

Domain, Functions, and Slope

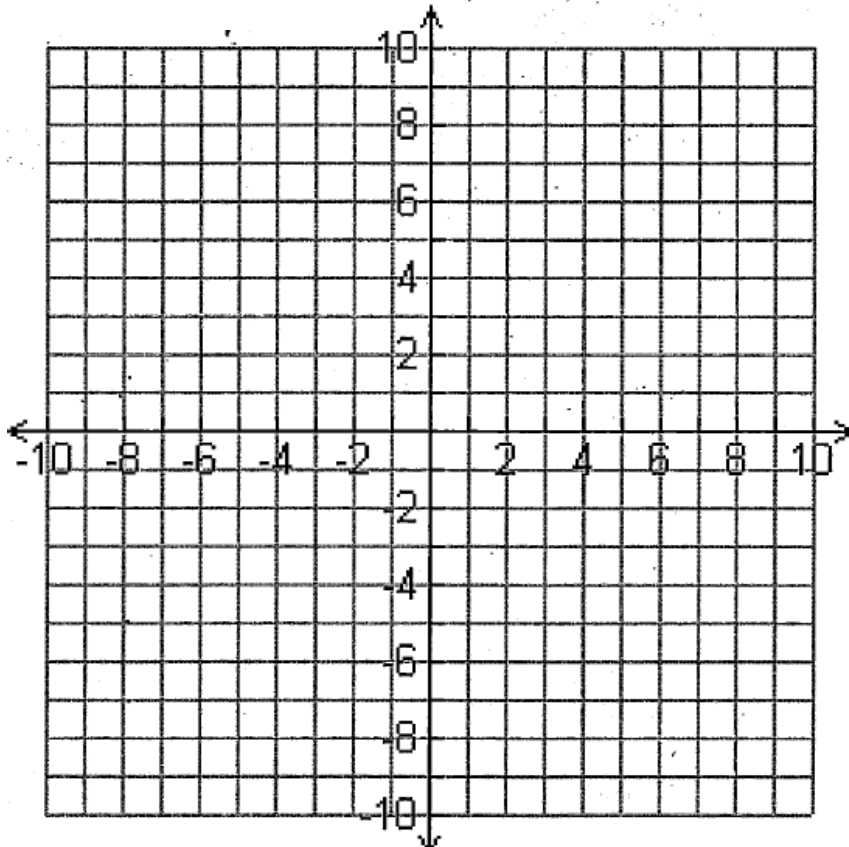
Chapter 4
Practice
Assignments

INTERMEDIATE ALGEBRA

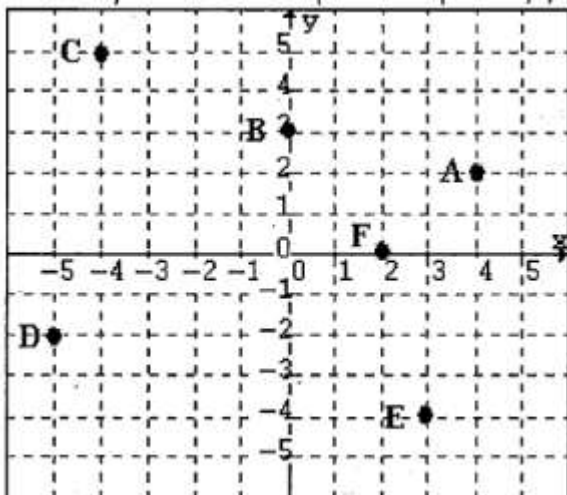
NAME: _____ HR: _____

Concept 1. Plot the following points on the graph provided below. Label by clearly writing the letter naming the point next to the point on the graph. Identify in which quadrant each point lies by writing the quadrant number in the blank provided.

- | | | |
|--------------------------------|-------------------------------|-------------------------------|
| 1. point K at (-4, 9) _____ | 2. point F at (-8, 10) _____ | 3. point U at (-3, -6) _____ |
| 4. point W at (4, 9) _____ | 5. point H at (-8, 1) _____ | 6. point V at (-6, 3) _____ |
| 7. point P at (-1, -4) _____ | 8. point I at (-4, -7) _____ | 9. point Q at (2, -6) _____ |
| 10. point Z at (-7, -10) _____ | 11. point M at (3, 10) _____ | 12. point L at (7, 9) _____ |
| 13. point R at (1, 10) _____ | 14. point T at (3, -9) _____ | 15. point S at (-8, -1) _____ |
| 16. point D at (8, 3) _____ | 17. point A at (-8, -6) _____ | 18. point C at (2, 0) _____ |

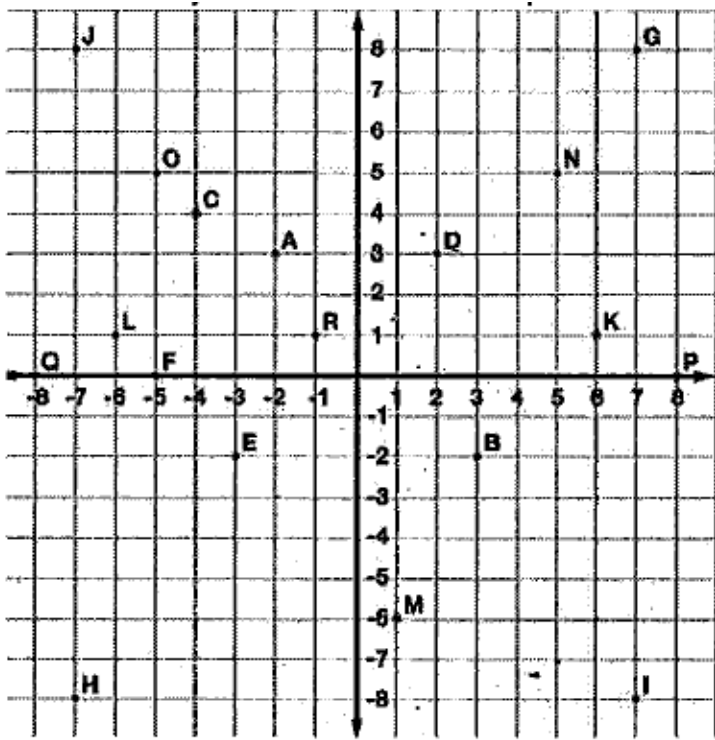


19. Identify the location (coordinates) and quadrant of points A, B, C, D, E, and F in the graph below.



<u>Coordinates</u>	<u>Quadrant</u>
A _____	_____
B _____	_____
C _____	_____
D _____	_____
E _____	_____

20. Identify the location (coordinates) and quadrants of points A – R in the graph below.



Coordinates Quadrant

A _____

B _____

C _____

D _____

E _____

F _____

G _____

H _____

I _____

J _____

K _____

L _____

M _____

N _____

O _____

P _____

Q _____

R _____

Concept 2. Write the domain and range for the given relations.

Concept 3. State whether the relation is a function and give a reason!

21. $\{(3, 4), (4, -6), (5, -7), (3, 2), (-2, 5)\}$

Domain: _____

Range: _____

This relation **IS** or **IS NOT** a function because _____
_____.

22. $\{(-1, 5), (0, 2), (1, -4), (2, 1)\}$

Domain: _____

Range: _____

This relation **IS** or **IS NOT** a function because _____
_____.

23. $\{(-3, 4), (-2, 5), (0, 0), (-2, 5), (4, 8)\}$

Domain: _____

Range: _____

This relation **IS** or **IS NOT** a function because _____
_____.

24. $\{(-1, 5), (0, 2), (1, -4), (2, 1)\}$

Domain: _____

Range: _____

This relation **IS** or **IS NOT** a function because _____
_____.

25. $\{(-1, 2), (-1, 3), (-1, 4), (-1, 5)\}$

Domain: _____

Range: _____

This relation **IS** or **IS NOT** a function because _____
_____.

26. $\{(-1, 5), (1, 5), (3, 5), (5, 5)\}$

Domain: _____

Range: _____

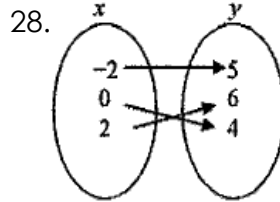
This relation **IS** or **IS NOT** a function because _____
_____.

27. $\{(9, 0), (0, 9), (4, 5), (5, 4)\}$

Domain: _____

Range: _____

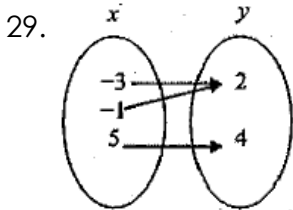
This relation **IS** or **IS NOT** a function because _____
_____.



Domain: _____

Range: _____

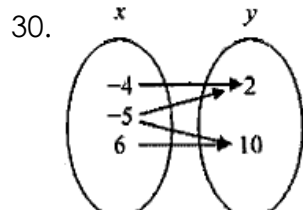
This relation **IS** or **IS NOT** a function because _____
_____.



Domain: _____

Range: _____

This relation **IS** or **IS NOT** a function because _____
_____.



Domain: _____

Range: _____

This relation **IS** or **IS NOT** a function because _____
_____.

31.

x	y
-4	-5
-3	-8
-2	-11
-1	-14

Domain: _____

Range: _____

This relation **IS** or **IS NOT** a function because _____
_____.

32.

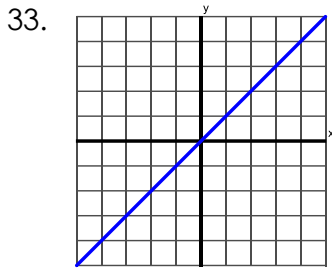
x	y
-2	0
3	-2
1	1
-2	-4
5	-1

Domain: _____

Range: _____

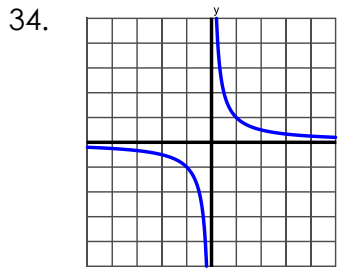
This relation **IS** or **IS NOT** a function because _____
_____.

Concept 4. Use the Vertical Line Test (VLT) to decide if the graph represents a function. Circle "IS" or "IS NOT" and write your answer in a sentence.



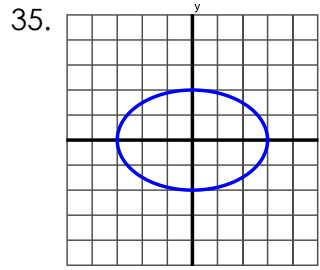
This relation **IS** or **IS NOT** a function because

_____.



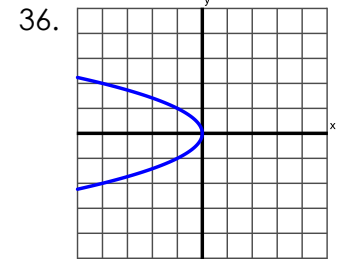
This relation **IS** or **IS NOT** a function because

_____.



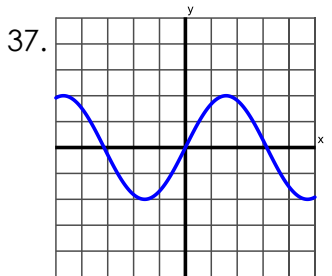
This relation **IS** or **IS NOT** a function because

_____.



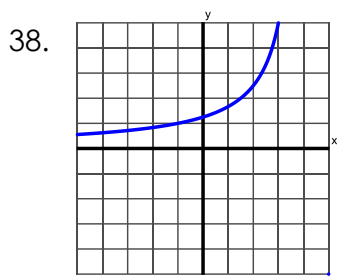
This relation **IS** or **IS NOT** a function because

_____.



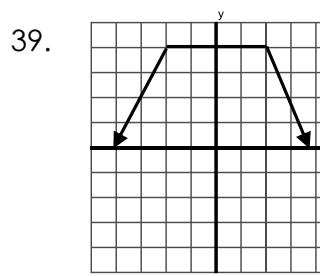
This relation **IS** or **IS NOT** a function because

_____.



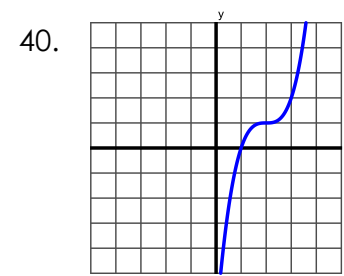
This relation **IS** or **IS NOT** a function because

_____.



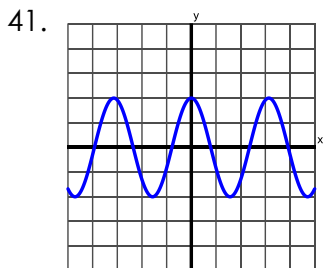
This relation **IS** or **IS NOT** a function because

_____.



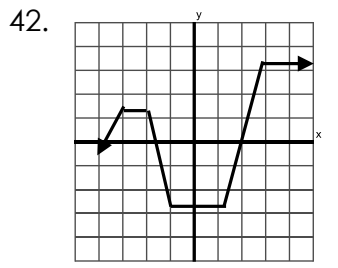
This relation **IS** or **IS NOT** a function because

_____.



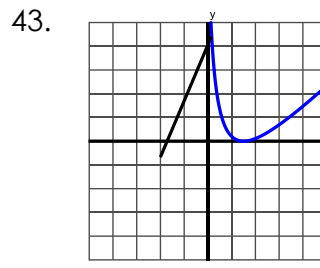
This relation **IS** or **IS NOT** a function because

_____.



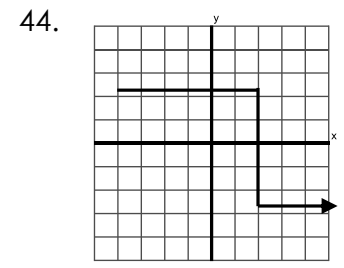
This relation **IS** or **IS NOT** a function because

_____.



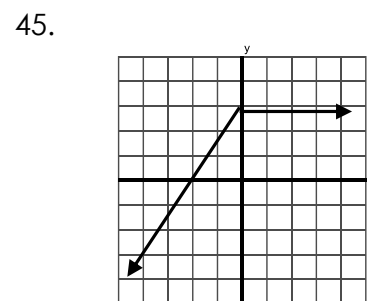
This relation **IS** or **IS NOT** a function because

_____.



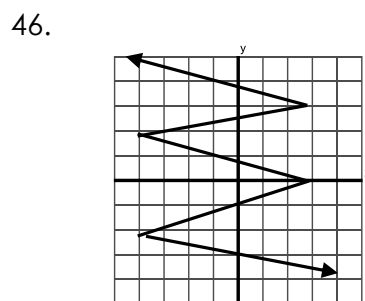
This relation **IS** or **IS NOT** a function because

_____.



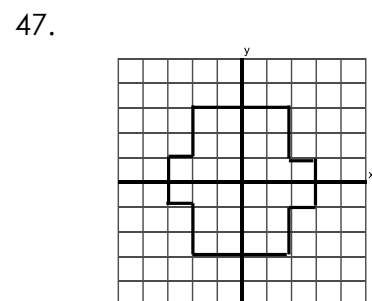
This relation **IS** or **IS NOT** a function because

_____.



This relation **IS** or **IS NOT** a function because

_____.



This relation **IS** or **IS** a function because

_____.

Concept 5: Identifying Rate of Change Given a Table.

48.

Time (hours)	Temperature (°F)
1	-2
4	7
7	16
10	25

49.

x (run)	y (rise)
-4	-2
-2	-1
0	0
2	1
4	2

50.

People	Cost (dollars)
2	\$7.90
3	\$11.85
4	\$15.80
5	\$19.75

51.

x	y
0	1.5
1	3
2	4.5
3	6
4	7.5

52.

x	y
0	1
2	2
4	3
8	4
12	5
14	6

53.

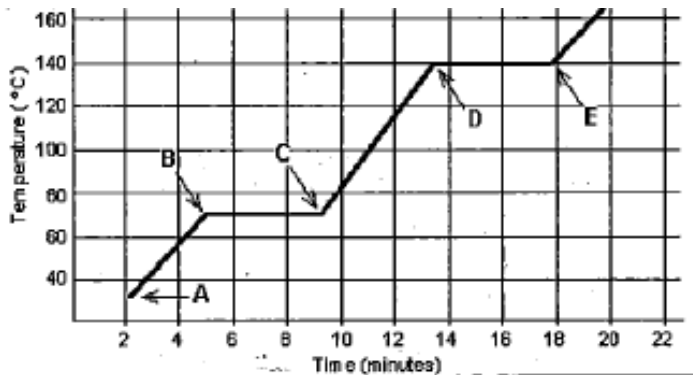
x	y
0	1
2	2
4	3
6	4
8	5
10	6

Concept 6: Identifying Rate of Change Given Graph or Word Problem.

Assume the points to the right are in these locations.

Please write corresponding coordinates ON graph first next to each letter.

- A (2, 20)
- B (5, 70)
- C (9, 70)
- D (13, 140)
- E (18, 140)



Describe the rate of change from the first point given to the next point given.

54. A to B

55. A to C

56. A to D

57. A to E

58. B to C

59. B to D

60. B to E

61. C to D

62. C to E

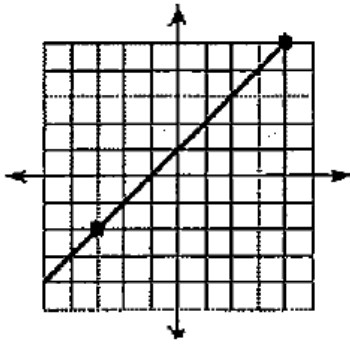
63. D to E

64. Ladainian Tomlinson rushed for 150 yards on 50 *carries*. How many yards did LT get per carry?

65. 300 homecoming tickets were sold in 4 *hours*. How many tickets were sold per hour?

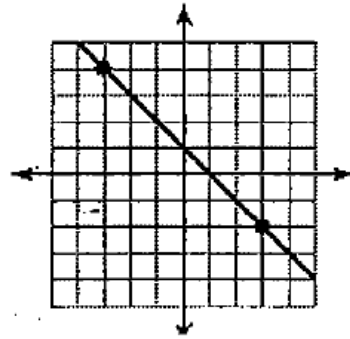
Concept 7: Find the slope given the graph.

66.



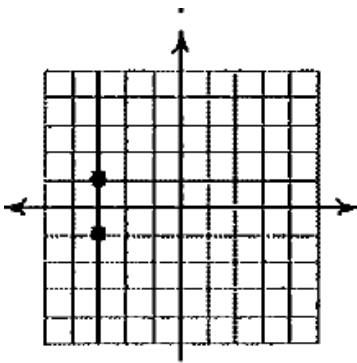
Slope: _____

67.



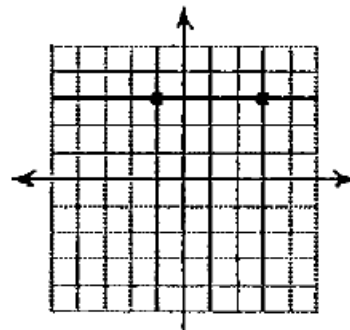
Slope: _____

68.



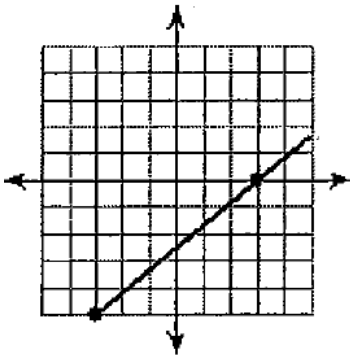
Slope: _____

69.



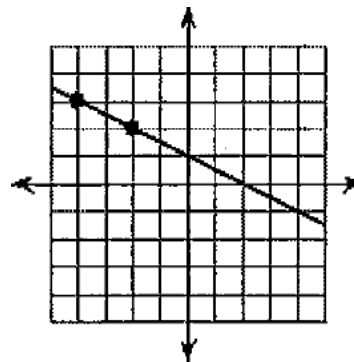
Slope: _____

70.



Slope: _____

71.



Slope: _____

Concept 8: Find the slope given two points. Identify the type of line (uphill positive, downhill negative, horizontal zero, vertical undefined)

72. $(-14, -18), (-20, 10)$ slope = _____

type of line:

73. $(-18, 12), (12, -7)$ slope = _____

type of line:

74. $(16, 8), (16, -6)$ slope = _____

type of line:

75. $(-12, 0), (7, 0)$ slope = _____

type of line:

76. $(14, 7), (7, -7)$ slope = _____

type of line:

77. $(-9, 8), (-10, 8)$ slope = _____

type of line:

78. $(10, 7), (-2, 19)$ slope = _____

type of line:

79. $(-13, 11), (2, -20)$ slope = _____

type of line:

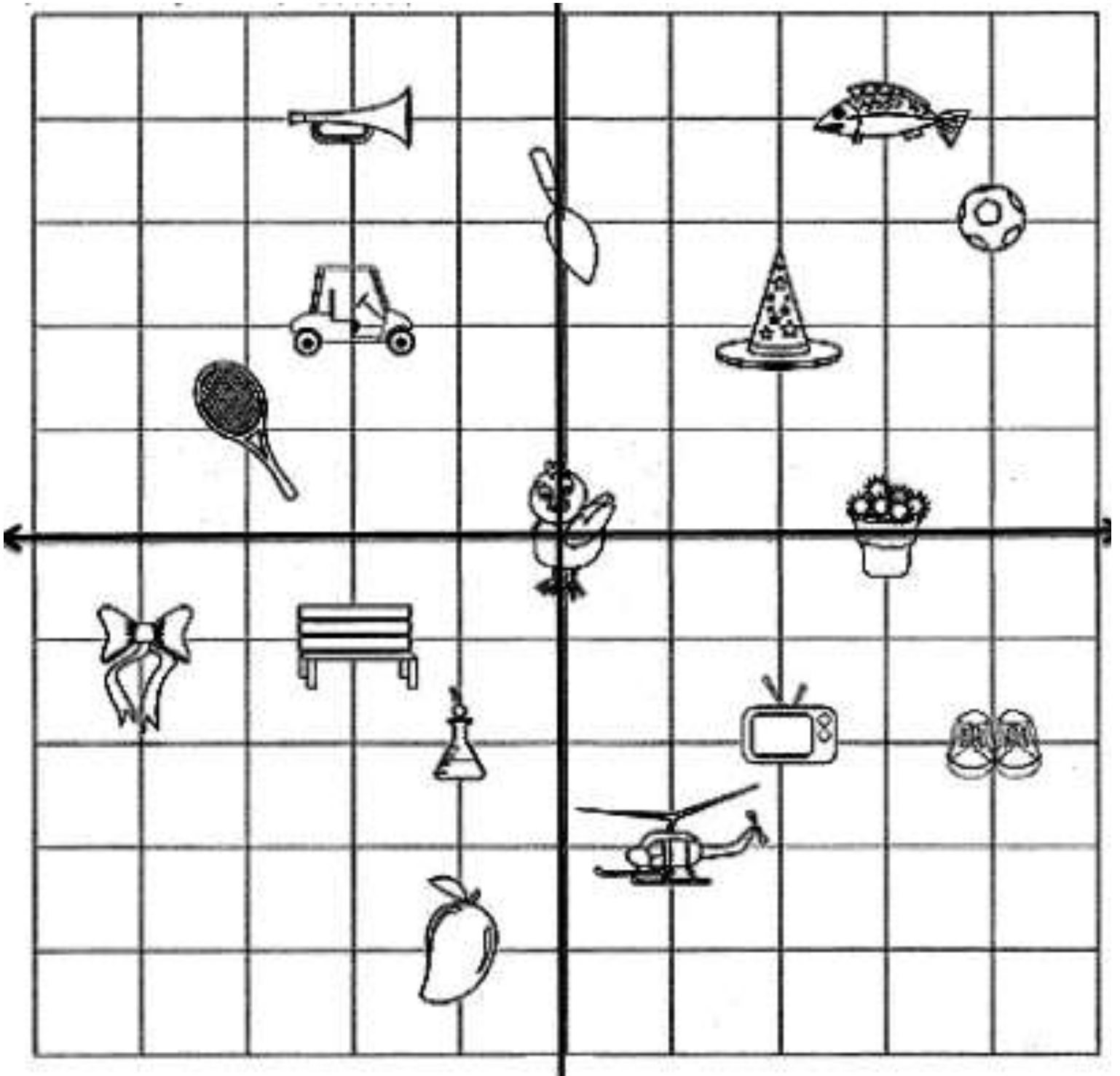
80. $(-7, 16), (-7, 20)$ slope = _____

type of line:

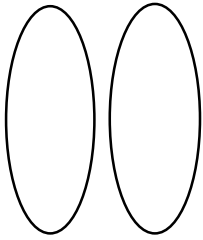
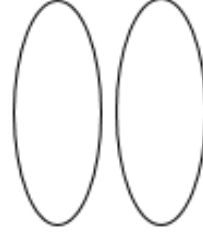


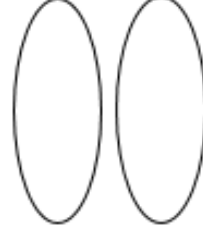
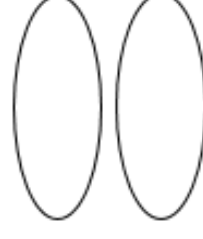

81. $(5, -1), (5, 10)$ slope = _____

type of line:

CHAPTER 4 PRACTICE TEST
(covers material from Concepts 1, 2, 3, 6, 7, 8)



<u>Object</u>	<u>Ordered Pair</u>
Trumpet	
Car	
Shovel	
Fish	
Soccer Ball	
Bow	
Bench	
Television	
Shoes	
Helicopter	
Flowers	
Bird	
Beaker	
Hat	
Tennis Racket	
Pear	

Objects	Table	Mapping Diagram	Domain & Range	Function or Relation? Why?
Trumpet Shovel Soccer Ball Bow Shoes	$\begin{array}{c c} x & y \\ \hline & \end{array}$		D: R:	
Shovel Pear Hat Bird Flowers Helicopter	$\begin{array}{c c} x & y \\ \hline & \end{array}$		D: R:	
Television Bench Shoes Flowers Bird Hat	$\begin{array}{c c} x & y \\ \hline & \end{array}$		D: R:	
Car Trumpet Fish Shoes Beaker	$\begin{array}{c c} x & y \\ \hline & \end{array}$		D: R:	
Helicopter Shoes Flowers Bird Beaker Fish	$\begin{array}{c c} x & y \\ \hline & \end{array}$		D: R:	
Pear Shovel Soccer Ball Fish Tennis Racket	$\begin{array}{c c} x & y \\ \hline & \end{array}$		D: R:	
Bird Beaker Helicopter Bow Fish Shovel Trumpet	$\begin{array}{c c} x & y \\ \hline & \end{array}$		D: R:	

Objects	Ordered Pairs of Two Objects	Slope of the line between two objects using rise/run	Slope of the line between two objects using slope formula	Type of Line <i>Uphill positive</i> <i>Downhill negative</i> <i>Horizontal zero</i> <i>Vertical undefined</i>
Bow and Helicopter		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	
Shoes and Television		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	
Pear and Beaker		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	
Car and Shovel		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	
Fish and Hat		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	
Flowers and Soccer Ball		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	
Bird and Shovel		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	
Bow and Bench		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	
Bench and Television		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	
Helicopter and Fish		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	
Soccer Ball and Beaker		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	
Car and Hat		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	
Tennis Racket and Shoes		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	
Trumpet and Fish		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	
Bench and Car		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	
Pear and Shoes		Rise = Run =	Slope = $\frac{(\) - (\)}{(\) - (\)} =$	