NAME _____ DATE _____ PERIOD ____

3-7 Study Guide and Intervention

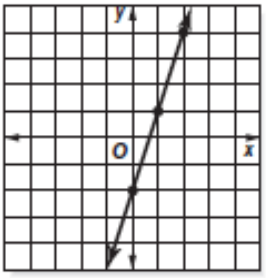
Functions and Graphs

The solution of an equation with two variables consists of two numbers, one for each variable, that make the equation true. The solution is usually written as an ordered pair (x, y), which can be graphed. If the graph for an equation is a straight line, then the equation is a linear equation.

Example 1 **Graph $y = 3x - 2$.**

Select any four values for the input x. We chose 3, 2, 0, and -1. Substitute these values for x to find the output y.

x	$3x - 2$	y	(x, y)
2	$3(2) - 2$	4	(2, 4)
1	$3(1) - 2$	1	(1, 1)
0	$3(0) - 2$	-2	(0, -2)
-1	$3(-1) - 2$	-5	(-1, -5)

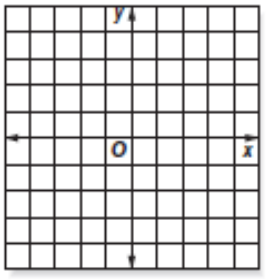


Four solutions are (2, 4), (1, 1), (0, -2), and (-1, -5). The graph is shown at the right.

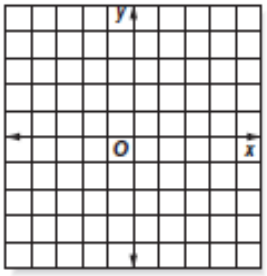
Exercises

Graph each equation.

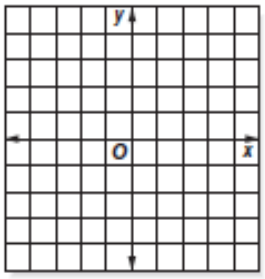
1. $y = x - 1$



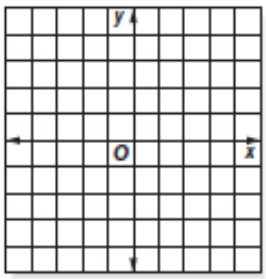
2. $y = x + 2$



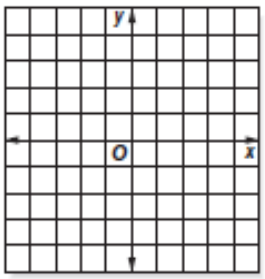
3. $y = -x$



4. $y = 4x$



5. $y = 2x + 4$



6. $y = 2x$