## 5.4 EXERCISES

## SKILL PRACTICE

**VOCABULARY** **Identify the form of the equation.**

**1.** $2x + 8y = -3$

**2.** $y = -5x + 8$

**3.** $y + 4 = 2(x - 6)$

**4. WRITING** *Explain* how to write an equation of a line in standard form when two points on the line are given.

EXAMPLE 1
on p. 311
for Exs. 5–10

**EQUIVALENT EQUATIONS** **Write two equations in standard form that are equivalent to the given equation.**

**5.** $x + y = -10$

**6.** $5x + 10y = 15$

**7.** $-x + 2y = 9$

**8.** $-9x - 12y = 6$

**9.** $9x - 3y = -12$

**10.** $-2x + 4y = -5$

EXAMPLE 2
on p. 311
for Exs. 11–22

**WRITING EQUATIONS** **Write an equation in standard form of the line that passes through the given point and has the given slope $m$ or that passes through the two given points.**

**11.** $(-3, 2)$, $m = 1$

**12.** $(4, -1)$, $m = 3$

**13.** $(0, 5)$, $m = -2$

**14.** $(-8, 0)$, $m = -4$

**15.** $(-4, -4)$, $m = -\frac{3}{2}$

**16.** $(-6, -10)$, $m = \frac{1}{6}$

**(17.)** $(-8, 4)$, $(4, -4)$

**18.** $(-5, 2)$, $(-4, 3)$

**19.** $(0, -1)$, $(-6, -9)$

**20.** $(3, 9)$, $(1, 1)$

**21.** $(10, 6)$, $(-12, -5)$

**22.** $(-6, -2)$, $(-1, -2)$

EXAMPLE 3
on p. 312
for Exs. 23–28

**HORIZONTAL AND VERTICAL LINES** **Write equations of the horizontal and vertical lines that pass through the given point.**

**23.** $(3, 2)$

**24.** $(-5, -3)$

**25.** $(-1, 3)$

**26.** $(5, 3)$

**27.** $(-1, 4)$

**28.** $(-6, -2)$

EXAMPLE 4
on p. 312
for Exs. 29–36

**29. ERROR ANALYSIS** *Describe* and correct the error in finding the value of $A$ for the equation $Ax - 3y = 5$, if the graph of the equation passes through the point $(1, -4)$.

$$A(-4) - 3(1) = 5$$
$$A = -2$$ ✗

**30.** ⬥ **TAKS REASONING** The graph of the equation $Ax + 2y = -2$ is a line that passes through $(2, -2)$. What is the value of $A$?

(A) $-1$  (B) $1$  (C) $2$  (D) $3$

**COMPLETING EQUATIONS** **Find the missing coefficient in the equation of the line that passes through the given point. Write the completed equation.**

**31.** $Ax + 3y = 5$, $(2, -1)$

**32.** $Ax - 4y = -1$, $(6, 1)$

**33.** $-x + By = 10$, $(-2, -2)$

**34.** $8x + By = 4$, $(-5, 4)$

**35.** $Ax - 3y = -5$, $(1, 0)$

**36.** $2x + By = -4$, $(-3, 7)$

**37. CHALLENGE** Write an equation in standard form of the line that passes through $(0, a)$ and $(b, 0)$ where $a \neq 0$ and $b \neq 0$.