Unit 5 – Functions & Linear Representations: Sample Unit Outline

	TOPIC	HOMEWORK
DAY 1	Coordinate Plane Review; Relations vs. Functions; Domain and Range	HW #1
DAY 2	Equations as Functions; Graphing Linear Equations by Table	HW #2
DAY 3	Rate of Change/Slope (from a graph)	HW #3
DAY 4	**Quiz 5-1**	None
DAY 5	Slope Formula	HW #4
DAY 6	Slope Applications (Rate of Change)	HW #5
DAY 7	Graphing Linear Equations by Slope-Intercept Form	HW #6
DAY 8	**Quiz 5-2**	None
DAY 9	Standard Form	HW #7
DAY 10	Vertical and Horizontal Lines	HW #8
DAY 11	Linear vs. Nonlinear Equations	HW #9
DAY 12	**Quiz 5-3**	None
DAY 13	Slope-Intercept Form Applications	HW #10
DAY 14	Proportional Relationships (Direct Variation)	HW #11
DAY 15	Unit 5 Review	Study for Test
DAY 16	**Unit 5 Test**	None

See sample images of the pages on the next page.

FUNCTIONS & LINEAR RELATIONSHIPS DICTIONARY

GRAPHING BASICS	DEFINITION	EXAMPLE OR VISUAL
COORDINATE PLANE		
X-AXIS		
Y-AXIS		
QUADRANTS		
ORIGIN		
ORDERED PAIR		
X-COORDINATE		
Y-COORDINATE		

FUNCTIONS	DEFINITION	EXAMPLE OR VISUAL
RELATION		
DOMAIN		
RANGE		
FUNCTION		
INDEPENDENT VARIABLE		
DEPENDENT VARIABLE		
VERTICAL LINE TEST		

LINEAR EQUATIONS	DEFINITION	EXAMPLE OR VISUAL
RATE OF CHANGE		

SLOPE	
POSITIVE SLOPE	
NEGATIVE SLOPE	
ZERO SLOPE	
UNDEFINED SLOPE	
SLOPE FORMULA	
SLOPE-INTERCEPT FORM	
STANDARD FORM	
VERTICAL LINE	

HORIZONTAL LINE		
LINEAR FUNCTION		
NONLINEAR FUNCTION		

DIRECT VARIATION	DEFINITION	EXAMPLE OR VISUAL
PROPORTIONAL RELATIONSHIP		
NONPROPORTIONAL RELATIONSHIP		
CONSTANT OF VARIATION		
DIRECT VARIATION		

COORDINATE PLANE

parts of the plane

x-axis

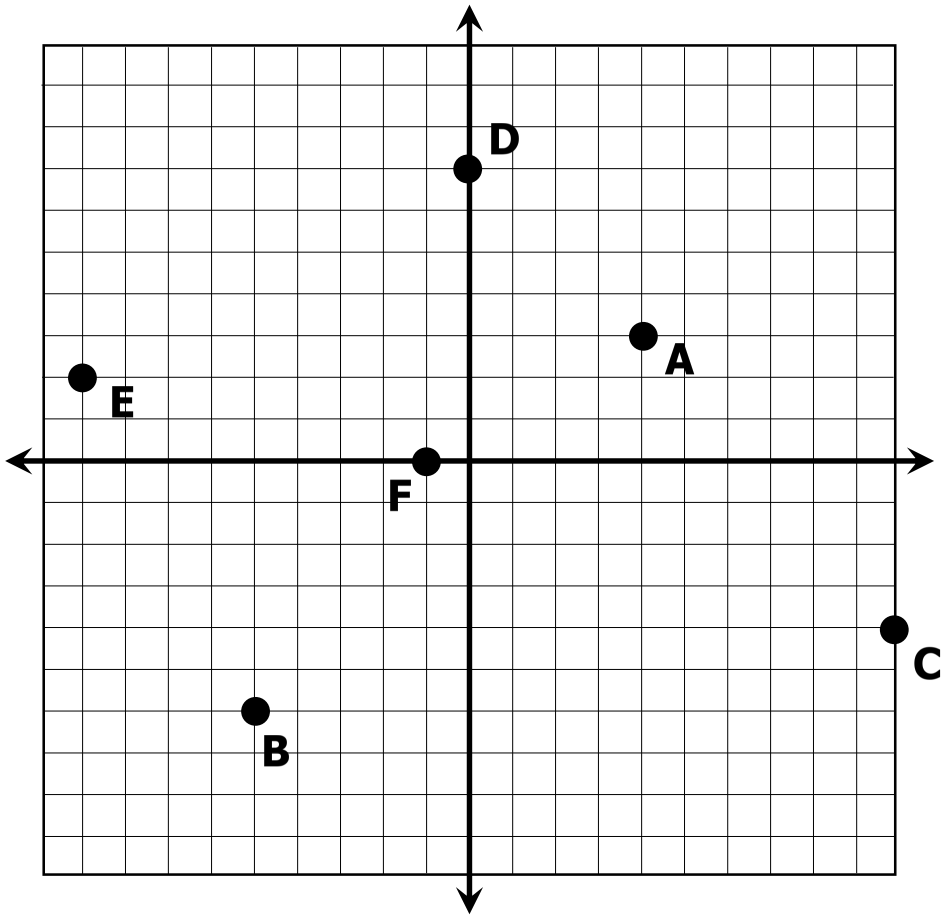
y-axis

ORIGIN:

QUADRANTS:

ORDERED PAIR:

(x, y)



LOCATING POINTS: Identify the ordered pair and quadrant (or axis) for each point.

POINT	ORDERED PAIR	QUADRANT
A		
B		
C		
D		
E		
F		

Name:	Date:
Topic:	Class:

Main Ideas/Questions	Notes/Examples
RELATION	
	Example:
	Can be shown as:
DOMAIN	
RANGE	

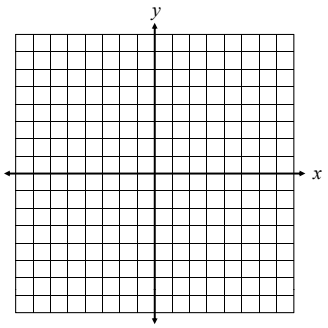
examples

ORDERED PAIRS | **TABLE** | **GRAPH**

1

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

x	y

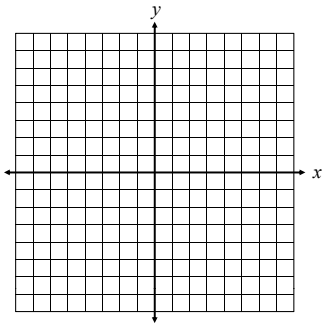


Domain: **Range:**

2

{(-6, 0), (1, 4), (8, -3), (1, -5)}

x	y

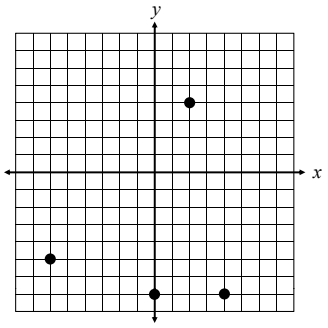


Domain: **Range:**

For questions 3 and 4, use the points plotted on the graph.

3

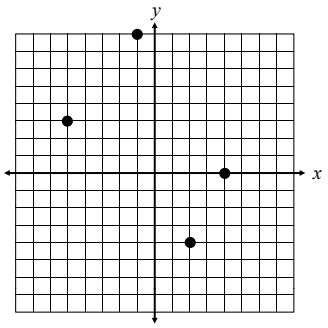
x	y



Domain: **Range:**

	4		
	Domain:	**Range:**	
FUNCTION			
examples	**Directions:** Determine whether the relation is a function.		
	5. {(6, -2), (-4, -1), (2, 0), (-7, 4)}	**6.** {(1, 5), (-5, -3), (-8, -1), (1, -7)}	
	7. {(1, 4), (2, 4), (3, 4), (4, 4)}	**8.** {(-7, 4), (-4, 1), (-4, -9), (0, -6)}	
	9.	**10.**	**11.**
VERTICAL LINE TEST	When given the **graph** of a relation, the vertical line test can be used to determine whether the relation is a function. **Vertical Line Test**: _____ _____ _____		
examples	**Directions:** Use the vertical line test to determine whether the relation is a function.		
	12.	**13.**	**14.**

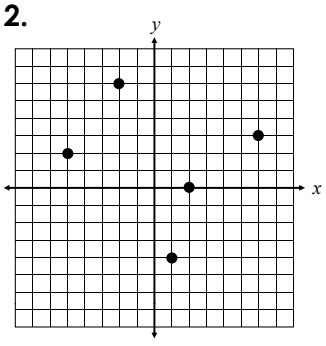
x	y

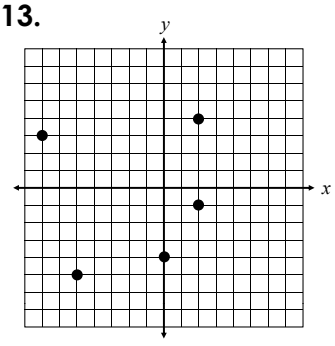


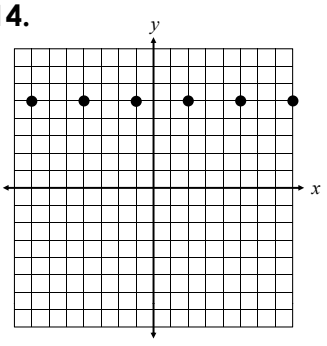
x	y
-2	4
-1	1
0	0
1	1
2	4

x	y
-7	0
-4	1
-1	2
5	3
8	4

x	y
-3	-2
-3	-1
-3	0
-3	5
-3	9





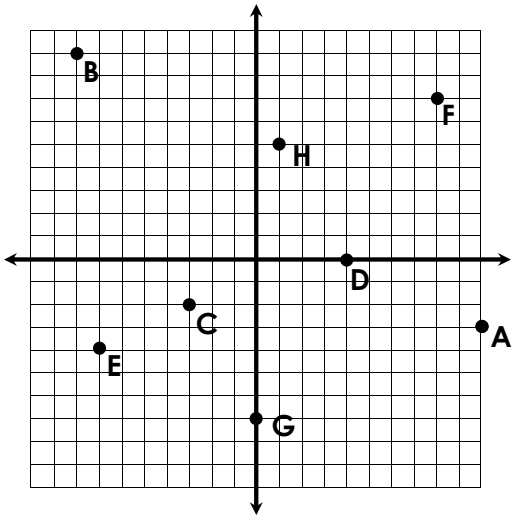


Name: _____ **Unit 5:** Functions & Linear Relationships

Date: _____ **Per:** _____ **Homework 1:** Coordinate Plane, Relations, & Functions

**** This is a 2-page document! ****

1. Identify the ordered pair and quadrant (or axis) for each point on the graph.



Point	Ordered Pair	Quadrant
A		
B		
C		
D		
E		
F		
G		
H		

Directions: For questions 2 and 3, complete the table and graph for each relation. Then give the domain and range. For questions 4 and 5, give the ordered pairs and complete the table for the relation shown on the graph. Then give the domain and range.

2.

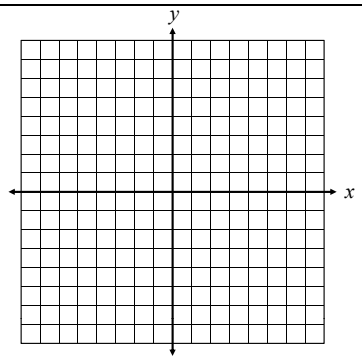
ORDERED PAIRS

{(4, -1), (6, 2), (-7, -6), (-5, 2), (-1, -8)}

TABLE

x	*y*

GRAPH



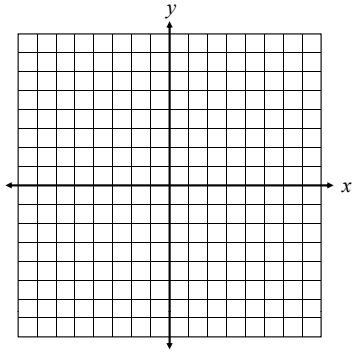
Domain:

Range:

3.

{(-4, -1), (0, 3), (-2, -7), (8, 5), (2, -6)}

x	*y*

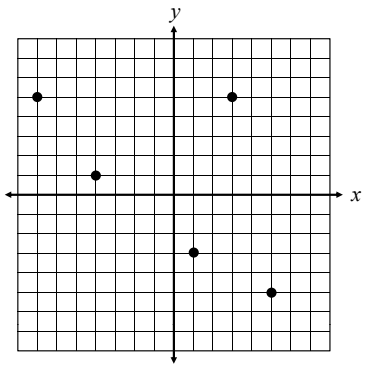


Domain:

Range:

4.

x	y

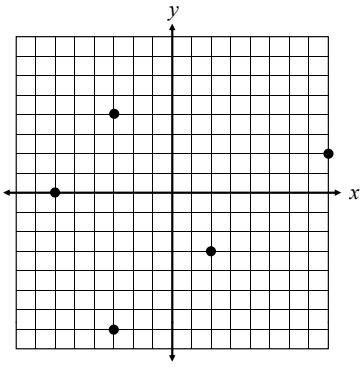


Domain:

Range:

5.

x	y



Domain:

Range:

Directions: Determine whether each relation is a function.

6. {(5, 12), (-4, 9), (-2, -7), (-4, 0), (3, 2)}

7. {(-1, 1), (-2, 3), (-3, 5), (-4, 7), (-5, 9)}

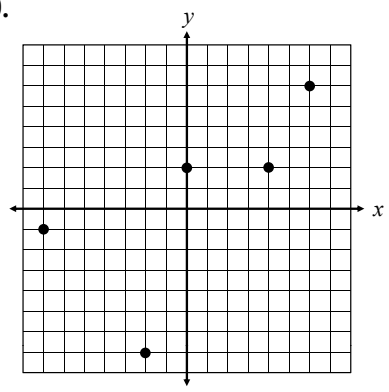
8.

x	-8	-4	0	4	8
y	5	1	-2	1	5

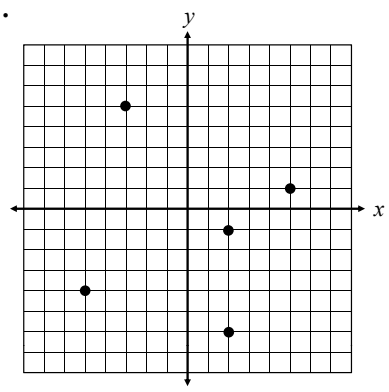
9.

x	7	7	7	7	7
y	0	-5	-8	4	3

10.



11.



12.