

# Practice A

For use with pages 154–159

**Describe each step used in solving the equation.**

- |                      |                       |                    |
|----------------------|-----------------------|--------------------|
| 1. $9x - 4 = 7x + 8$ | 2. $-4x + 9 = 2x + 3$ | 3. $4(2x - 9) = 4$ |
| A. $2x - 4 = 8$      | A. $-4x + 6 = 2x$     | A. $8x - 36 = 4$   |
| B. $2x = 12$         | B. $6 = 6x$           | B. $8x = 40$       |
| C. $x = 6$           | C. $1 = x$            | C. $x = 5$         |

**Solve the equation and describe each step you use.**

- |                   |                  |                    |
|-------------------|------------------|--------------------|
| 4. $2x = x + 9$   | 5. $4x - 6 = 3x$ | 6. $-2x = -3x + 8$ |
| 7. $7x = 5x + 24$ | 8. $7x + 5 = 6x$ | 9. $12x = 9x - 15$ |

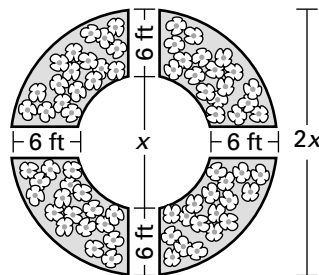
**Solve the equation if possible.**

- |                         |                                       |  |
|-------------------------|---------------------------------------|--|
| 10. $2x + 5 = 3x$       | 11. $-2x = -4x + 20$                  | 12. $7x - 20 = -3x$                    |
| 13. $7x = 4x - 9$       | 14. $-8x - 70 = 2x$                   | 15. $8x - 3 = 8x$                      |
| 16. $3(x - 1) = 3x - 3$ | 17. $2x + 3 = 4x + 5$                 | 18. $-3x - 4 = 4x + 10$                |
| 19. $8x - 3 = 19 + 5x$  | 20. $\frac{1}{3}x = 7 - \frac{2}{3}x$ | 21. $\frac{1}{4}x + 3 = \frac{-1}{4}x$ |

**In Exercises 22–24, write and solve an equation to answer the question.**

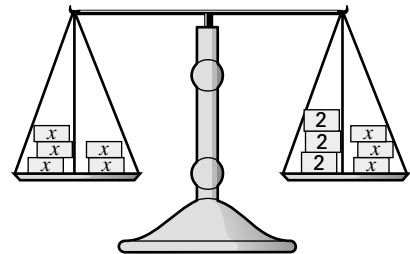
**22. Dimensions of a Circular Flower Garden**

A flower garden has the shape pictured below. The diameter of the outer circle is twice the diameter of the inner circle. The lengths of the walkways are each 6 feet long. What is the diameter of the inner circle?



**23. Balanced Scale**

On one side of a scale there are 6 blocks, 3 weighing 2 grams each and 3 weighing  $x$  grams each. The scale is balanced if 5 blocks weighing  $x$  grams each are placed on the other side of the scale. How much does each of the unknown blocks weigh?



**24. Distance-Rate-Time** Two cars travel the same distance. The first car travels at a rate of 40 miles per hour and reaches its destination in  $t$  hours. The second car travels at a rate of 55 miles per hour and reaches its destination 3 hours earlier than the first car. How long does it take for the first car to reach its destination?

$$\boxed{\text{Rate of car 1}} \cdot \boxed{\text{Time for car 1}} = \boxed{\text{Rate of car 2}} \cdot \boxed{\text{Time for car 2}}$$