LESSON 5.4 **Practice B**
For use with pages 311–316

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

1. $6x + 24y = 18$

2. $8x - 14y = 2$

3. $6x + y = 1$

4. $-4x - 2y = 16$

5. $2x + 3y = 11$

6. $-9x + 4y = 5$

Write an equation in standard form of the line that passes through the given point and has the given slope *m*.

7. $(4, 3)$, $m = 7$

8. $(5, -1)$, $m = 2$

9. $(-2, 6)$, $m = 1$

10. $(-7, 8)$, $m = -3$

11. $(9, -10)$, $m = -4$

12. $(-15, -4)$, $m = \frac{1}{2}$

Write an equation in standard form of the line that passes through the given points.

13. $(2, 6)$, $(3, 8)$

14. $(-1, 2)$, $(5, 4)$

15. $(7, -3)$, $(4, 1)$

16. $(3, -8)$, $(5, -9)$

17. $(-5, 6)$, $(2, -3)$

18. $(-3, -1)$, $(6, -8)$

Write equations of the horizontal and the vertical lines that pass through the given point.
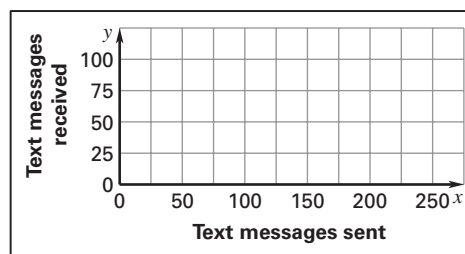
19. $(8, 3)$

20. $(-2, 6)$

21. $(5, -5)$

22. **Text Messaging** Your cell phone plan charges you $.02 to send a text message and $.07 to receive a text message. You plan to spend no more than $5 a month on text messaging.

   a. Write an equation in standard form that models the possible combinations of sent text messages and received text messages.

   b. Graph the equation from part (a). *Explain* what the intercepts of the graph mean in this situation.

   c. List three other possible combinations of the number of messages you can send and receive.

23. **Potting Soil Mix** You are making 24 pounds of your own potting soil mix of sphagnum peat moss and coarse sand. You buy the peat moss in bags that weigh approximately 2 pounds.

   a. The last time you made potting soil, you used 9 bags of sphagnum peat moss and 4 bags of coarse sand. Use this information to find the number of pounds in a bag of coarse sand.

   b. Write an equation in standard form that models the possible combinations of bags of sphagnum peat moss and coarse sand you can use.

   c. List three possible combinations of whole bags of sphagnum peat moss and coarse sand you can use to make the potting soil.