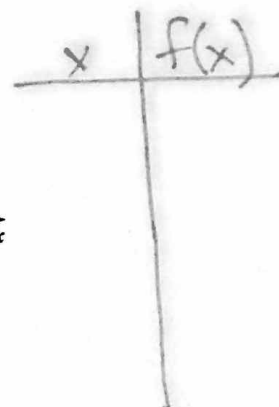
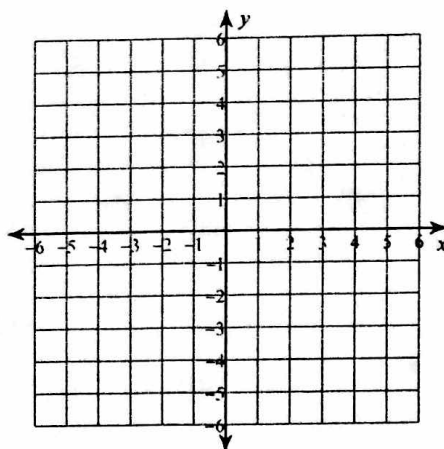
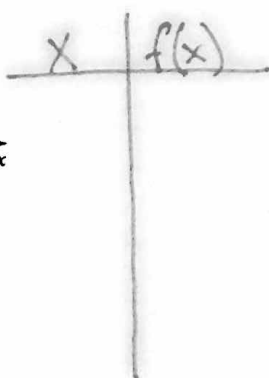
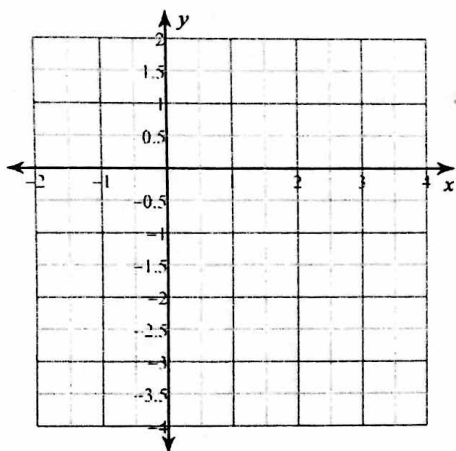


Functions Test Review

Sketch the graph of each function. State whether it is linear or non-linear.

1) $y = -x^2 + 2x$

2) $y = 2x + 3$



State the domain and range. Then determine whether or not the relation is a function.

3) $\{(0,2), (-3,1), (4,-5), (7,4)\}$

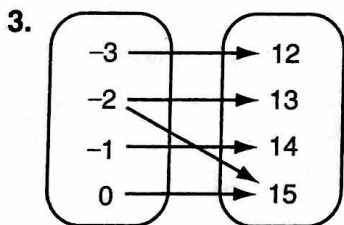
Function: YES or NO

Domain: _____ Range: _____

4) $\{(4,9), (-4,0), (4,-5), (-4,-9)\}$

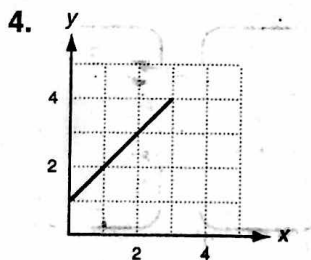
Function: YES or NO

Domain: _____ Range: _____



D: _____

R: _____



D: _____

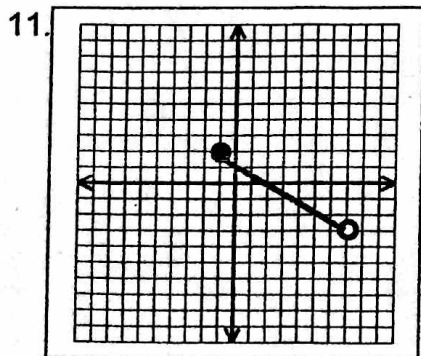
R: _____

5.

x	y
8	8
6	6
4	4
2	6
0	8

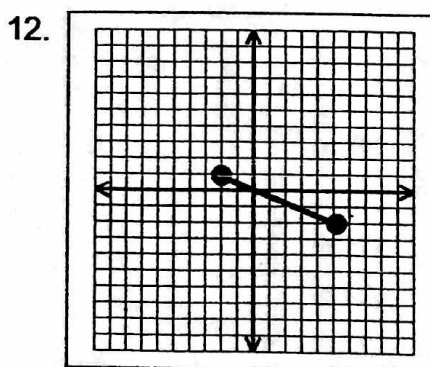
D: _____

R: _____



Domain: _____

Range: _____



Domain: _____

Range: _____

Determine the correlation for the following relationships. State the independent and dependent variables.

3) The weight of a box and the number of books in the box.

4) A person's heart rate during the first five minutes of aerobic exercise.

5) A person's heart rate during cool-down after exercising.

6) The number of students cleaning a classroom and the time it takes to clean it.

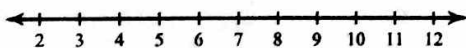
Answer the following questions.

7) Find the range of $f(x) = 4x - 2$ when the given domain is $\{-2, -1, 0, 1\}$.

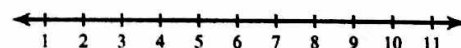
8) Find the domain of $f(x) = x - 3$ when the given range is $\{-1, 0, 1, 2\}$.

Solve each inequality and graph its solution.

9) $201 \leq -8(-4n - 5) + 1$



10) $-84 > -3x - 7(x + 2)$



Solve each equation.

11) $-7(3m + 3) = -7m - 7$

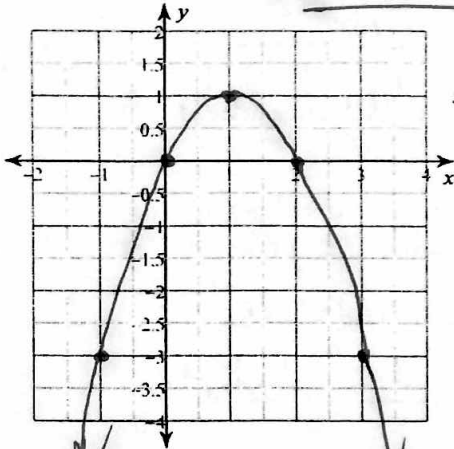
12) $3(8 + 6n) - 2n = -30 + 7n$

Functions Test Review

Sketch the graph of each function. State whether it is linear or non-linear.

1) $y = -x^2 + 2x$

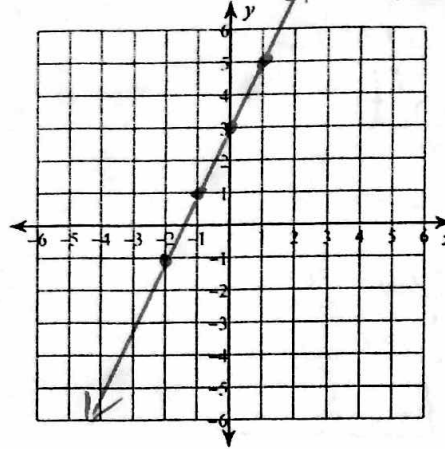
Non-Linear



x	f(x)
-1	-3
0	0
1	1
2	0
3	-3

2) $y = 2x + 3$

Linear



x	f(x)
-2	-1
-1	1
0	3
1	5
2	7

State the domain and range. Then determine whether or not the relation is a function.

3) $\{(0,2), (-3,1), (4,-5), (7,4)\}$

Function: YES or NO

Domain: $\{0, -3, 4, 7\}$

Range: $\{2, 1, -5, 4\}$

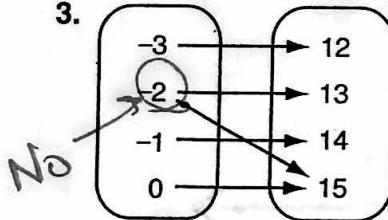
4) $\{(4,9), (-4,0), (4,-5), (-4,-9)\}$

Function: YES or NO

Domain: $\{4, -4\}$

Range: $\{9, 0, -5, -9\}$

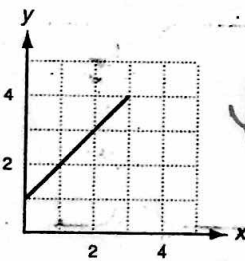
3.



D: $\{-3, -2, -1, 0\}$

R: $\{12, 13, 14, 15\}$

4.



Yes

D: $0 \leq x < 3$

R: $1 \leq y \leq 4$

5.

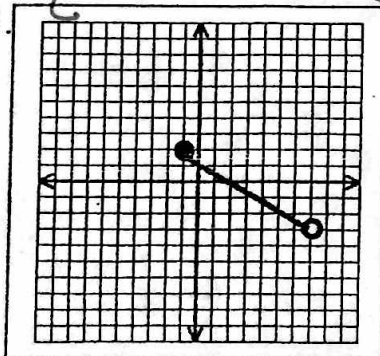
x	y
8	8
6	6
4	4
2	6
0	8

Yes

D: $\{8, 6, 4, 2, 0\}$

R: $\{8, 6, 4, 6, 8\}$

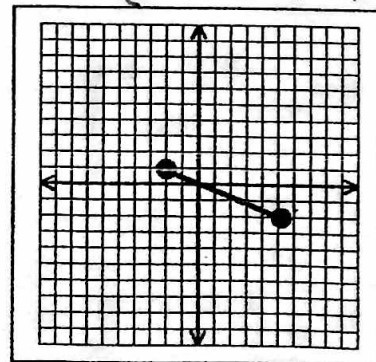
11.



Domain: $-1 \leq x < 7$

Range: $-3 < y \leq 2$

12.



Domain: $-2 \leq x \leq 5$

Range: $-2 \leq y \leq 1$

Determine the correlation for the following relationships. State the independent and dependent variables.

- 3) The weight of a box and the number of books in the box.

Corr: positive

Ind: # of books

Dep: weight

- 4) A person's heart rate during the first five minutes of aerobic exercise.

Corr: positive

Ind: time

Dep: heart rate

- 5) A person's heart rate during cool-down after exercising.

Corr: negative

Ind: time

Dep: heart rate

- 6) The number of students cleaning a classroom and the time it takes to clean it.

Corr: negative

Ind: # of students

Dep: time

Answer the following questions.

- 7) Find the range of $f(x) = 4x - 2$ when the given domain is $\{-2, -1, 0, 1\}$.

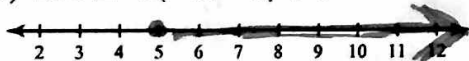
$$R = \{-10, -6, -2, 2\}$$

- 8) Find the domain of $f(x) = x - 3$ when the given range is $\{-1, 0, 1, 2\}$.

$$D = \{2, 3, 4, 2\}$$

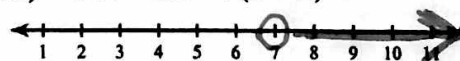
Solve each inequality and graph its solution.

9) $201 \leq -8(-4n - 5) + 1$



$$n \geq 5$$

10) $-84 > -3x - 7(x + 2)$



$$x < 7$$

Solve each equation.

11) $-7(3m + 3) = -7m - 7$

$$m = -1$$

12) $3(8 + 6n) - 2n = -30 + 7n$

$$n = -6$$