

## Chapter 5 Test

### Solve systems graphically. (5.1)

1.  $y = x + 6$

$y = -x + 2$

2.  $y = 3x - 12$

$x + y + 8 = 0$

3.  $y = 3x + 6$

$y = -4$

4.  $-4x = -3y - 15$

$y = x - 7$

5.  $4x + 3y + 5 = 0$

$5y + x + 20 = 0$

6.  $3x + 2y + 8 = 0$

$6y + 4x + 9 = 0$

### Solve systems graphically. Name figure formed. (5.1)

7.  $x = -1.5$

$x + y = 4$

$y = 2x - 5$

8.  $y = 3x + 10$

$5y = -2x - 9$

$4x + y = -3$

9.  $x = -1$

$y = -2$

$7x + y - 5 = 0$

10.  $y = 4$

$y = -3$

$x = 7$

$x = -3$

11.  $2y + x = -6$

$y = 9x - 4$

$4y - 5x - 32 = 0$

$-2y = x - 8$

12.  $5y = 3x + 15$

$y + 3x = 12$

$y = x - 7$

$y + x + 9 = 0$

### Solve each system by substitution. (5.2)

13.  $x = y - 7$

$3x + y + 9 = 0$

14.  $y = x + 8$

$y = -9$

15.  $2y = x - 8$

$x + 5y = -6$

16.  $4x + y + 2 = 0$

$5y + 3x + 14 = 0$

17.  $7y = 3x + 18$

$y = -x + 5$

18.  $6y = x - 4$

$x + y = 1$

### Solve each system by algebraic addition. (5.3)

19.  $x = y - 7$

$x + y + 4 = 0$

20.  $5y = x + 2$

$y = -5$

21.  $y = 4x - 3$

$6x + 2y = -8$

22.  $x + 4y + 6 = 0$

$10y + 6x + 24 = 0$

23.  $7y = 9x + 21$

$2y = -x + 27$

24.  $9y = 7x - 16$

$5x + 4y + 20 = 0$

### Solve. (5.4)

25. A math class collected \$41.90 in nickels and quarters to help the needy. If the kids collected 258 coins, how many are quarters and how many are nickels?

26. Kelly is 6 years older than her sister. Four years ago, she was four times her sister's age. What are the ages of the sisters today?

27. Two planes fly in opposite directions at the same time and land at the same time. One is propeller driven and flies at 511 km per hour; the other one is a jet going at 946 km per hour. If when they land the distance between them is 2,914 km, how long did they travel?

### Find the solution area. (5.5)

28.  $5y \leq 3x + 12$

$y < -1$

29.  $5y \leq x - 3$

$3x + 2y \leq -7$

30.  $5y \leq 3x + 25$

$-x + y + 6 \geq 5$

$5x - 4y - 10 < 0$

31.  $8x \leq 7y + 15$

$4x + y > 1$

32.  $-3x < -6y - 20$

$y < 4x - 4$

33.  $9x + 4y + 8 \leq 0$

$y + 5x + 4 \leq 0$

$7x - 7y - 5 < 8$

34.  $y \geq 5x + 12$

$4y \geq -x + 14$

35.  $y > 4x - 11$

$7x + 10y + 18 > 0$

36.  $y < 2x + 5$

$y \leq 4$

$x + y > 4$

$5x - 3y < 0$