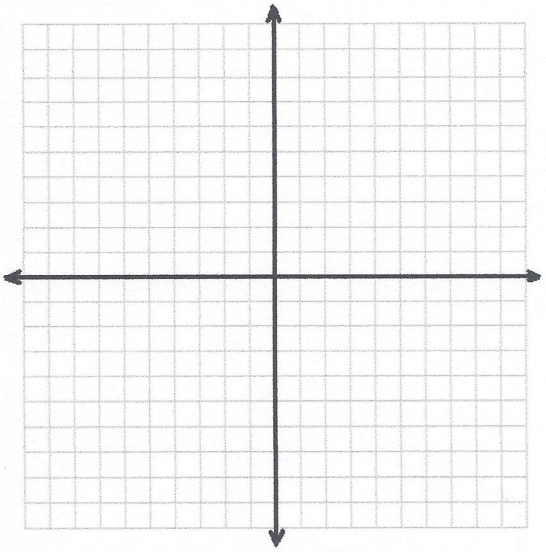
Worksheet 4

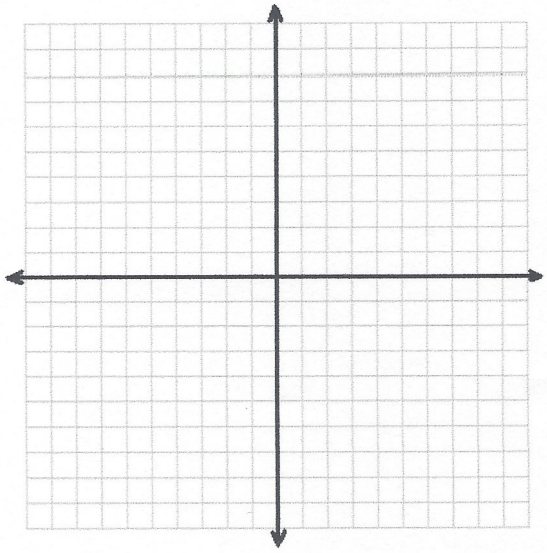
Name _____ Date _____

Graphing Horizontal and Vertical Lines

All linear equations can be written in the form Ax+By=C. When A = 0 the equation reduces to By = C and the graph is a horizontal line. When B = 0 the equation reduces to Ax = 0 and the graph is a vertical line.



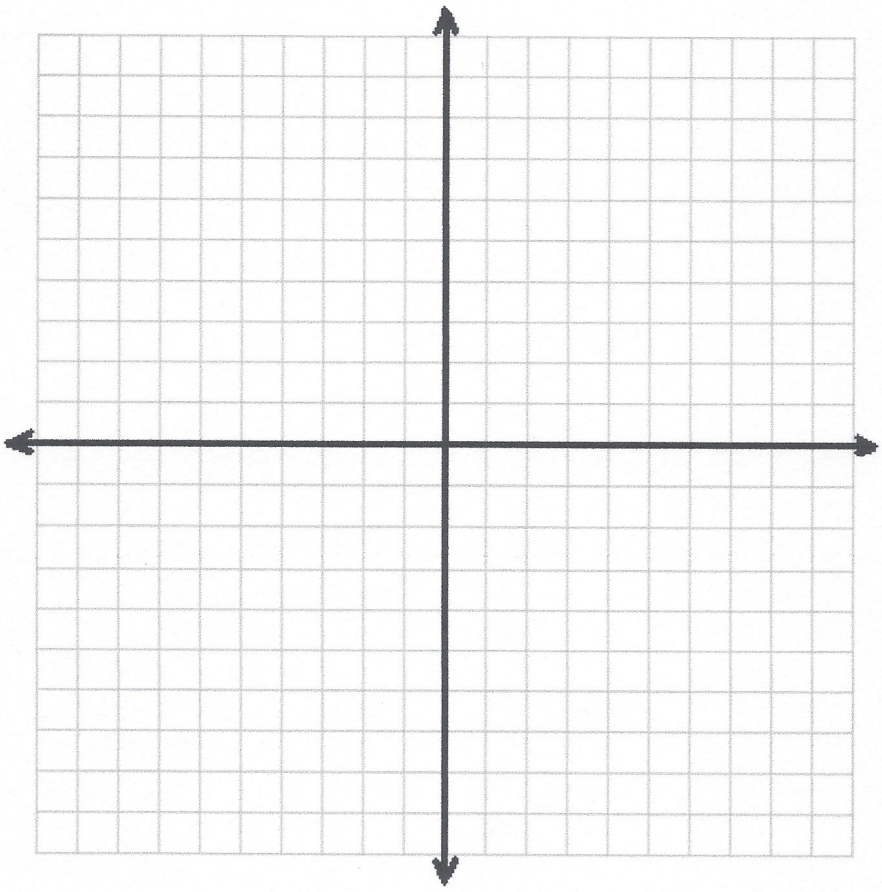
In the coordinate plane, the graph of y = b is a horizontal line.



In the coordinate plane, the graph of x = a is a vertical line.

Graphing y = b

1. Graph the equation y = 2 on the blank graph below.
   - ❖ The equation does not have x as a variable. The y-value is always 2, regardless of the value of x. Here are some points that are solutions of the equation (-3, 2), (0, 2), (3, 2)
   - ❖ The graph of the equation is a horizontal line 2 units above the x-axis

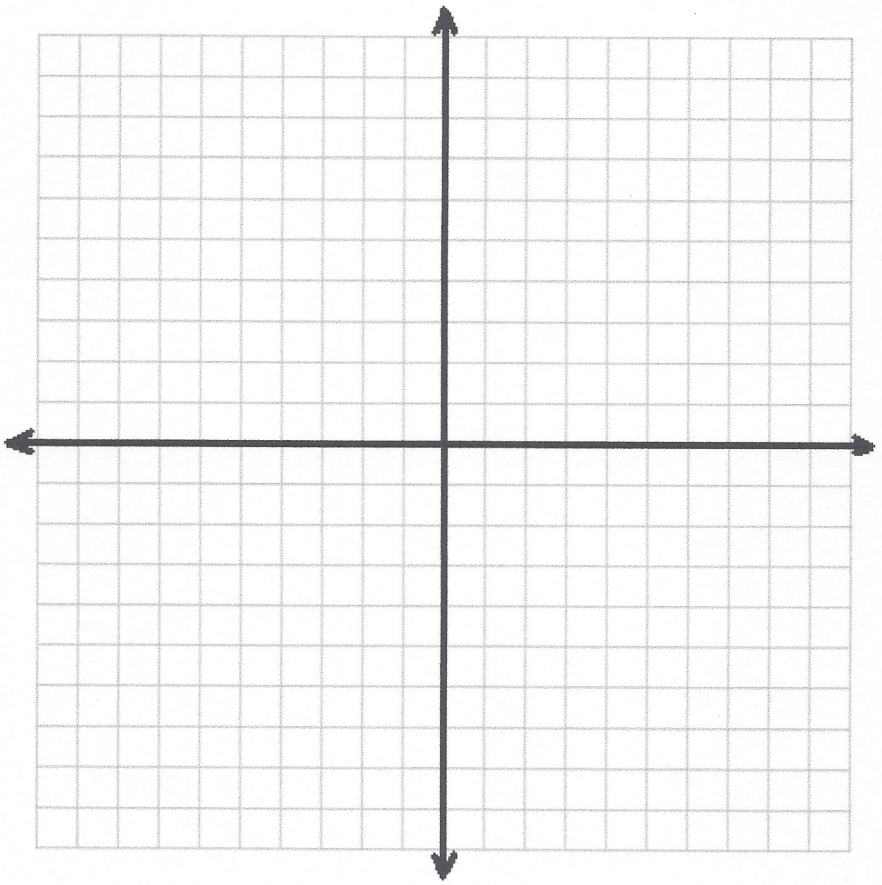


Graphing x = a

1. Graph the equation x = -3 on the blank graph above.
   - ❖ The x-value is always -3, regardless of the value of y. For instance, here are some points that are solutions of the equation.

     (-3, -2), (-3, 0), (-3, 3)

   - ❖ The graph of the equation is the vertical line 3 units to the left of the y-axis.



Practice: On the blank graph above, graph the following equations in the color requested.

1. $x = 9$ (red)
2. $y = -1$ (orange)
3. $y = -6$ (blue)
4. $x = 2$ (green)
5. $x = -5$ (purple)