

Algebra 1
Introduction to Functions

Name: _____
Date: _____

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

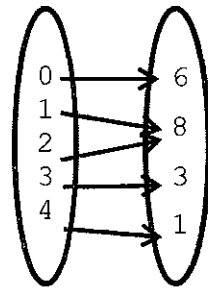
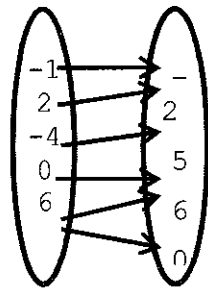
Function? _____ Domain: _____ Range: _____

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: _____

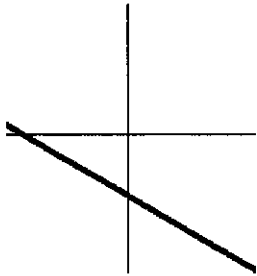
Range: _____

Range: _____

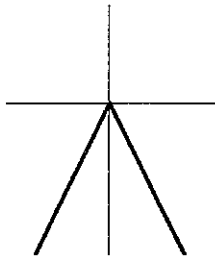
Range: _____

Range: _____

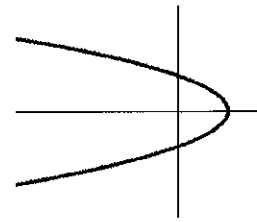
In order to determine if a *graph* is a function, use the vertical line test.



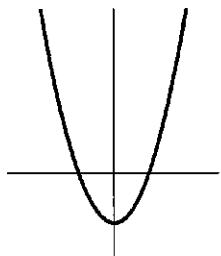
Function? _____



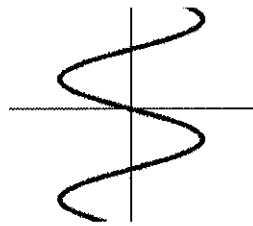
Function? _____



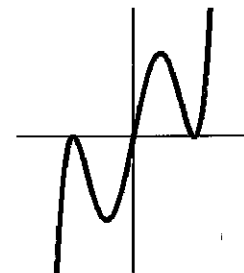
Function? _____



Function? _____



Function? _____



Function? _____

Determine if the following relations are functions. Describe the domain and range.

1. $\{(5, -1), (0, 3), (-2, -4), (6, -1), (-2, 3)\}$

Function? _____ Domain: _____ Range: _____

2. $\{(9, 2), (-4, -1), (0, -3), (-7, 6), (5, -2)\}$

Function? _____ Domain: _____ Range: _____

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

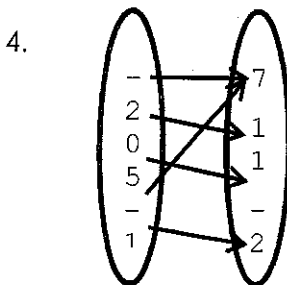
3.

x	y
3	9
8	24
-2	-6
0	0

Function? _____

Domain: _____

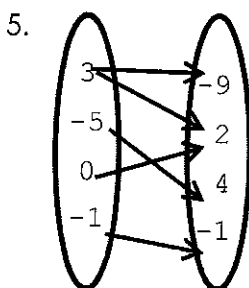
Range: _____



Function? _____

Domain: _____

Range: _____



Function? _____

Domain: _____

Range: _____

6.

x	y
-6	8
2	3
-6	-11
4	-2

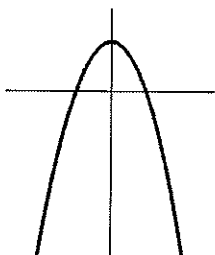
Function? _____

Domain: _____

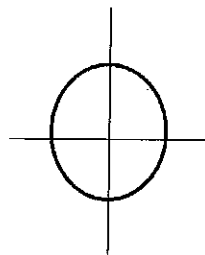
Range: _____

Determine if the following graphs are functions. Use the vertical line test.

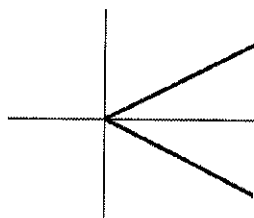
7. Function? _____



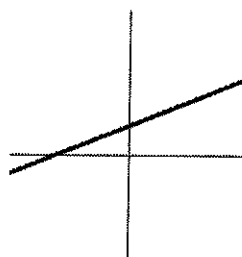
8. Function? _____



9. Function? _____



10. Function? _____

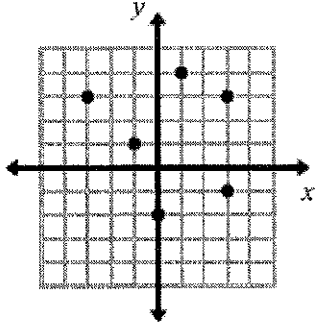


Function Notation and Evaluating Functions Practice Worksheet B

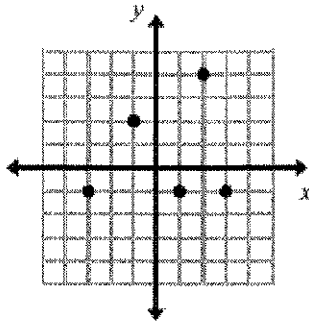
Name _____ Class Period _____

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

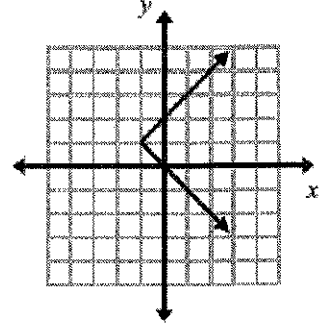
1.



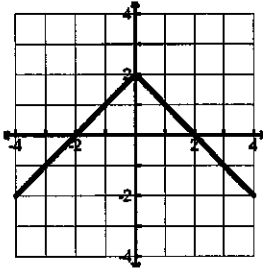
2.



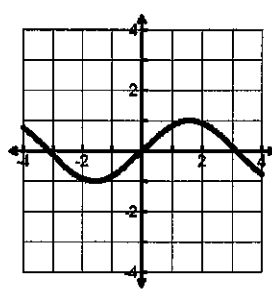
3.



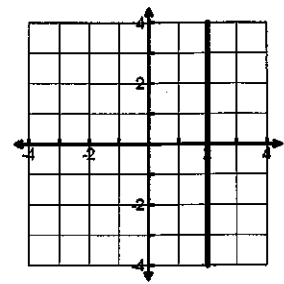
4.



5.

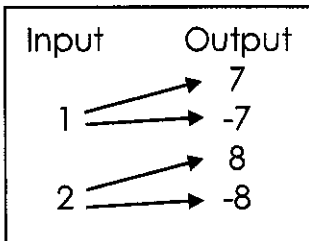


6.

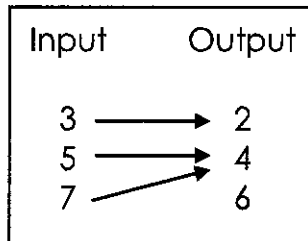


Decide whether the relation is a function.
If it is a function, give the domain and the range.

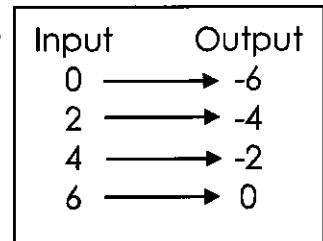
7.



8.



9.



Evaluate the function when $x = 3$, $x = 0$, and $x = -2$. (3 answers for each problem)

10. $f(x) = 2x - 5$

11. $h(x) = 6x + 2$

12. $g(x) = 2.4x$