Extra Practice: Skills and Word Problems

● **Lesson 7-1** Solve each system by graphing.

1. $x - y = 7$

$3x + 2y = 6$

2. $y = 2x + 3$

$y = -\frac{3}{2}x - 4$

3. $y = -2x + 6$

$3x + 4y = 24$

● **Lesson 7-2** Solve each system by using substitution.

4. $x - y = 13$

$y - x = -13$

5. $3x - y = 4$

$x + 5y = -4$

6. $x + y = 4$

$y = 7x + 4$

● **Lesson 7-3** Solve each system by elimination.

7. $x + y = 19$

$x - y = -7$

8. $-3x + 4y = 29$

$3x + 2y = -17$

9. $3x + y = 3$

$-3x + 2y = -30$

10. $6x + y = 13$

$y - x = -8$

11. $4x - 9y = 61$

$10x + 3y = 25$

12. $4x - y = 105$

$x + 7y = -10$

● **Lesson 7-4** Write a system of equations to model each problem and solve.

13. Suppose you have 12 coins that total 32 cents. Some of the coins are nickels and the rest are pennies. How many of each coin do you have?

14. Claire bought three bars of soap and five sponges for $2.31. Steve bought five bars of soap and three sponges for $3.05. Find the cost of each item.

15. The perimeter of a rectangular lot is 74 feet. The cost of fencing along the two lengths is $1 per foot, and the cost of fencing along the two widths is $3.50 per foot. Find the dimensions of the lot if the total cost of the fencing is $159.

16. A chemist wants to make a 10% solution of fertilizer. How much water and how much of a 30% solution should the chemist mix to get 30 L of a 10% solution?

17. Fruit drink A consists of 6% pure fruit juice and drink B consists of 15% pure fruit juice. How much of each kind of drink should you mix together to get 4 L of a 10% concentration of fruit juice?

18. A motor boat traveled 12 miles with the current, turned around, and returned 12 miles against the current to its starting point. The trip with the current took 2 hours and the trip against the current took 3 hours. Find the speed of the boat and the speed of the current.

● **Lesson 7-5** Graph each linear inequality.

19. $y < x$

20. $y < x - 4$

21. $y > -6x + 5$

22. $y \leq 14 - x$

23. $y \geq \frac{1}{4}x - 3$

24. $2x + 3y \leq 6$

● **Lesson 7-6** Solve each system by graphing.

25. $y \leq 5x + 1$

$y > x - 3$

26. $y > 4x + 3$

$y \geq -2x - 1$

27. $y > -x + 2$

$y > x - 4$

28. $y < -2x + 1$

$y > -2x - 3$

29. $y \leq 5$

$y \geq -x + 1$

30. $y \leq 5x - 2$

$y > 3$