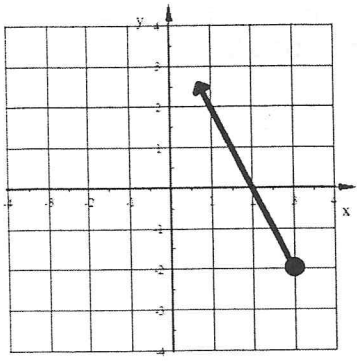
Algebra 1 Review Sec 5-2 to 5-4 Fall 2014

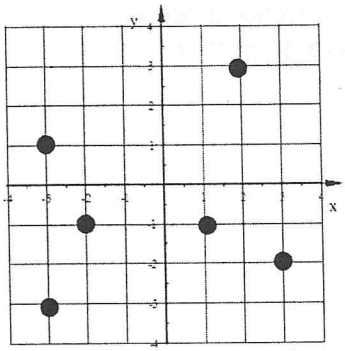
1. Find the domain and range of each.

a) $(6,7)\ (4,-1)\ (-6,7)\ (-1,3)$

b) Use the graph below.

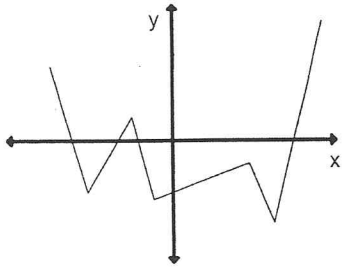


c) Use the graph below.

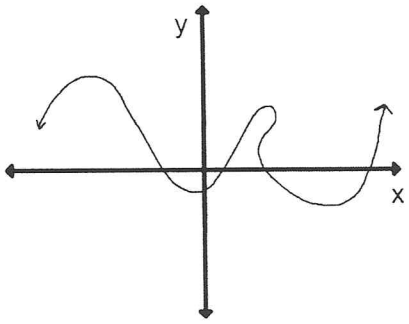


2. Is each relation a function? a) $(5,4)\ (-5,4)\ (3,1)\ (-3,1)$

b)



c)



d)

X	Y
5	6
−3	6
2	4
3	−7

e)

X	Y
−4	3
0	9
2	−7
−4	5

3. Given $f(x) = 2x^2 + 5$ find $f(-3)$

4. Given $c(w) = 4a + 7$.

a) Find the range of $c(w)$ that corresponds to this domain $\{-8,-2,5\}$

b) Find w if $c(w) = 23$

5. Given $g(t) = 4t - 1$ and $m(b) = b - 9$, find $2g(3) - 5m(8)$

6. Use what you know about each equation to state what he shape of each graph will be and, if applicable, which way it opens.

a) $f(x) = 2x^2 + 50$ b) $y = -6x + 7$ c) $f(x) = -6|x + 1| + 12$ d) $y = -2(x - 4)^2 + 8$

7. Use a separate sheet of graph paper to graph each function using a table. Make sure your graph shows the whole shape.

a. $y = -3|x + 3| + 5$ b. $y = -2(x - 2)^2 + 7$ c. $f(x) = 2x^2 - 4x - 2$

3. Model each situation with a function rule. Define your variables.

a) The number of gallons of water used when taking a shower is a function of low long your shower lasts. Water comes out of the shower head at a rate of 6 gallons per minute.

b) The bill for a plumber to come to your house and make a repair is a function of the number of hours spent working on the repair. The plumber charges $100 to drive to your house and $30 an hour for labor.

9. Write a function rule for each table.

a)

X	Y
1	−3
2	−2
3	−1
4	0
5	1

b)

X	Y
−2	−20
−1	−10
0	0
1	10
2	20

c)

X	Y
−2	6
−1	7
0	8
1	9
2	10

d)

X	Y
−6	9
−4	6
−2	3
2	−3
4	−6