4.2 Graph Linear Equations

pp. 215–221

EXAMPLE

Graph the equation $y + 3x = 1$.

STEP 1 Solve the equation for y.

$$y + 3x = 1$$
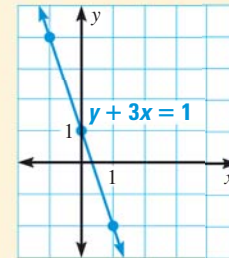$$y = -3x + 1$$

STEP 2 Make a table by choosing a few values for x and finding the values for y.

x	−1	0	1
y	4	1	−2

STEP 3 Plot the points.

STEP 4 Connect the points by drawing a line through them.

EXERCISES

Graph the equation.

EXAMPLE 2
on p. 216
for Exs. 8–10

8. $y + 5x = -5$

9. $2x + 3y = 9$

10. $2y - 14 = 4$

4.3 Graph Using Intercepts

pp. 225–232

EXAMPLE

Graph the equation $-0.5x + 2y = 4$.

STEP 1 Find the intercepts.

$$-0.5x + 2y = 4 \qquad\qquad -0.5x + 2y = 4$$
$$-0.5x + 2(0) = 4 \qquad\qquad -0.5(0) + 2y = 4$$
$$x = -8 \leftarrow \textbf{x-intercept} \qquad y = 2 \leftarrow \textbf{y-intercept}$$

STEP 2 Plot the points that correspond to the intercepts: (−8, 0) and (0, 2).

STEP 3 Connect the points by drawing a line through them.

EXERCISES

Graph the equation.

**EXAMPLES
2 and 4**
on pp. 226–227
for Exs. 11–14

11. $-x + 5y = 15$

12. $4x + 4y = -16$

13. $2x - 6y = 18$

14. CRAFT FAIR You sell necklaces for $10 and bracelets for $5 at a craft fair. You want to earn $50. This situation is modeled by the equation $10n + 5b = 50$ where n is the number of necklaces you sell and b is the number of bracelets you sell. Find the intercepts of the graph of the equation. Then graph the equation. Give three possibilities for the number of bracelets and necklaces that you could sell.