Name _____

# Functions, Domains, and Ranges

**Directions:** State the relation as a set of ordered pairs. Determine the domain and range of the relation.

1.

| x | y |
|---|---|
| −3 | 2 |
| −1 | 6 |
| 1 | −2 |
| 3 | 5 |

Relation _____

D = _____

R = _____

2.

| x | y |
|---|---|
| 3 | −2 |
| 6 | 4 |
| 8 | −2 |
| 10 | −8 |

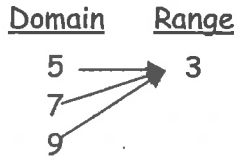
Relation _____

D = _____

R = _____

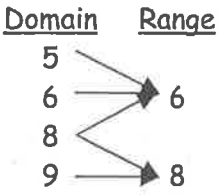
**Directions:** State whether the following relations are functions.

3.



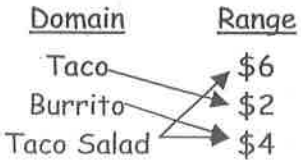

_____

4.



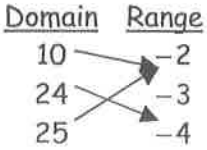

_____

5.



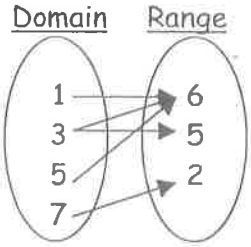

_____

6.



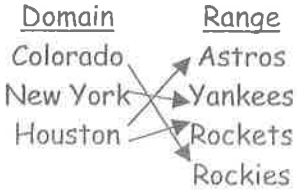

_____

7.




_____

8.

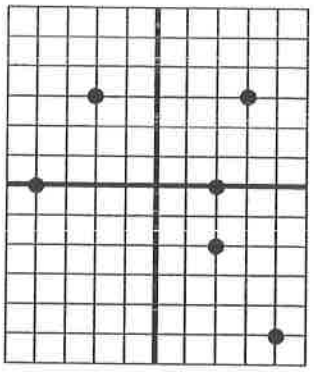



_____

# Functions, Domains, and Ranges *(cont.)*

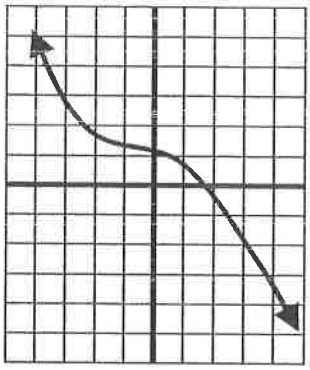
**Directions:** Use the vertical line test to determine which of the following graphs are functions. Write "yes" if the graph is a function and "no" if the graph is not a function.

9.



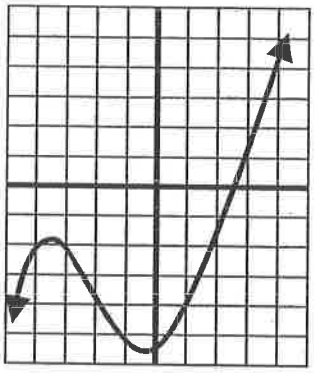
_____

10.



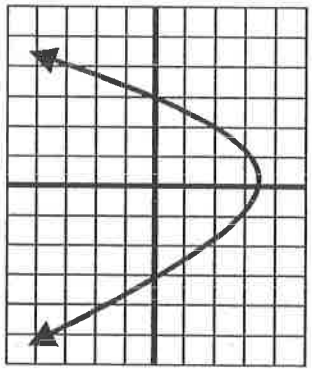
_____

11.



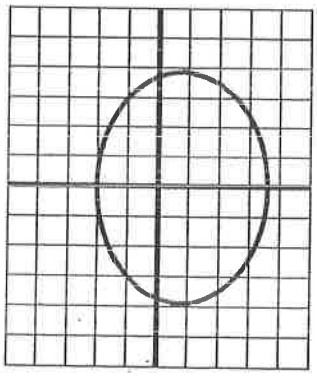
_____

12.



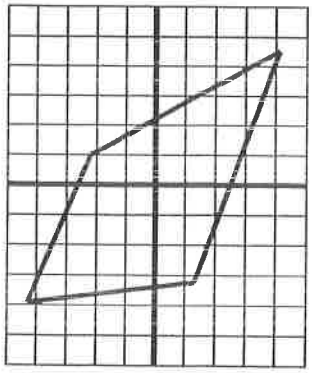
_____

13.



_____

14.



_____

Name _____ HOMEWORK Period _____ A#5-2

**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

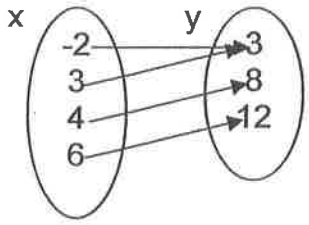
Domain:_____ Range:_____

5) { ( 5, 3 ) , ( -2,7 ) , ( 7, -2 ) , ( 5, -3) } Function: YES or NO

Domain:_____ Range:_____

**Express the relations shown in each table, mapping, or graph as a set of ordered pairs. Then state the domain and range. Tell whether the relation is a function.**

6.



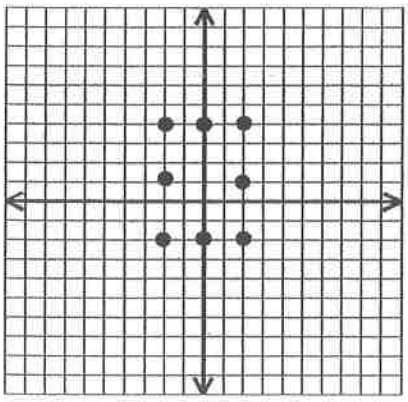

Ordered pairs:_____

Domain:_____

Range:_____

Function: YES or NO

7.



Ordered Pairs:_____

Domain:_____

Range:_____

Function: YES or NO

8. Cost of admission to Water World

| Number of people | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Cost (dollars) | 28 | 50 | 80 | 100 |

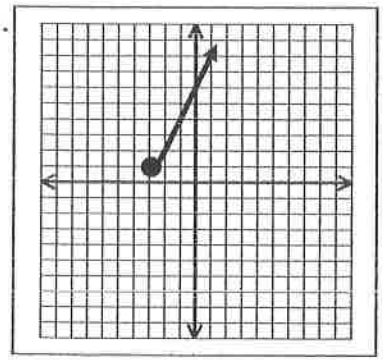
Ordered Pairs:_____

Domain:_____

Range:_____

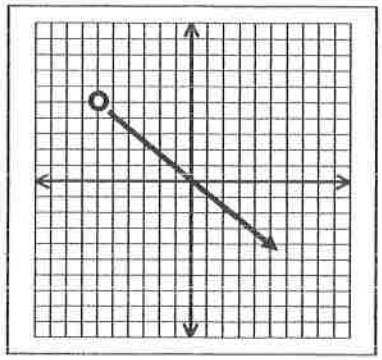
Function: YES or NO

Find the domain and range from the graph.

9. 

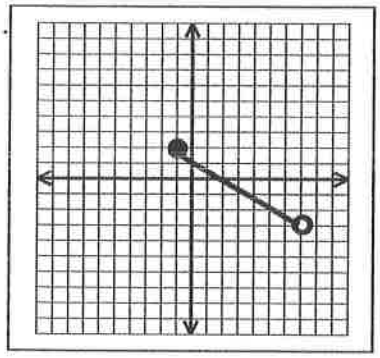
Domain:_____

Range:_____

10. 

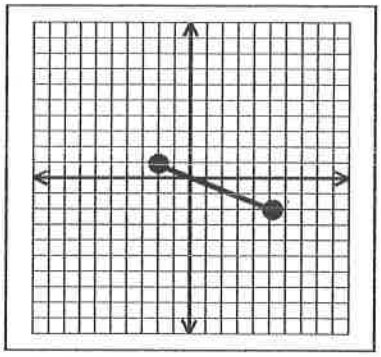
Domain:_____

Range:_____

11. 

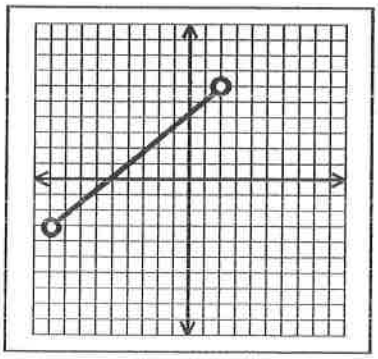
Domain:_____

Range:_____

12. 

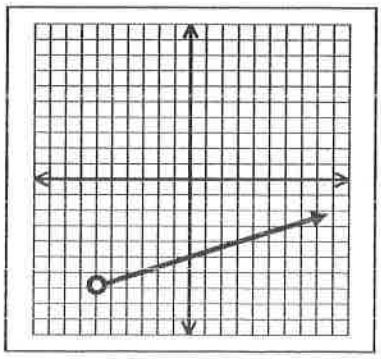
Domain:_____

Range:_____

13. 

Domain:_____

Range:_____

14. 

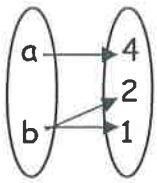
Domain:_____

Range:_____

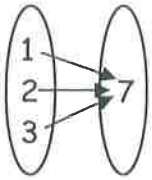
FUNCTIONS AND NON-FUNCTIONS Name _____

PRACTICE Date_____Period _____

Identify each relation as a FUNCTION or NON-Function.

1. 


2.
San Francisco → Giants
New York → Mets
Saint Louis → Rams

3. 


1. _____ 2._____ 3._____

4.

| x | -5 | -3 | 2 | -3 |
|---|---|---|---|---|
| y | 4 | 2 | 6 | -5 |

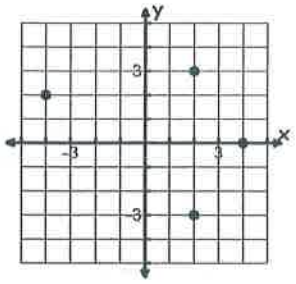
5.

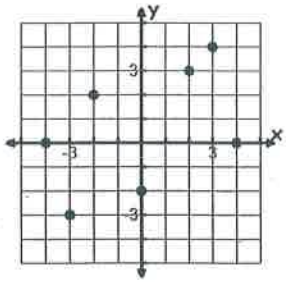
| x | 4 | 2 | 1 | -2 |
|---|---|---|---|---|
| y | 5 | 5 | -3 | -2 |

6.

| x | 2 | 6 | 6 | 8 |
|---|---|---|---|---|
| y | 6 | 8 | 10 | 12 |

4._____ 5._____ 6._____

7. 


8. 


7. _____ 8. _____

Elizabeth bought 3-inch tomato plants at Home Depot. Each week after she bought the plants she measured their height. She recorded the data in the table below

| Time (wks.) | 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| Height of Tomato Plants (in.) | 3 | 5 | 7 | 9 | 11 |

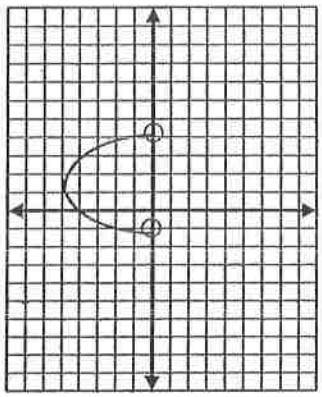
9. INDEPENDENT:_____

10. DEPENDENT:_____

11. Correlation:_____

(a) STATE THE DOMAIN (b) STATE THE RANGE
(c) DETERMINE IF FUNCTION OR NOT

7.

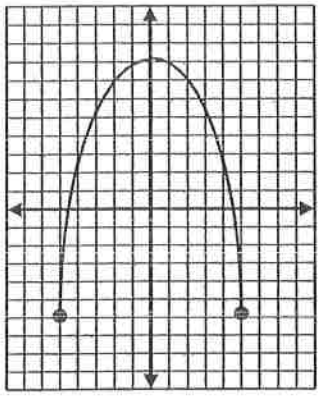


a)_____

b)_____

c) _____

8.

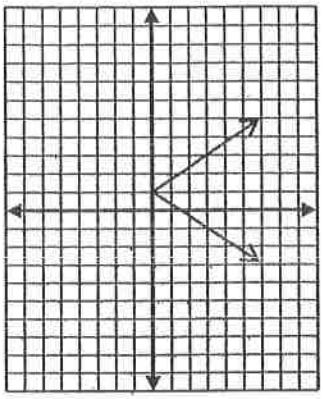


a)_____

b)_____

c)_____

9.

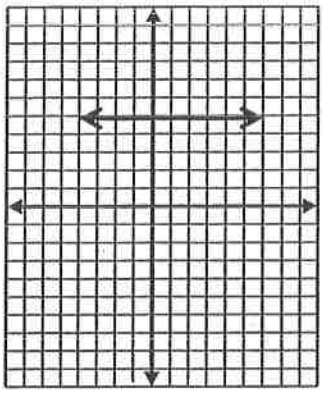


a)_____

b)_____

c)_____

10.

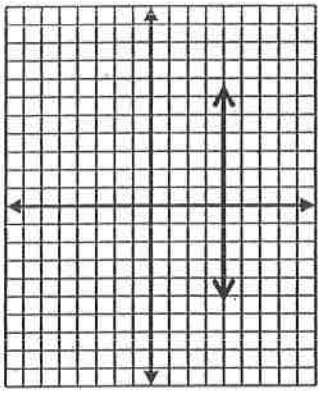


a)_____

b)_____

c) _____

11.

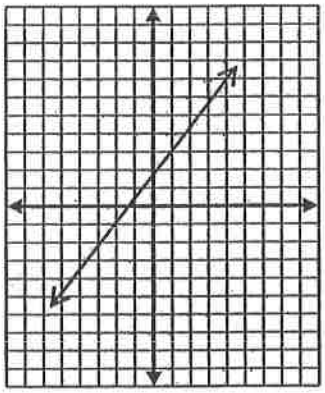


a)_____

b)_____

c)_____

12.



a)_____

b)_____

c)_____

13. Tara's car travels about 25 miles on one gallon of gas. She has between 10 and 12 gallons of gas in the tank.
   a) List the independent and dependent quantities.

   b) Find the reasonable domain and range values.

   c) Write the reasonable domain and range as inequalities.

14. Sal and three friends plan to bowl one or two games each. Each game costs $2.50.
   a) List the independent and dependent quantities.

   b) Find the reasonable domain and range values.

   c) Write the reasonable domain and range as inequalities.