Practice B 7.4 Progress 451–457

Describe the first step you would use to solve the linear system.

1.
$$3x - 4y = 7$$

 $5x + 8y = 10$

2.
$$9x + 4y = 13$$
 $3x + 5y = 9$

3.
$$5x + 7y = -3$$

 $15x + 4y = -5$

4.
$$7x - 4y = 6$$
 $3x - 2y = -15$

5.
$$7x + 9y = -6$$

 $-5x + 14y = 11$

6.
$$9x - 5y = 14$$

 $-6x + 8y = 13$

Solve the linear system by using elimination.

7.
$$x + 3y = 1$$

 $-5x + 4y = -24$

8.
$$-3x - y = -15$$
 $8x + 4y = 48$

9.
$$x + 7y = -37$$
 $2x - 5y = 21$

10.
$$8x - 4y = -76$$

 $5x + 2y = -16$

11.
$$-3x + 10y = 23$$
 $5x + 2y = 55$

12.
$$9x - 4y = 26$$
 $18x + 7y = 22$

13.
$$4x - 3y = 16$$

 $16x + 10y = 240$

14.
$$20x + 10y = 100$$

 $-5x + 4y = 53$

15.
$$3x - 10y = -25$$

 $5x - 20y = -55$

16.
$$-3x - 4y = 27$$
 $5x - 6y = -7$

17.
$$2x + 7y = 2$$
 $5x - 2y = 83$

18.
$$3x - 5y = -16$$

 $2x - 3y = -8$

Practice B continued For use with pages 451–457

- **19. Hockey Game** Two families go to a hockey game. One family purchases two adult tickets and four youth tickets for \$28. Another family purchases four adult tickets and five youth tickets for \$45.50. Let *x* represent the cost in dollars of one adult ticket and let *y* represent the cost in dollars of one youth ticket.
 - **a.** Write a linear system that represents this situation.
 - **b.** Solve the linear system to find the cost of one adult and one youth ticket.
 - **c.** How much would it cost two adults and five youths to attend the game?
- **20. Travel Agency** A travel agency offers two Chicago outings. Plan A includes hotel accommodations for three nights and two pairs of baseball tickets worth a total of \$557. Plan B includes hotel accommodations for five nights and four pairs of baseball tickets worth a total of \$974. Let *x* represent the cost in dollars of one night's hotel accommodations and let *y* represent the cost in dollars of one pair of baseball tickets.
 - **a.** Write a linear system you could use to find the cost of one night's hotel accommodations and the cost of one pair of baseball tickets.
 - **b.** Solve the linear system to find the cost of one night's hotel accommodations and the cost of one pair of baseball tickets.
- **21. Highway Project** There are fifteen workers employed on a highway project, some at \$180 per day and some at \$155 per day. The daily payroll is \$2400. Let *x* represent the number of \$180 per day workers and let *y* represent the number of \$155 per day workers. Write and solve a linear system to find the number of workers employed at each wage.