

4-5 Study Guide and Intervention *(continued)*

Graphing Linear Equations

Graph Linear Equations The graph of a linear equation is a line. The line represents all solutions to the linear equation. Also, every ordered pair on this line satisfies the equation.

Example Graph the equation $y - 2x = 1$.

Solve the equation for y .

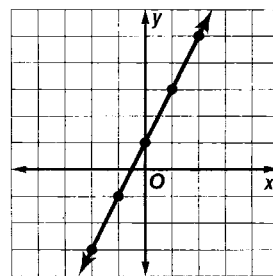
$$\begin{array}{ll}
 y - 2x = 1 & \text{Original equation} \\
 y - 2x + 2x = 1 + 2x & \text{Add } 2x \text{ to each side.} \\
 y = 2x + 1 & \text{Simplify.}
 \end{array}$$

*** LOOK AT EXAMPLE. PUT YOUR TABLES ON LOOSE LEAF.**

Select five values for the domain and make a table. Then graph the ordered pairs and draw a line through the points.

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

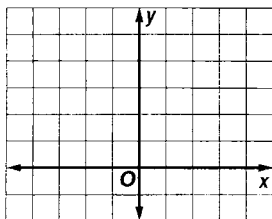
*** ALL WORK EXCEPT THE GRAPHS ON LOOSE LEAF.**



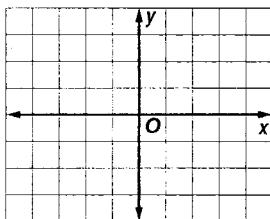
A. Exercises

Graph each equation.

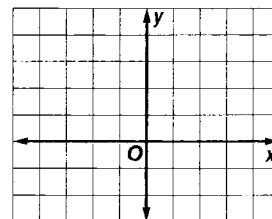
1. $y = 4$



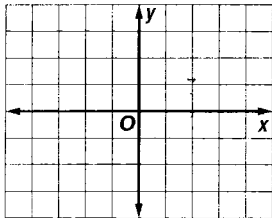
2. $y = 2x$



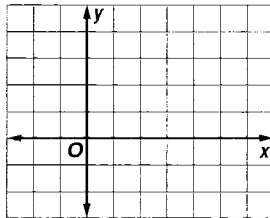
3. $x - y = -1$



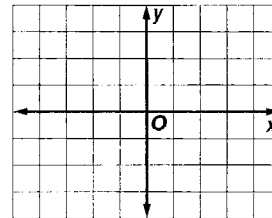
4. $3x + 2y = 6$



5. $x + 2y = 4$



6. $2x + y = -2$



B. Determine whether each equation is a linear equation. If so, write the equation in standard form.

1. $xy = 6$

2. $y = 2 - 3x$

3. $5x = y - 4$

4. $y = 2x + 5$

5. $y = -7 + 6x$

6. $y = 3x^2 + 1$