Lesson 9

Graphing Linear Equations

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1) There are many ways to graph the equation of a line. In this lesson we will focus on two methods.

The first method uses the formula y = mx + b. In this formula m is the slope and b is the y - intercept.

Steps to follow . . .

1. Use this method when you can get y by itself.
2. Identify the values for the slope and y - intercept from the equation
3. Always plot the y - intercept first
4. From the y - intercept, apply the slope
5. connect the points to graph the line

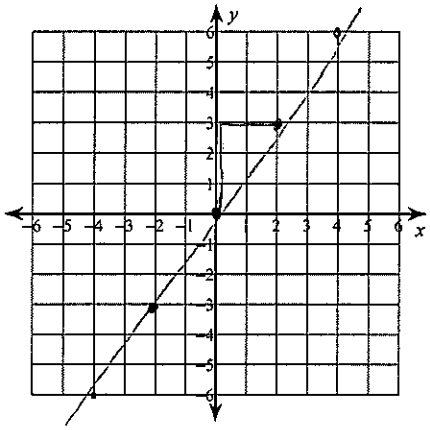
The second method requires you to find the x - intercept and the y - intercept.

Steps to follow . . .

1. Use this method when the equation looks like Ax + By = C
2. Substitute 0 in for x, solve for y
3. This is the y - intercept, plot it on the y - axis
4. Substitute 0 in for y, solve for x
5. This is the x - intercept, plot is on the x - axis
6. Connect the two points to graph the line

Sketch the graph of each line.

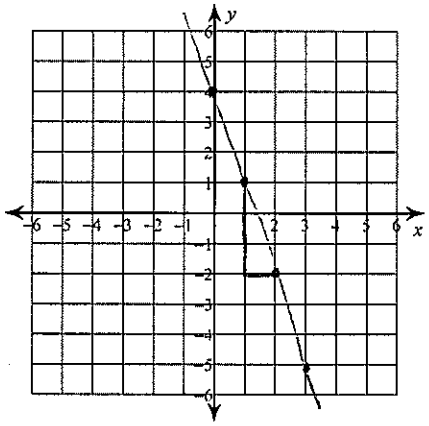
2) $y = \frac{3}{2}x + 0$



$m = \frac{3}{2}$

$b = 0$

3) $y = -3x + 4$



$m = -3$

$b = 4$

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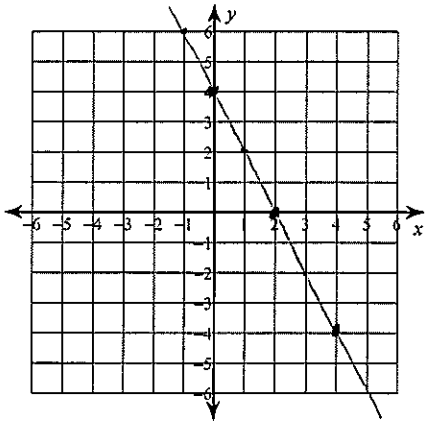
4) $2x + y = 4$



$2x + y = 4$

x	y
0	4
2	0

$2(0) + y = 4$

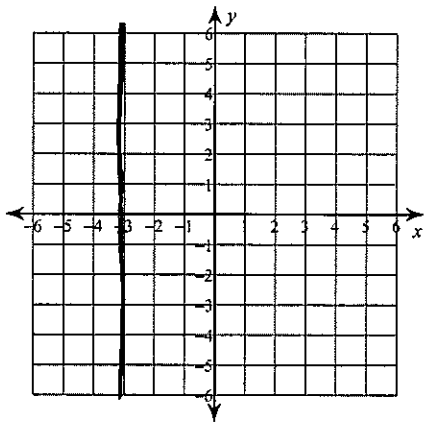
$y = 4$

$2x + 0 = 4$

$\frac{2x}{2} = \frac{4}{2}$

$x = 2$

5) $x = -3$



Vertical Line

X	Y
-3	0

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