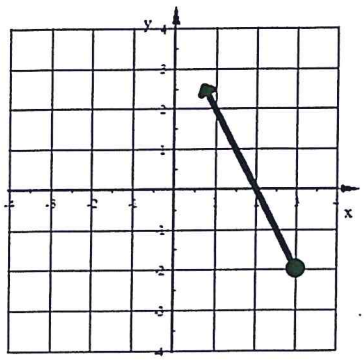
Algebra 1 Review Sec 5-2 and 5-3 Fall 2015

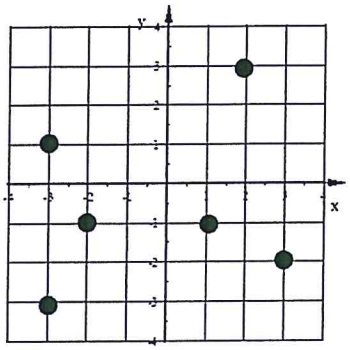
1. Find the domain and range of each.

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

b) Use the graph below.

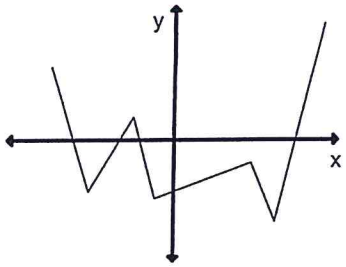


c) Use the graph below.

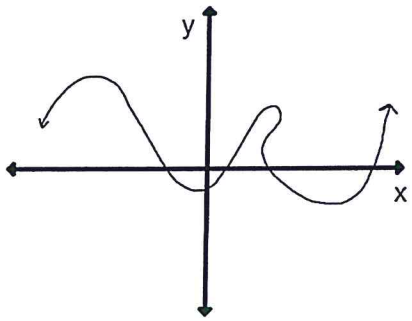


2. Is each relation a function? a) $(5,4)$ $(-5,4)$ $(3,1)$ $(-3,1)$

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

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 the 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. $y = -3x + 2$ b. $y = 2x^2 - 5$ c. $y = -3|x| + 4$

d. $y = 3|x + 2| - 6$ e. $y = -2(x - 2)^2 + 7$ f. $f(x) = 2x^2 - 4x - 2$

g. $y = \frac{1}{2}x - 1$

Algebra 1 Review Sec 5-2 and 5-3 ANSWERS Fall 2015

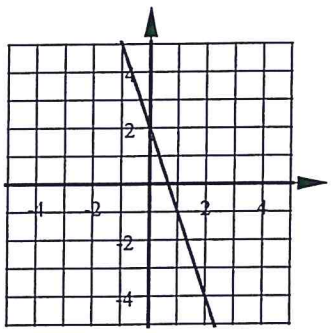
1. a) Domain: $\{-6,-1,4,6\}$ Range: $\{-1,3,7\}$
b) Domain: $x \le 3$ Range: $y \ge -2$ c) Domain: $\{-3,-2,1,2,3\}$ Range: $\{-3,-2,-1,1,3\}$

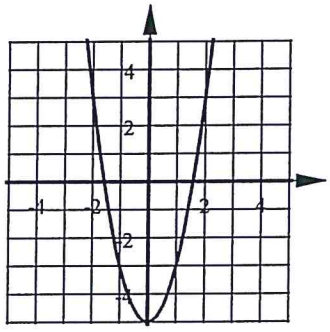
2. a) Yes b) Yes c) No d) Yes e) No

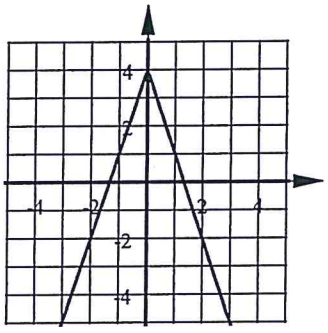
3. $f(-3) = 23$ 4. a) Range: $\{-25,-1,27\}$ b) $w = 4$ 5. 27

6. a) Parabola that opens up. b) A line that moves down and to the right.
c) V-shape that opens down d) Parabola that opens down

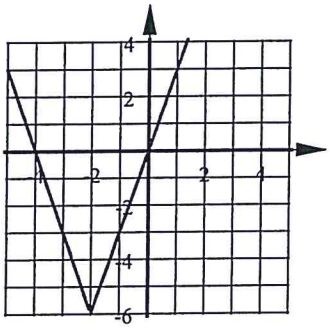
7. a. $y = -3x + 2$ b. $y = 2x^2 - 5$ c. $y = -3|x| + 4$

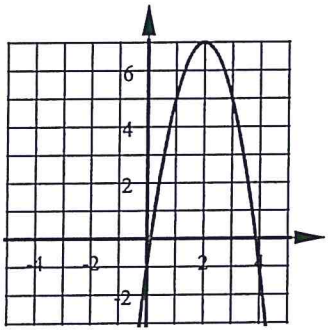


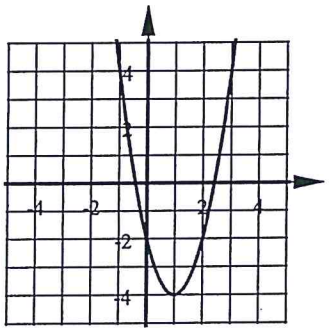




d. $y = 3|x + 2| - 6$ e. $y = -2(x - 2)^2 + 7$ f. $f(x) = 2x^2 - 4x - 2$







g. $y = \frac{1}{2}x - 1$