

4-5 Study Guide

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 .

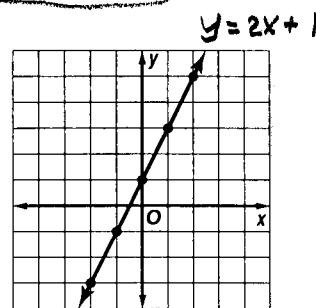
$$\begin{aligned} y - 2x &= 1 && \text{Original equation} \\ y - 2x + 2x &= 1 + 2x && \text{Add } 2x \text{ to each side} \\ y &= 2x + 1 && \text{Simplify.} \end{aligned}$$

* Solve for y , if needed, plus T-Table on looseleaf.

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	$(2, 5)$

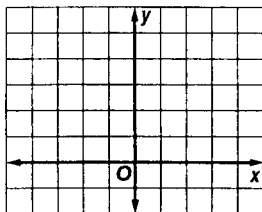
* GRAPHS ON THIS sheet!!!



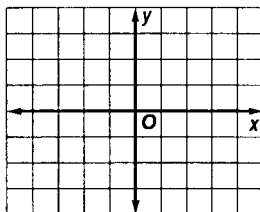
Exercises

Graph each equation.

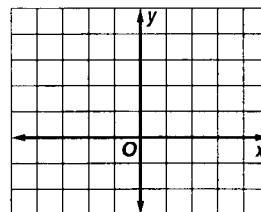
1. $y = 4$



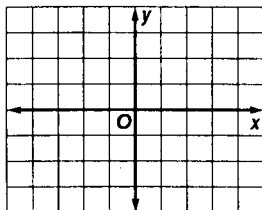
2. $y = 2x$



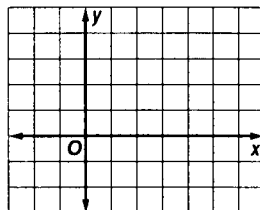
3. $x - y = -1$



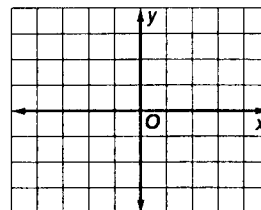
4. $3x + 2y = 6$



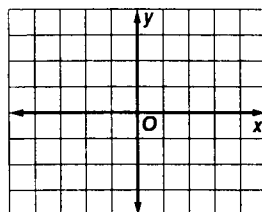
5. $x + 2y = 4$



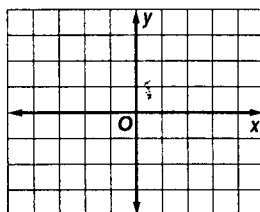
6. $2x + y = -2$



7. $3x - 6y = -3$



8. $-2x + y = -2$



9. $\frac{1}{4}x + \frac{3}{4}y = 6$ BONUS Problem

