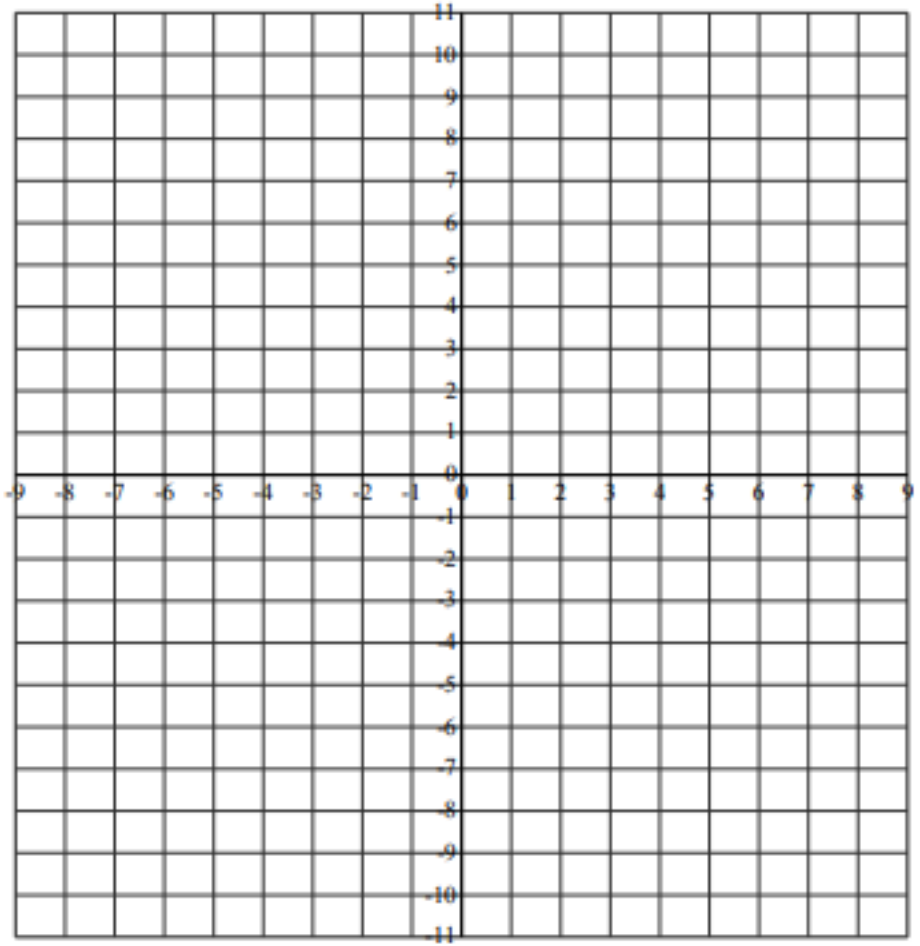
Plotting Points on a Coordinate Grid (All 4 Quadrants)

https://www.math-drills.com/geometry/coordinate_point_plots_001.php

Plotting Coordinate Points (A)

Plot the coordinate points below.

(-4, 10)	(7, -9)	(0, 9)	(-8, 6)	(-4, -6)	(6, 5)	(-3, -1)	(5, 5)
(-5, 6)	(-3, -6)	(-1, -6)	(5, 9)	(8, 6)	(1, 5)	(-4, 9)	(2, 8)



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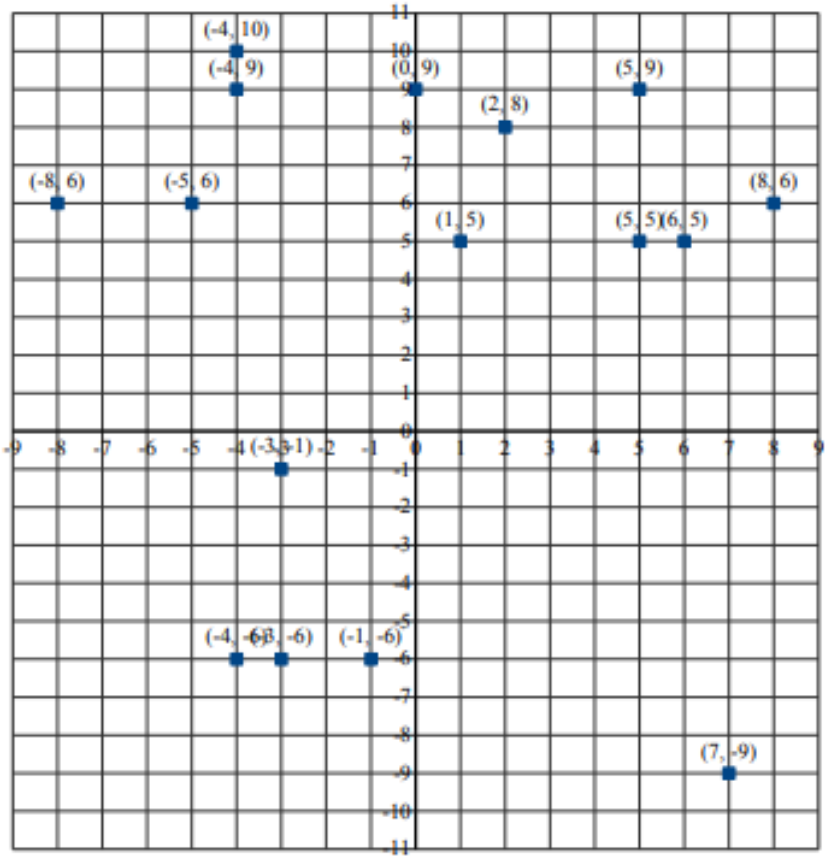
Plotting Coordinate Points (A) Answers

Plot the coordinate points below.

(-4, 10)	(7, -9)	(0, 9)	(-8, 6)	(-4, -6)	(6, 5)	(-3, -1)	(5, 5)
(-5, 6)	(-3, -6)	(-1, -6)	(5, 9)	(8, 6)	(1, 5)	(-4, 9)	(2, 8)



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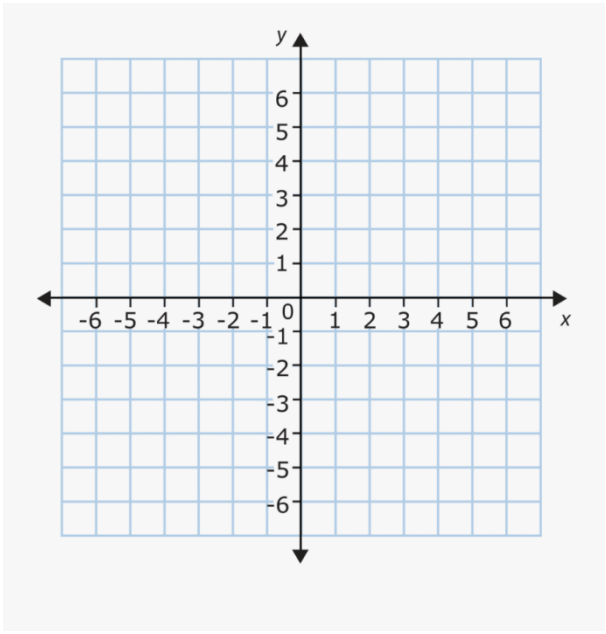
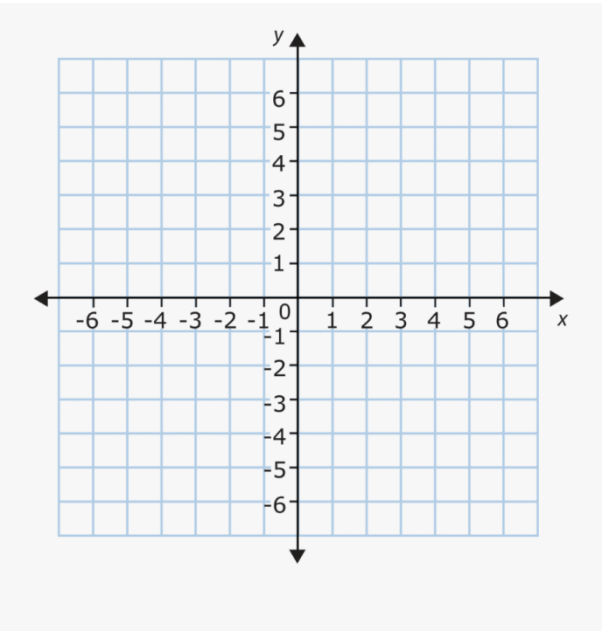
Graphing a Table of Values

Graph each table of values on the cartesian plane to its right and connect the points with a ruler to create a line.

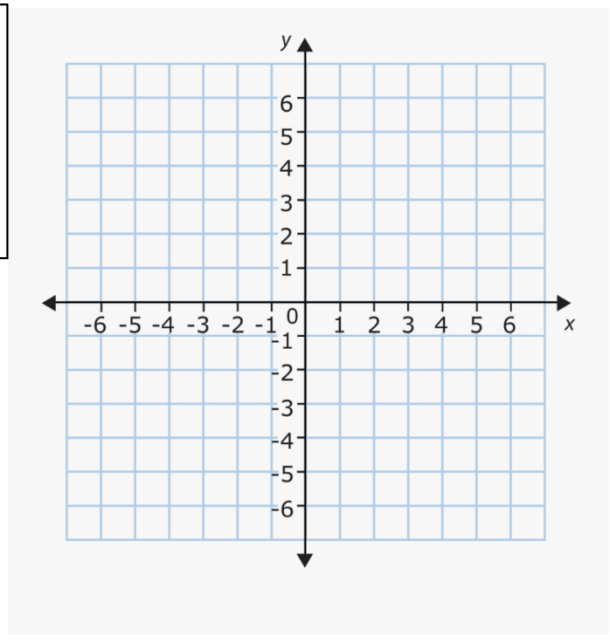
x	y
-2	2
-1	3
0	4
1	5
2	6



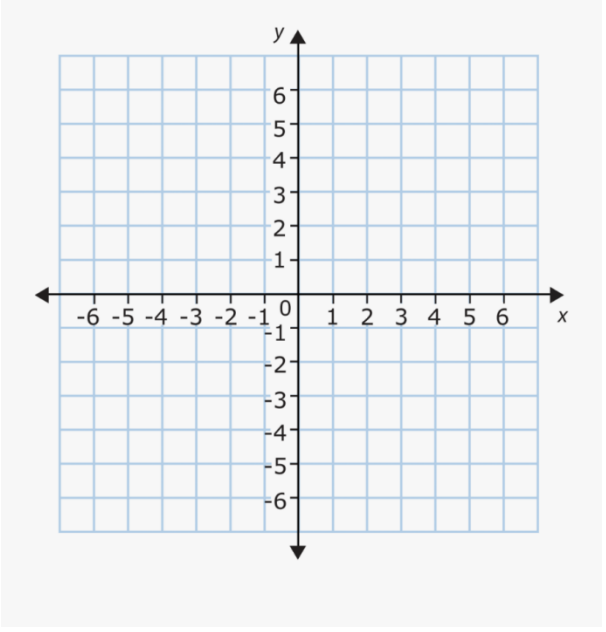
x	y
-5	6
-4	4
-3	2
-2	0
-1	-2



x	y
-6	-6
-5	-3
-4	0
-3	3
-2	6



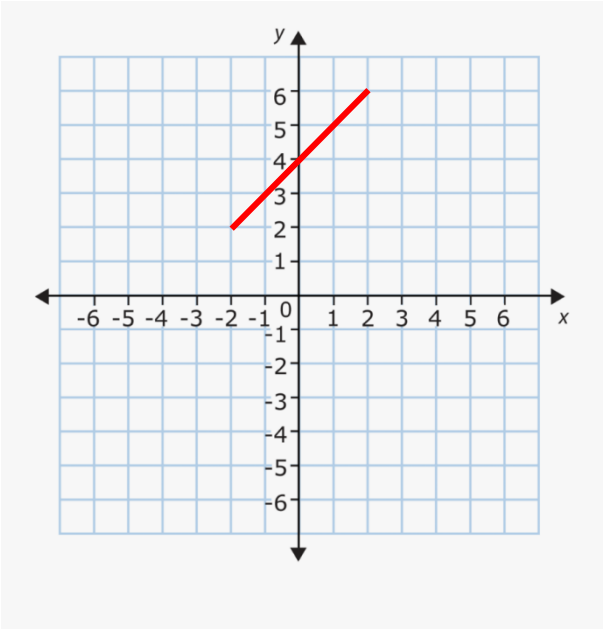
x	y
1	6
2	4
3	2
4	0
5	-2



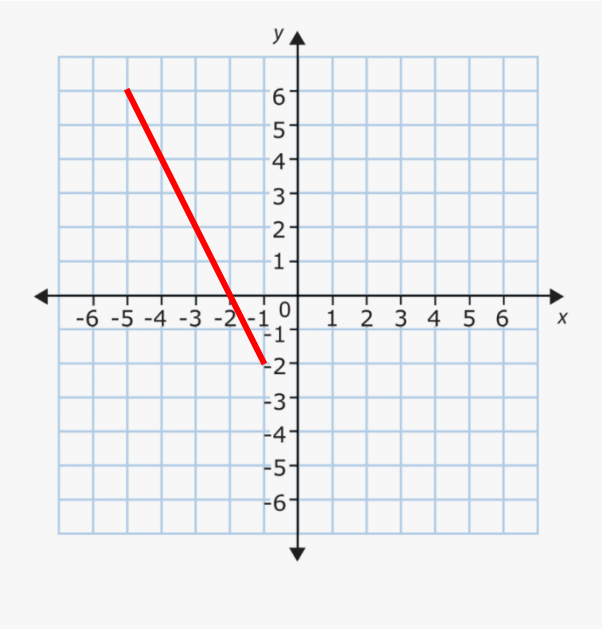
ANSWERS

Graph each table of values on the cartesian plane to its right and connect the points with a ruler to create a line.

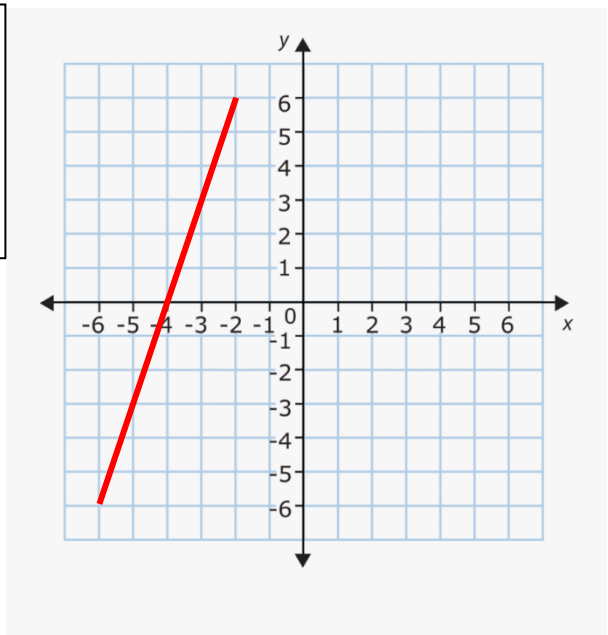
x	y
-2	2
-1	3
0	4
1	5
2	6



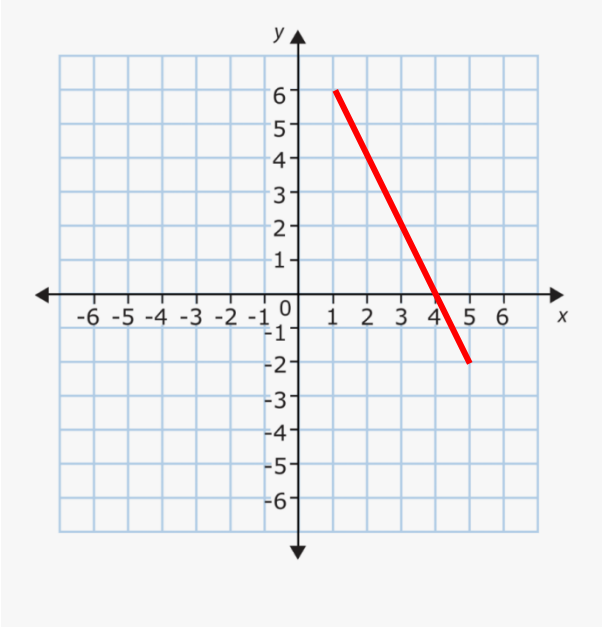
x	y
-5	6
-4	4
-3	2
-2	0
-1	-2



x	y
-6	-6
-5	-3
-4	0
-3	3
-2	6



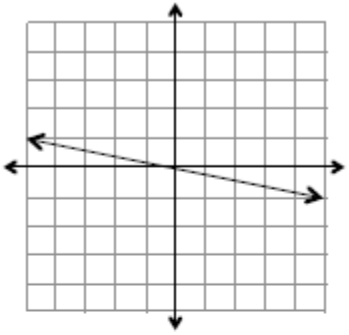
x	y
1	6
2	4
3	2
4	0
5	-2



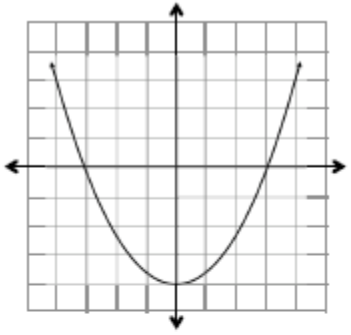
Linear or Non-Linear?

Identify each function as linear or non-linear **and explain how you know**.

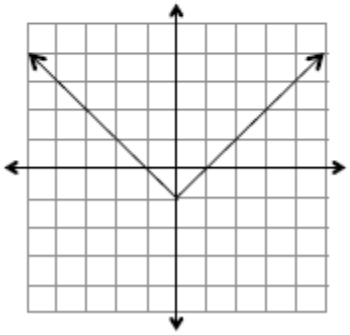
1)



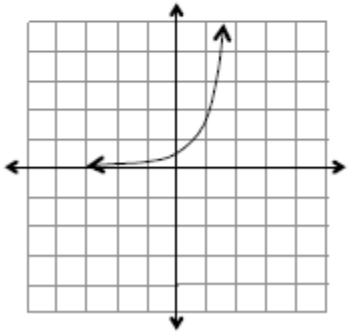
2)



3)



4)



5)

x	y
0	1
1	3
2	9
3	27

6)

x	y
-5	4
0	1
5	-2
10	-5

7)

x	y
0	0
2	6
4	18
6	38

8) $y = 4x + 6$

9) $y = -10x$

10) $y = -3x^2 - 4$

Answers:

1. Linear
2. Non-Linear
3. Non-linear
4. Non-linear
5. Non-linear
6. Linear
7. Non-linear
8. Linear
9 Linear
10. Non-Linear

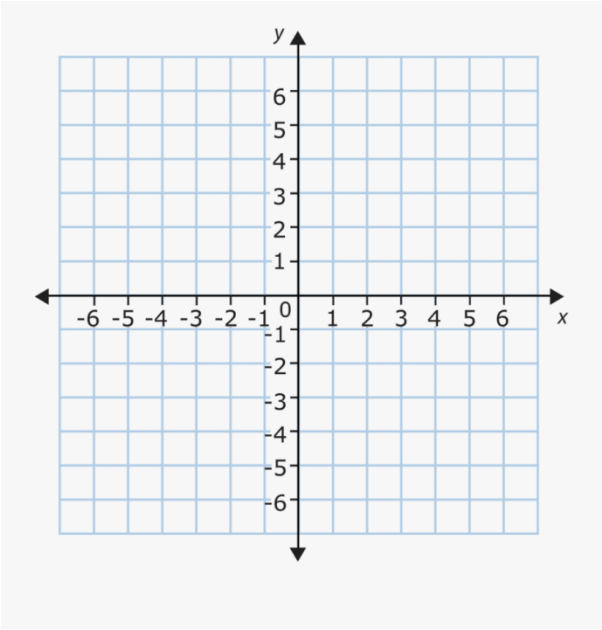
Create a Table of Values from an Equation

For each Equation, complete the following:

1. Complete a Table of Values using x values from -2 to +2 using substitution.
2. Graph the points using the table of values.
3. State whether the relationship is linear or non-linear and explain how you know.

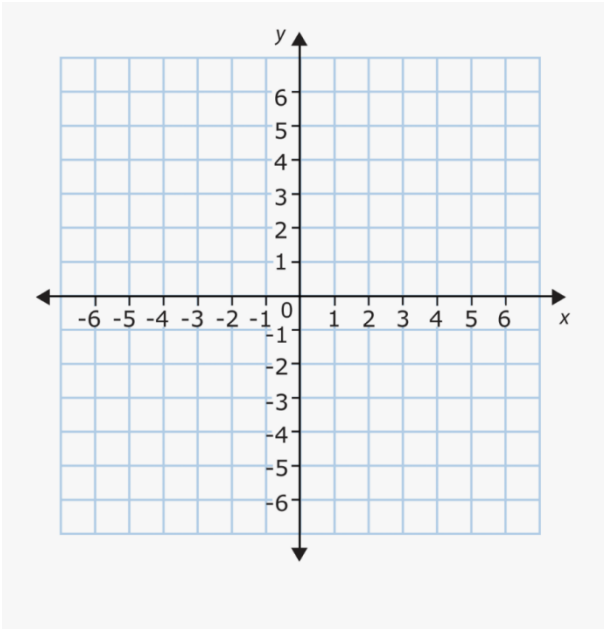
$y = 2x + 1$

x	y
-2	
-1	
0	
1	
2	



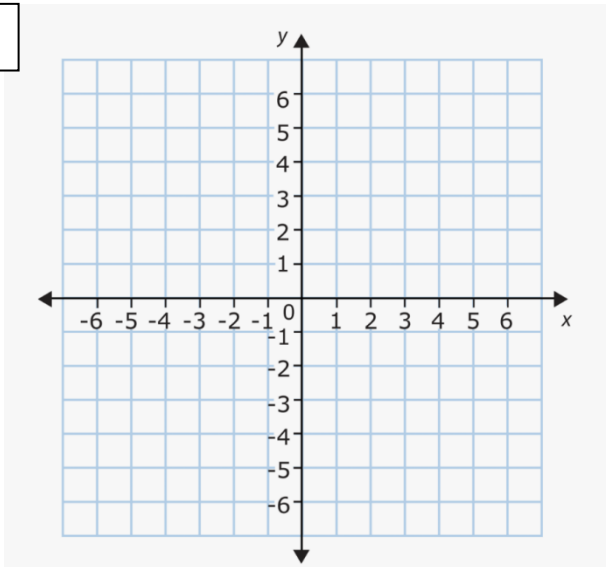
$y = -3x$

x	y
-2	
-1	
0	
1	
2	



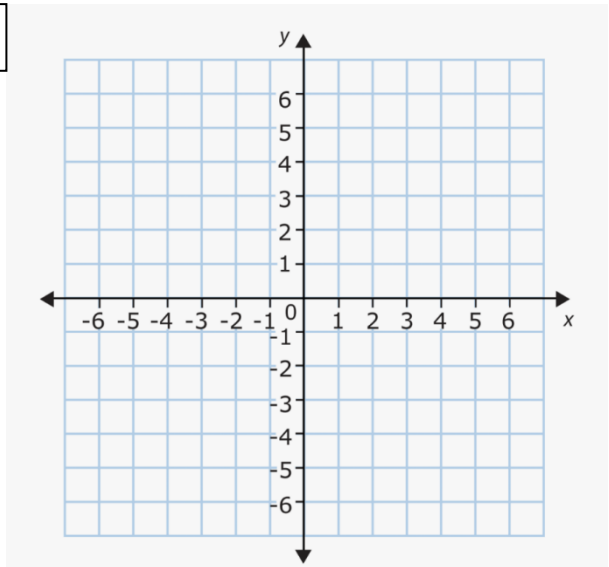
$y = x^2 + 1$

x	y
-2	
-1	
0	
1	
2	



$y = -x - 4$

x	y
-2	
-1	
0	
1	
2	

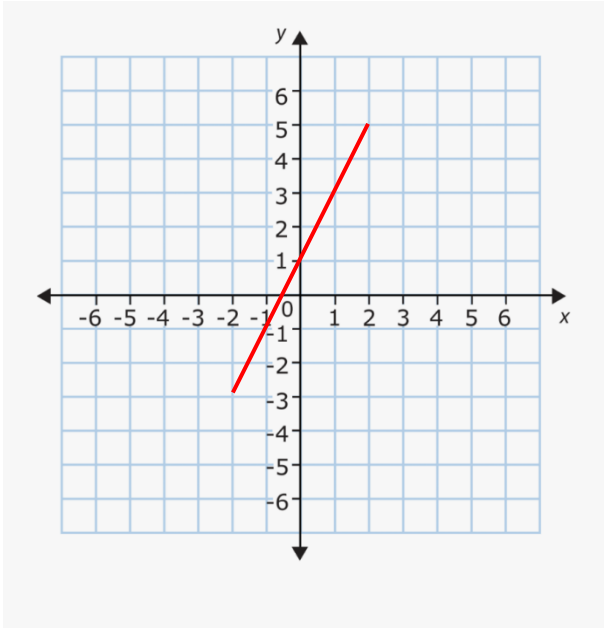


ANSWERS

$y = 2x + 1$

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

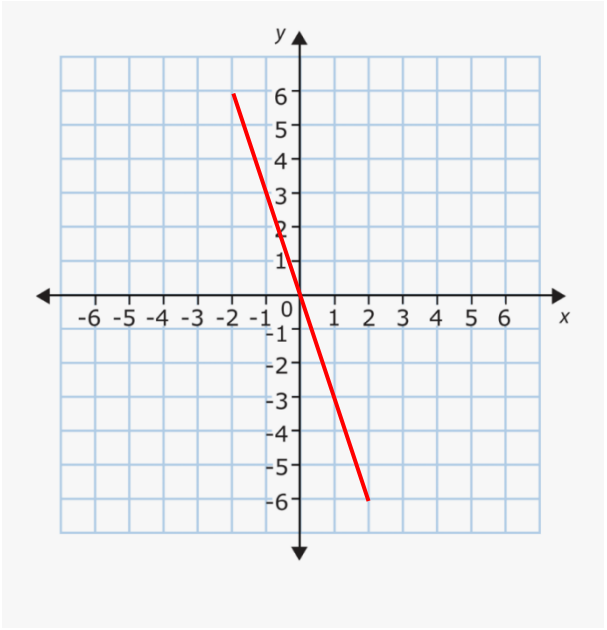
Linear



$y = -3x$

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

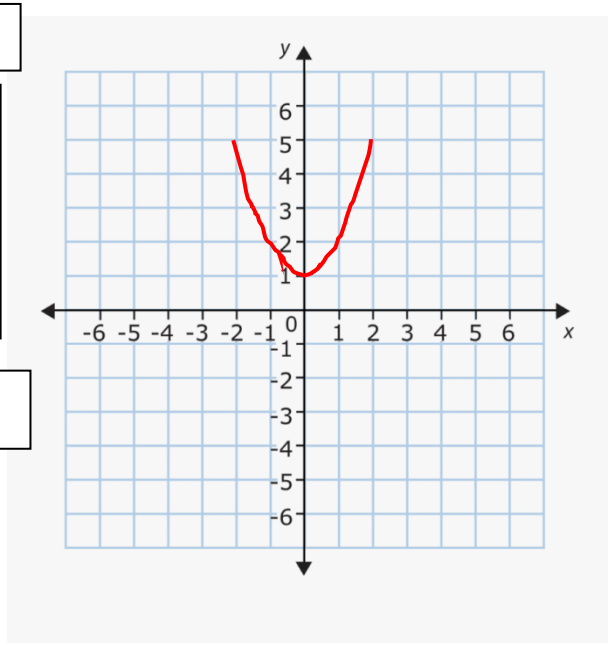
Linear



$y = x^2 + 1$

x	y
-2	5
-1	2
0	1
1	2
2	5

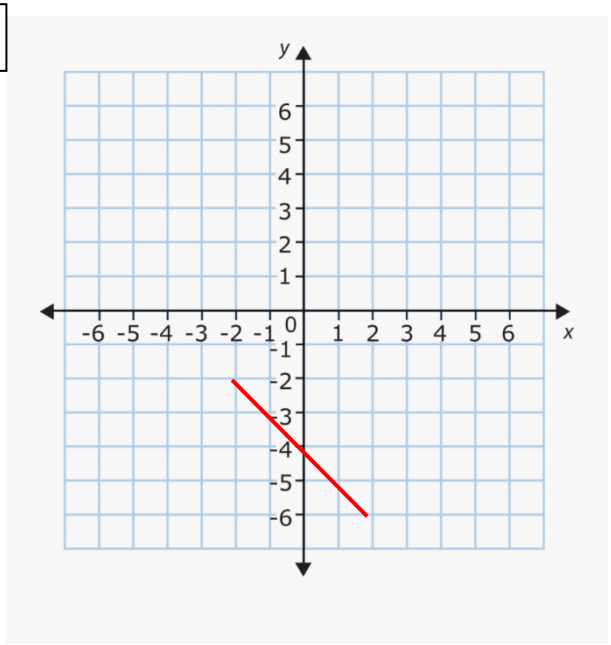
Non-Linear



$y = -x - 4$

x	y
-2	-2
-1	-3
0	-4
1	-5
2	-6

Linear



Match each table of values to its equation:

1.

x	y
1	6
2	7
3	8
4	9
5	10

a. y = 2x

b. y = 5x

c. y = x + 5

d. x = y + 5

2.

x	y
1	5
2	7
3	9
4	11
5	13

a. y = 4x + 1

b. x = 2y + 3

c. y = x + 2

d. y = 2x + 3

3.

x	y
1	-2
2	1
3	4
4	7
5	10

a. y = 2x - 4

b. y = -2x

c. y = -3x + 1

d. y = 3x - 5

4.

x	y
-2	12
-1	9
0	6
1	3
2	0

a. y = -2x + 8

b. y = -3x + 6

c. y = 2x + 16

d. y = 3x + 18

Answers: 1) c 2) d 3) d 4) b 5) b 6) c 7) d 8) a

Match each equation to its graph:

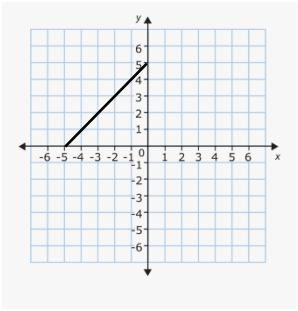
5. y = -3x + 6 matches with Graph _____

6. y = 3x – 5 matches with Graph _____

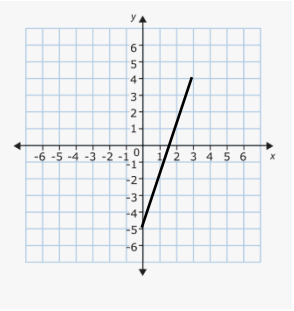
7. y = 2x + 3 matches with Graph _____

8. y = x + 5 matches with Graph _____

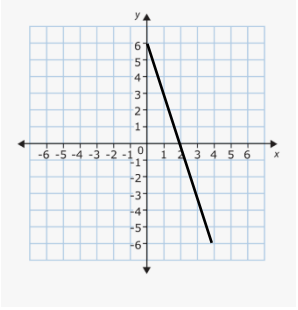
a.



c.



b.



d.