

**Practice B**

For use with pages 148–155

**Solve the system using the substitution method.**

- |                                    |                                   |                                    |
|------------------------------------|-----------------------------------|------------------------------------|
| 1. $2x - 5y = 9$<br>$-3x + y = -7$ | 2. $-3x + 4y = 1$<br>$x - 2y = 1$ | 3. $6x + 2y = 11$<br>$4x + y = 6$  |
| 4. $x - 2y = -1$<br>$5x - 7y = 4$  | 5. $4x + 3y = 3$<br>$2x + y = -3$ | 6. $10x - 16y = 17$<br>$x + y = 3$ |

**Solve the system using the linear combination method.**

- |                                       |                                       |                                       |
|---------------------------------------|---------------------------------------|---------------------------------------|
| 7. $5x + y = 6$<br>$-5x + 3y = -22$   | 8. $2x - 3y = 4$<br>$8x + 3y = 1$     | 9. $4x + y = -5$<br>$4x + 3y = 9$     |
| 10. $2x - 7y = -10$<br>$3x + 2y = 10$ | 11. $3x - 4y = 12$<br>$6x + 2y = -11$ | 12. $5x - 2y = -15$<br>$7x + 5y = 18$ |

**Solve the system using any algebraic method.**

- |                                       |                                     |  |
|---------------------------------------|-------------------------------------|--|
| 13. $4x + 7y = -10$<br>$3x - 7y = -4$ | 14. $-2x + 3y = 8$<br>$x - 5y = -4$ | 15. $6x + y = 0$<br>$15x + 2y = 9$     |
| 16. $6x - 3y = 1$<br>$4x - 2y = 7$    | 17. $3x - 8y = 1$<br>$6x + 2y = 11$ | 18. $4x - 16y = 4$<br>$-3x + 12y = -3$ |
| 19. $2x + 8y = 8$<br>$3x - 2y = -16$  | 20. $-5x + y = 17$<br>$3x + 2y = 8$ | 21. $3x - 9y = 3$<br>$x + 8y = 9$      |

22. **CDs and Cassettes** For 1990 through 1998, the manufacturer's shipments for audio cassettes,  $A$  (in millions), and compact discs,  $C$  (in millions), can be modeled by the equations

$$A = -31.8t + 322 \quad \text{Audio cassette shipments}$$

$$C = 42.8t + 110 \quad \text{Compact disc shipments}$$

where  $t$  is the number of years since 1990. In what year did the number of compact discs shipped surpass the number of audio cassettes shipped?

23. **Golf Bags** A sporting goods store receives a shipment of 124 golf bags. The shipment includes two types of bags, full-size and collapsible. The full-size bags cost \$38.50 each. The collapsible bags cost \$22.50 each. The bill for the shipment is \$3430. How many of each type of golf bag are in the shipment?
24. **Vacation Trip** You and a friend share the driving on a 280 mile trip. Your average speed is 58 miles per hour. Your friend's average speed is 53 miles per hour. You drive one hour longer than your friend. How many hours did each of you drive? Use the following verbal model.

$$\boxed{\text{Your speed}} \cdot \boxed{\text{Your time}} + \boxed{\text{Friend's speed}} \cdot \boxed{\text{Friend's time}} = \boxed{\text{Total distance}}$$

$$\boxed{\text{Your time}} = \boxed{\text{Friend's time}} + \boxed{1 \text{ hour}}$$