
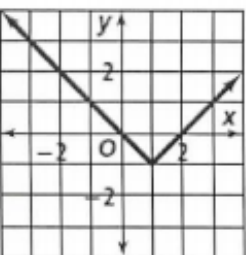


Unit 8 Review

Directions: please finish this review in order to take the test tomorrow. You will need to complete this review before your test will be graded.

1) Decide which of the following examples are functions (circle the functions):

<p>a)</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #d9ead3;"> <th>Time (s)</th> <th>Distance (m)</th> </tr> </thead> <tbody> <tr><td>0</td><td>80</td></tr> <tr><td>1</td><td>77</td></tr> <tr><td>2</td><td>74</td></tr> <tr><td>3</td><td>71</td></tr> <tr><td>4</td><td>68</td></tr> </tbody> </table> <p>D: R:</p>	Time (s)	Distance (m)	0	80	1	77	2	74	3	71	4	68	<p>b)</p> <p style="text-align: center; font-size: small;">The Cost of Postage for a Letter</p>  <p>D: R:</p>	<p>c)</p> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p>Jordan is spending the week fishing at the Great Salt Lake. Each day he catches 4 fish for each hour he spends fishing. This relationship can be modeled by the equation <math>y=4x</math>, where <math>x</math> = number of hours spent fishing and <math>y</math> = the number of fish caught.</p> </div> <p>D: R:</p>
Time (s)	Distance (m)													
0	80													
1	77													
2	74													
3	71													
4	68													
<p>d)</p>  <p>D: R:</p>	<p>e) This is a circle with the center at the origin</p>  <p>D: R:</p>	<p>f)</p>  <p>D: R:</p>												
<p>g)</p>  <p>D: R:</p>	<p>h)</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <tbody> <tr> <td>X</td> <td>-2</td> <td>0</td> <td>-2</td> <td>7</td> <td>-8</td> </tr> <tr> <td>Y</td> <td>6</td> <td>8</td> <td>20</td> <td>4</td> <td>8</td> </tr> </tbody> </table> <p>D: R:</p>	X	-2	0	-2	7	-8	Y	6	8	20	4	8	
X	-2	0	-2	7	-8									
Y	6	8	20	4	8									

- 2) Define the domain and range of each of the above using interval or bracket notation.
- 3) Define the domain and range of each of the above using inequalities.

4)  $f(x) = x^4 - 2x + 6$

a.  $f(7) =$

b.  $f(9) =$

c.  $f(-2) =$

d.  $f(x + 2) =$

Write the coordinate Pair for each of the above.

5)  $g(x) = 17x^3 + 1$

a.  $f(4) =$

b.  $f(10) =$

c.  $f(0) =$

d.  $f(2 - x) =$

Write the coordinate Pair for each of the above.

6)  $f(x) = 6x^2 - 2 + x$

a.  $f(-3) =$

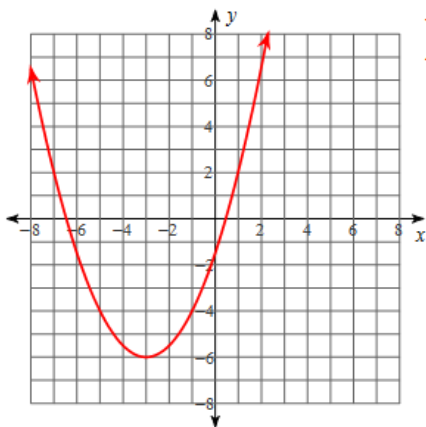
b.  $f(8) =$

c.  $f(1) =$

d.  $f(8 - x) =$

Write the coordinate Pair for each of the above.

Use the following graphed function to evaluate it at the indicated points (write answer as a coordinate pair):



7)  $f(0) =$

8)  $f(-8) =$

9)  $f(-7) =$

10) The  $x$  where  $f(x) = 2$

11) The  $x$  where  $f(x) = 6$

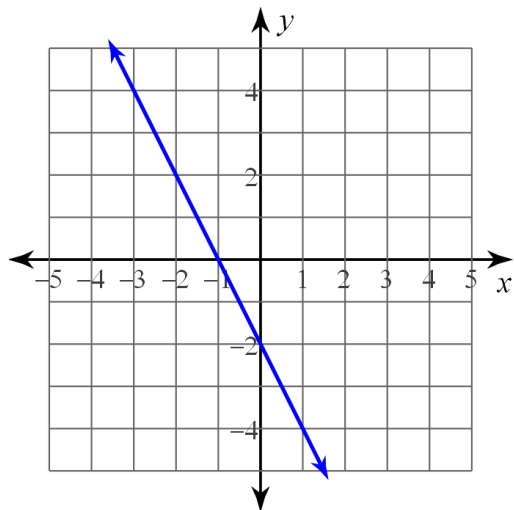
Write a function for each of the following:

12) Function: \_\_\_\_\_

<b>x</b>	9	6	3	0	-3
<b>y</b>	-14	-7	0	7	14

13) Function: \_\_\_\_\_  
(1,1), (-1,7)

14) Function \_\_\_\_\_



15) Function \_\_\_\_\_

$(-6,3), (6,1)$

Use the following functions to answer questions 11-14.

$$f(x) = -2x + 9$$

$$g(x) = 3x^2 - 3$$

$$h(x) = x^2 + 1$$

16) Find  $f(h(2))$

17) Find  $h(g(f(-1)))$

18) Find  $(f \circ g)(4)$

19) Find  $(f \circ g)(n)$

20) Find  $(f - g)(x)$

21) Find  $(h - g)(x)$

22) Find  $(h + f)(n)$

23) Find  $(g + h)(n)$

For each of the following situations describe what the function means:

24) Porter and Dillon start a business selling pieces of artwork. They calculate their earnings using a function  $f(x)$  where  $x$  represents the amount of artwork sold. What does  $f(4) = 643$  mean?

25) Abby and Gentry are planning to take over the world. They use a function  $f(x)$  to determine how many people they can bring under their rule per day where  $x$  represents the number of days. What does  $f(45) = 45,842$  mean?