

## Chapter 2 ■ Skills Practice

### Lesson

#### 2-1

Solve each equation. Check your answer.

1.  $x - 9 = 5$

2.  $4 = y - 12$

3.  $a + \frac{3}{5} = 7$

4.  $7.3 = b + 3.4$

5.  $-6 + j = 5$

6.  $-1.7 = -6.1 + k$

Write an equation to represent each relationship. Then solve the equation.

7. A number decreased by 7 is equal to 10.

8. The sum of 6 and a number is  $-3$ .

### Lesson

#### 2-2

Solve each equation. Check your answer.

9.  $\frac{n}{5} = 15$

10.  $-6 = \frac{k}{4}$

11.  $\frac{r}{2.6} = 5$

12.  $3b = 27$

13.  $56 = -7d$

14.  $-3.6 = -2f$

15.  $\frac{1}{4}z = 3$

16.  $12 = \frac{4}{5}g$

17.  $\frac{1}{3}a = -5$

Write an equation to represent each relationship. Then solve the equation.

18. A number multiplied by 4 is  $-20$ .

19. The quotient of a number and 5 is 7.

Use the equation  $9y = -3x$  to find  $y$  for each value of  $x$ .

	$x$	$-3x$	$9y = -3x$	$y$
20.	$-6$	$-3(-6) = 18$	$9y = 18$	<input type="text"/>
21.	$0$	<input type="text"/>	<input type="text"/>	<input type="text"/>
22.	$3$	<input type="text"/>	<input type="text"/>	<input type="text"/>

### Lesson

#### 2-3

Solve each equation. Check your answer.

23.  $2k + 7 = 15$

24.  $11 - 5m = -4$

25.  $23 = 9 - 2d$

26.  $\frac{2}{5}b + 6 = 10$

27.  $\frac{f}{3} - 4 = 2$

28.  $6n + 4 = 22$

29. If  $5(y - 2) = 30$ , find the value of  $\frac{1}{4}y$ .

30. If  $4 - 3b = 19$ , find the value of  $-2b$ .

Write an equation to represent each relationship. Solve each equation.

31. The difference of 11 and 4 times a number equals 3.

32. Thirteen less than 5 times a number is equal to 7.

### Lesson

#### 2-4

Solve each equation. Check your answer.

33.  $5b - 3 = 4b + 1$

34.  $3g + 7 = 11g - 17$

35.  $-8 + 4y = y - 6 + 3y - 2$

36.  $7 + 3d - 5 = -1 + 2d - 12 + d$

Write an equation to represent each relationship. Then solve the equation.

37. Three more than one-half a number is the same as 17 minus three times the number.

38. Two times the difference of a number and 4 is the same as 5 less than the number.

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### Lesson

**2-5**

Solve each equation for the indicated variable.

39.  $q - 3r = 2$  for  $r$

40.  $\frac{5-c}{6} = d - 7$  for  $c$

41.  $2x + 3\frac{y}{4} = 5$  for  $y$

42.  $2fgh - 3g = 10$  for  $h$

### Lesson

**2-6**

Find each unit rate.

43. A long-distance runner ran 9000 meters in 30 minutes.

44. A hummingbird flapped its wings 770 times in 14 seconds.

Solve each proportion.

45.  $\frac{h}{4} = \frac{5}{6}$

46.  $\frac{5}{m} = \frac{2}{5}$

47.  $\frac{r}{3} = \frac{10}{7}$

48.  $\frac{2}{3} = \frac{2x}{8}$

49.  $\frac{5}{x-3} = \frac{3}{10}$

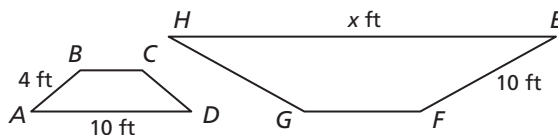
50.  $\frac{b-2}{4} = \frac{7}{12}$

### Lesson

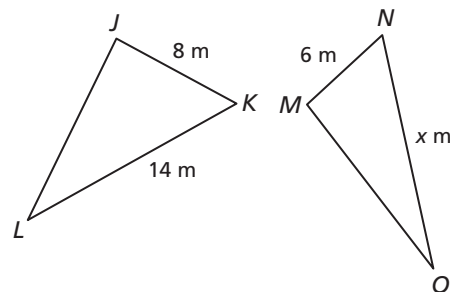
**2-7**

Find the value of  $x$  in each diagram.

51.  $ABCD \sim EFGH$



52.  $\triangle JKL \sim \triangle MNO$



### Lesson

**2-8**

53. Find 25% of 60.

54. Find 40% of 95.

55. What percent of 75 is 15?

56. What percent of 60 is 33?

57. 91 is what percent of 65?

58. 35% of what number is 24.5?

Write each decimal or fraction as a percent.

59.  $\frac{4}{5}$

60. 0.55

61.  $\frac{9}{6}$

62. 0.0375

Write each percent as a decimal and as a fraction.

63. 32%

64. 24%

65. 37.5%

66. 118.75%

Write each list in order from least to greatest.

67.  $\frac{2}{17}$ , 0.28, 1.9%,  $\frac{6}{25}$ , 0.19

68.  $\frac{5}{3}$ , 9.2, 117%,  $\frac{9}{11}$ , 8.8%

### Lesson

**2-9**

69. Estimate the tax on a \$2438.00 clarinet when the sales tax is 7.9%.

70. Estimate the tip on a \$21.32 check using a tip rate of 20%.

### Lesson

**2-10**

Find each percent change. Tell whether it is a percent increase or decrease.

71. 10 to 25

72. 40 to 2

73. 800 to 160

74. 4 to 14

75. 8 to 30

76. 60 to 36

77. Find the result when 45 is increased by 40%.

78. Find the result when 120 is decreased by 70%.