

Warm-Up:

How do we remember order of operations?



1.  $15 \times 2 \div 6$

2.  $3(7 - 1) - 4$

3.  $6 - 4 \div 2 + 5$

4.  $2 - (1 - 3) \times 2$

-----  
A \_\_\_\_\_ is a relationship between two sets of data.

Every relation has a **domain** and a **range**.

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

_____	_____
_____	_____
_____	_____

A \_\_\_\_\_ is a special relation in which each input is mapped to only one output.

[In other words, no \_\_\_\_\_.]

Consider the following relation:  $\{(-1, 4), (2, 0), (-4, -7), (3, 5), (4, -1)\}$

Function? \_\_\_\_\_ Domain: \_\_\_\_\_ Range: \_\_\_\_\_

Consider the following relation:  $\{(2, -3), (1, 6), (-5, -4), (2, 4), (6, 0)\}$

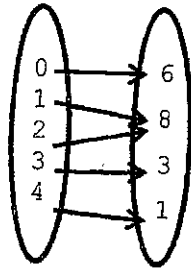
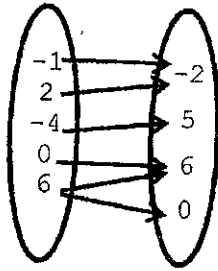
Function? \_\_\_\_\_ Domain: \_\_\_\_\_ Range: \_\_\_\_\_

Consider the following relation:  $\{(-2, 2), (-1, 2), (0, 2), (1, 2), (2, 2)\}$

Function? \_\_\_\_\_ Domain: \_\_\_\_\_ Range: \_\_\_\_\_

Determine if the following tables and mappings are functions. Describe the domain and range.

x	y
-2	14
1	10
4	6
7	2
11	-2



x	y
2	7
-1	2
0	-5
4	3
4	-2

Function? \_\_\_\_\_

Function? \_\_\_\_\_

Function? \_\_\_\_\_

Function? \_\_\_\_\_

Domain: \_\_\_\_\_

Domain: \_\_\_\_\_

Domain: \_\_\_\_\_

Domain: \_\_\_\_\_

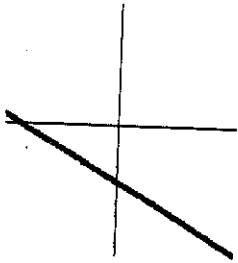
Range: \_\_\_\_\_

Range: \_\_\_\_\_

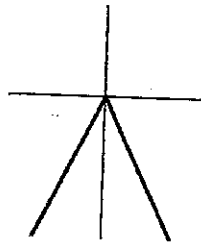
Range: \_\_\_\_\_

Range: \_\_\_\_\_

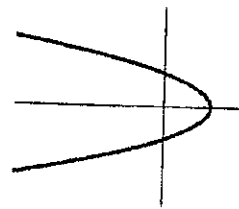
In order to determine if a graph is a function, use the vertical line test.



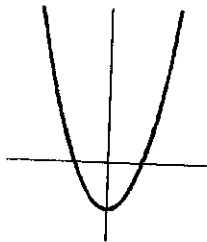
Function? \_\_\_\_\_



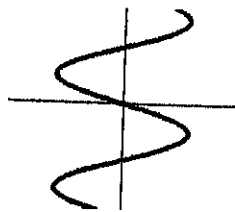
Function? \_\_\_\_\_



Function? \_\_\_\_\_



Function? \_\_\_\_\_



Function? \_\_\_\_\_



Function? \_\_\_\_\_

# Ways to Represent RELATIONS

## ORDERED PAIRS

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

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

Function? \_\_\_\_\_

## TABLES

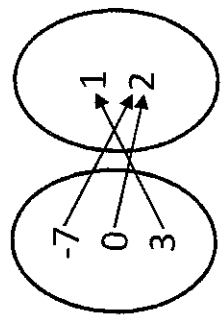
x	y
3	1
-2	-4
0	2
3	6

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

Function? \_\_\_\_\_

## MAPPINGS

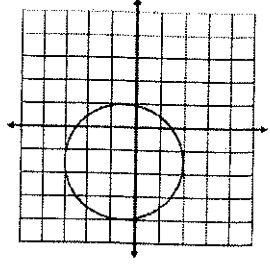


Domain: \_\_\_\_\_

Range: \_\_\_\_\_

Function? \_\_\_\_\_

## GRAPHS



Domain: \_\_\_\_\_

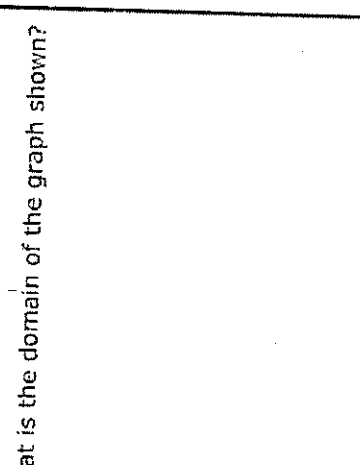
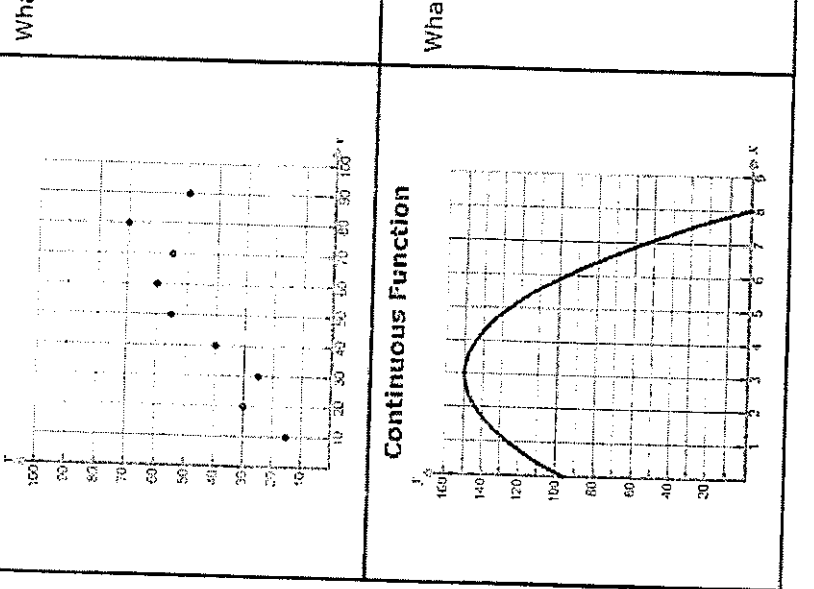
Range: \_\_\_\_\_

Function? \_\_\_\_\_

Name: \_\_\_\_\_

Domain and Range

## Domain and Range Graphic Organizer

	DOMAIN	RANGE
<p>My Definition:</p>	<p>My Definition:</p>	<p>My Definition:</p>
<p><b>Discrete Function</b></p> 	<p>What is the domain of the graph shown?</p>	<p>What is the range of the graph shown?</p>
<p><b>Continuous Function</b></p> 	<p>What is the domain of the graph shown?</p>	<p>What is the range of the graph shown?</p>

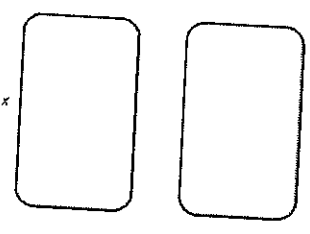
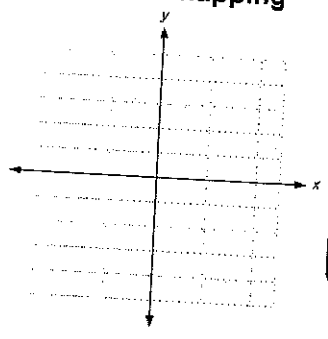
**LESSON**  
**8-2**

**Practice B**  
**Relations and Functions**

Express each relation as a table, as a graph, and as a mapping diagram.

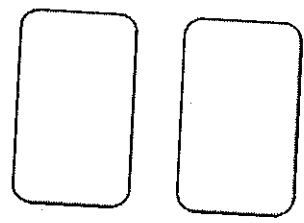
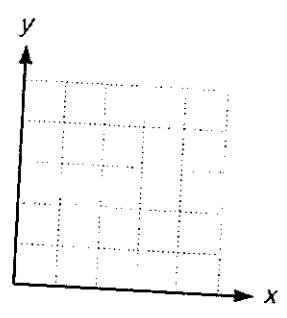
1.  $\{(-5, 3), (-2, 1), (1, -1), (4, -3)\}$

x	y

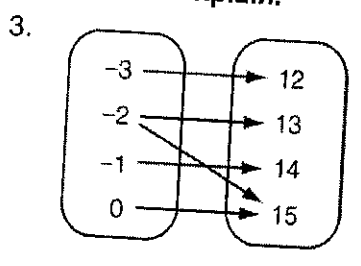


2.  $\{(4, 0), (4, 1), (4, 2), (4, 3), (4, 4), (4, 5)\}$

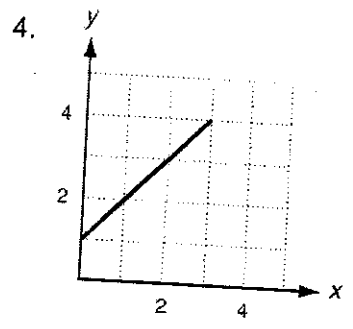
x	y



Give the domain and range of each relation. Tell whether the relation is a function. Explain.



D: \_\_\_\_\_  
R: \_\_\_\_\_  
Function? \_\_\_\_\_  
Explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



D: \_\_\_\_\_  
R: \_\_\_\_\_  
Function? \_\_\_\_\_  
Explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5.

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

D: \_\_\_\_\_  
R: \_\_\_\_\_  
Function? \_\_\_\_\_  
Explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

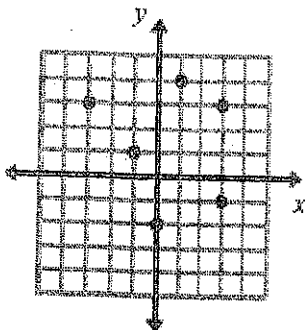


# Function Notation and Evaluating Functions Practice Worksheet B

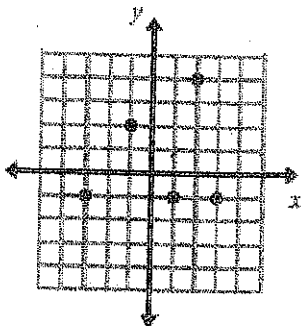
Name \_\_\_\_\_ Class Period \_\_\_\_\_

Decide whether the graph represents  $y$  as a function of  $x$ . If it is a function, give the domain and range.

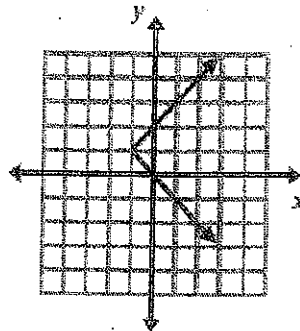
1.



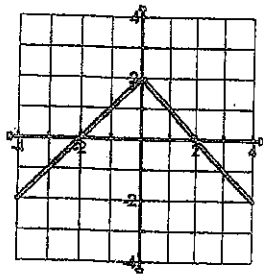
2.



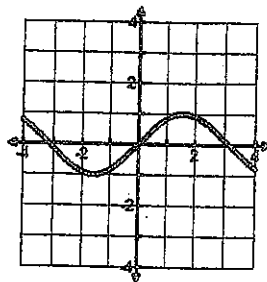
3.



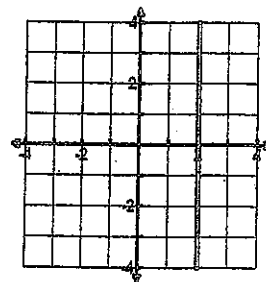
4.



5.



6.



Decide whether the relation is a function.  
If it is a function, give the domain and the range.

7.

Input	Output
1	7
1	-7
2	8
2	-8

8.

Input	Output
3	2
5	4
7	6

9.

Input	Output
0	-6
2	-4
4	-2
6	0