

Steps to Graphing Equations Using a Table

Input → slope (pattern) → y-int → output

x	$Y = 2x - 1$	y	(x, y)
-3	$Y = 2(-3) - 1$	-7	$(-3, -7)$
-2	$Y = 2(-2) - 1$	-5	$(-2, -5)$
-1	$Y = 2(-1) - 1$	-3	$(-1, -3)$
0	$Y = 2(0) - 1$	-1	$(0, -1) \rightarrow$ y-intercept
1	$Y = 2(1) - 1$	1	$(1, 1)$
2	$Y = 2(2) - 1$	3	$(2, 3)$
3	$Y = 2(3) - 1$	5	$(3, 5)$

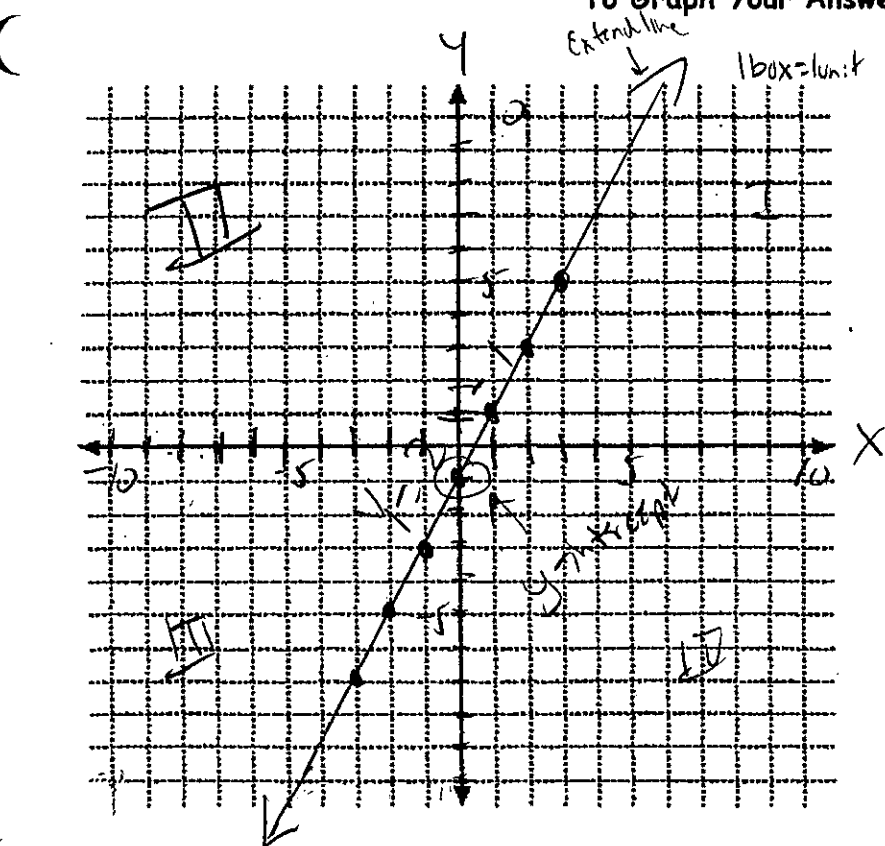
Step 1: Put values -3 to +3 for x in column 1.

Step 2: In column 2, replace the value of x with the x-value in column 1.

Step 3: Calculate the answer and put it in column 3 for the y-value.

Step 4: Write the values for x and y as coordinates in column 4.

graph these (x, y)



Step 1: Using the coordinates from column 4, plot each point on the graph.

Step 2: Use a ruler to connect the points.

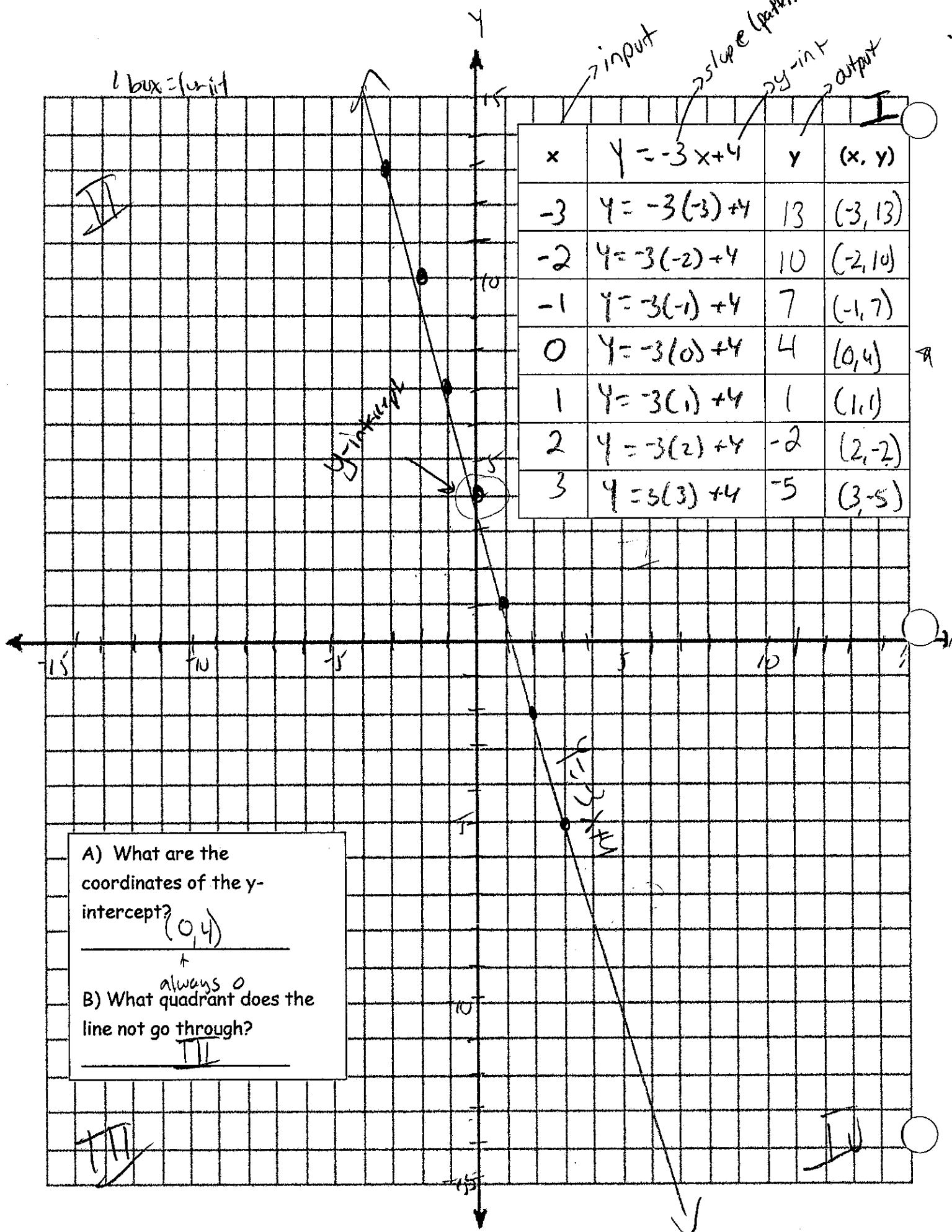
Step 3: Put arrows on the ends of the line.

Step 4: Write the equation from column 2 on the line.

A) What are the coordinates of the y-intercept?
(0, -1)
The x-value will always be zero

B) What quadrant does the line not go through?
II
Where the line intersects the y-axis

1 box = 1 unit



x	$y = -3x + 4$	y	(x, y)
-3	$y = -3(-3) + 4$	13	(-3, 13)
-2	$y = -3(-2) + 4$	10	(-2, 10)
-1	$y = -3(-1) + 4$	7	(-1, 7)
0	$y = -3(0) + 4$	4	(0, 4)
1	$y = -3(1) + 4$	1	(1, 1)
2	$y = -3(2) + 4$	-2	(2, -2)
3	$y = -3(3) + 4$	-5	(3, -5)

A) What are the coordinates of the y-intercept?
(0, 4)

B) What ^{always 0} quadrant does the line not go through?
III

II

I

III

IV

More Practice Using Equations

1) Tell whether each ordered pair is a solution of the given equation.

$$y = -7x + 10$$

x y (-3, 31)	x y (7, 59)	x y (0, 10)
$y = -7x + 10$ $31 = -7(-3) + 10$ $31 = 21 + 10$ $31 = 31$ <p style="text-align: center;">✓</p> <p style="text-align: center;">yes!</p>	$y = -7x + 10$ $59 = -7(7) + 10$ $59 = -49 + 10$ $59 \neq -39$ <p style="text-align: center;">NO</p>	$y = -7x + 10$ $10 = -7(0) + 10$ $10 = 0 + 10$ $10 = 10$ <p style="text-align: center;">✓</p> <p style="text-align: center;">yes!</p>

2) Use the equation, $y = 2x - 4$ to complete each solution.

a. $(-3, \underline{\quad -10 \quad})$

$$y = 2x - 4$$

$$y = 2(-3) - 4$$

$$y = -6 - 4$$

$$y = -10$$

b. $(50, \underline{\quad 96 \quad})$

$$y = 2x - 4$$

$$y = 2(50) - 4$$

$$y = 100 - 4$$

$$y = 96$$

3) Complete the table and graph the linear equation below.

slope = +1

x	$y = x + 4$	y	(x, y)
-3	$y = (-3) + 4$	1	(-3, 1)
-2	$y = (-2) + 4$	2	(-2, 2)
-1	$y = (-1) + 4$	3	(-1, 3)
0	$y = (0) + 4$	4	(0, 4)
1	$y = (1) + 4$	5	(1, 5)
2	$y = (2) + 4$	6	(2, 6)
3	$y = (3) + 4$	7	(3, 7)

