



## Lesson Check

### Do you know HOW?

Solve each equation. Check your answer.

1.  $x + 7 = 3$

2.  $9 = m - 4$

3.  $5y = 24$

4. **Books** You have already read 117 pages of a book. You are one third of the way through the book. Write and solve an equation to find the number of pages in the book.

### Do you UNDERSTAND?

**Vocabulary** Which property of equality would you use to solve each equation? Why?

5.  $3 + x = -34$

6.  $2x = 5$

7.  $x - 4 = 9$

8.  $\frac{x}{7} = 9$

9. **Reasoning** Write a one-step equation. Then write two equations that are equivalent to your equation. How can you prove that all three equations are equivalent?



## Practice and Problem-Solving Exercises

### A Practice

Solve each equation using addition or subtraction. Check your answer.

10.  $6 = x + 2$

11.  $27 + n = 46$

12.  $23 = v + 5$

13.  $4 = q + 13$

14.  $f + 9 = 20$

15.  $-5 + a = 21$

16.  $-17 = 3 + k$

17.  $5.5 = -2 + d$

18.  $c + 4 = -9$

19.  $67 = w - 65$

20.  $23 = b - 19$

21.  $g - 3.5 = 10$

22.  $y - 19 = 37$

23.  $q - 11 = -9$

24.  $-2.5 = p + 7.1$

25.  $j - 3 = -7$

See Problems 1 and 2.

Solve each equation using multiplication or division. Check your answer.

26.  $-8n = -64$

27.  $-7y = 28$

28.  $5b = 145$

29.  $6a = 0.96$

30.  $-96 = 4c$

31.  $11 = 2.2t$

32.  $17.5 = 5s$

33.  $7r = -\frac{7}{2}$

34.  $\frac{m}{7} = 12$

35.  $35 = \frac{j}{5}$

36.  $\frac{k}{7} = 13$

37.  $-39 = \frac{q}{3}$

38.  $14 = \frac{z}{2}$

39.  $\frac{q}{-9} = -9$

40.  $-13 = \frac{m}{-5}$

41.  $\frac{k}{4} = -\frac{17}{2}$

See Problems 3 and 4.

Solve each equation. Check your answer.

42.  $\frac{2}{3}q = 18$

43.  $\frac{3}{4}x = 9$

44.  $\frac{5}{8}y = -1$

45.  $\frac{3}{5}m = -15$

46.  $\frac{1}{5}x = \frac{2}{7}$

47.  $36 = \frac{4}{9}d$

48.  $-6 = \frac{3}{7}n$

49.  $\frac{3}{8}p = 9$

See Problem 5.

Define a variable and write an equation for each situation. Then solve.

See Problem 6.

50. **Music** You have a rack that can hold 30 CDs. You can fit 7 more CDs on the rack before the rack is full. How many CDs are in the rack?

51. **Population** In a 3-year period, a city's population decreased by 7525 to about 581,600. What was the city's population at the beginning of the 3-year period?