

# Extra Practice Chapter 1 ■ Skills Practice

## Lesson 1-1

Give two ways to write each algebraic expression in words.

1.  $x + 8$

2.  $6(y)$

3.  $g - 4$

4.  $\frac{12}{h}$

Evaluate each expression for  $a = 4$ ,  $b = 2$ , and  $c = 5$ .

5.  $b + c$

6.  $\frac{a}{b}$

7.  $c - a$

8.  $ab$

Write an algebraic expression for each verbal expression. Then evaluate the algebraic expression for the given values of  $y$ .

	Verbal	Algebraic	$y = 9$	$y = 6$
9.	$y$ reduced by 4	<input type="text"/>	<input type="text"/>	<input type="text"/>
10.	the quotient of $y$ and 3	<input type="text"/>	<input type="text"/>	<input type="text"/>
11.	5 more than $y$	<input type="text"/>	<input type="text"/>	<input type="text"/>
12.	the sum of $y$ and 2	<input type="text"/>	<input type="text"/>	<input type="text"/>

## Lesson 1-2

Solve each equation. Check your answer.

13.  $x - 9 = 5$

14.  $4 = y - 12$

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

16.  $7.3 = b + 3.4$

17.  $-6 + j = 5$

18.  $-1.7 = -6.1 + k$

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

19. A number decreased by 7 is equal to 10. 20. The sum of 6 and a number is  $-3$ .

## Lesson 1-3

Solve each equation. Check your answer.

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

22.  $-6 = \frac{k}{4}$

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

24.  $3b = 27$

25.  $56 = -7d$

26.  $-3.6 = -2f$

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

28.  $12 = \frac{4}{5}g$

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

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

30. A number multiplied by 4 is  $-20$ . 31. The quotient of a number and 5 is 7.

## Lesson 1-4

Solve each equation. Check your answer.

32.  $2k + 7 = 15$

33.  $11 - 5m = -4$

34.  $23 = 9 - 2d$

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

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

37.  $6n + 4 = 22$

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

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

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

**LESSON**  
**1.4**

**Problem Solving**

**Solving Two-Step and Multi-Step Equations**

Write the correct answer.

1. Stephen belongs to a movie club in which he pays an annual fee of \$39.95 and then rents DVDs for \$0.99 each. In one year, Stephen spent \$55.79. Write and solve an equation to find how many DVDs  $d$  he rented.
2. In 2003, the population of Zimbabwe was about 12.6 million, which was 1 million more than 4 times the population in 1950. Write and solve an equation to find the population  $p$  of Zimbabwe in 1950.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

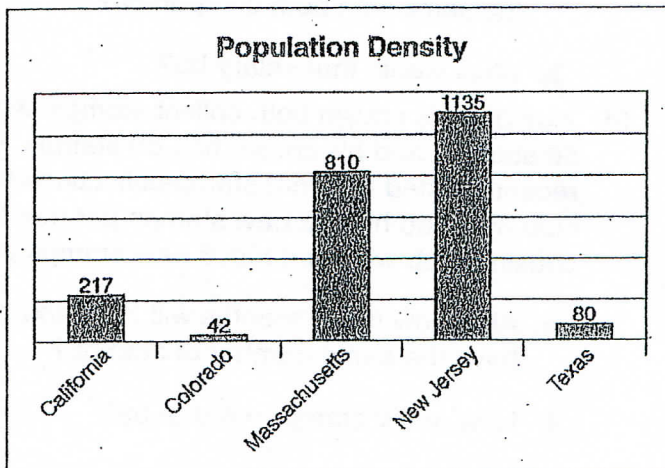
3. Maggie's brother is three years younger than twice her age. The sum of their ages is 24. How old is Maggie?
4. Kate is saving to take an SAT prep course that costs \$350. So far, she has saved \$180, and she adds \$17 to her savings each week. How many more weeks must she save to be able to afford the course?

\_\_\_\_\_

\_\_\_\_\_

Use the graph below to answer questions 5–7. Select the best answer. The graph shows the population density (number of people per square mile) of various states given in the 2000 census.

5. One seventeenth of Rhode Island's population density minus 17 equals the population density of Colorado. What is Rhode Island's population density?  
A 425                      C 714  
B 697                      D 1003
6. One more than sixteen times the population density of New Mexico equals the population density of Texas. To the nearest whole number, what is New Mexico's population density?  
F 5                              H 13  
G 8                              J 63
7. Three times the population density of Missouri minus 26 equals the population density of California. What is Missouri's population density?  
A 64                              C 98  
B 81                              D 729



**LESSON**  
**1.5**

**Practice**

**Solving Equations with Variables on Both Sides**

Solve each equation. Check your answers.

1.  $3d + 8 = 2d - 17$

\_\_\_\_\_

2.  $2n - 7 = 5n - 10$

\_\_\_\_\_

3.  $p - 15 = 13 - 6p$

\_\_\_\_\_

4.  $-t + 5 = t - 19$

\_\_\_\_\_

5.  $15x - 10 = -9x + 2$

\_\_\_\_\_

6.  $1.8r + 9 = -5.7r - 6$

\_\_\_\_\_

7.  $2y + 3 = 3(y + 7)$

\_\_\_\_\_

8.  $4n + 6 - 2n = 2(n + 3)$

\_\_\_\_\_

9.  $6m - 8 = 2 + 9m - 1$

\_\_\_\_\_

10.  $-v + 5 + 6v = 1 + 5v + 3$

\_\_\_\_\_

11.  $2(3b - 4) = 8b - 11$

\_\_\_\_\_

12.  $5(r - 1) = 2(r - 4) - 6$

\_\_\_\_\_

Answer each of the following.

13. Janine has job offers at two companies. One company offers a starting salary of \$28,000 with a raise of \$3000 each year. The other company offers a starting salary of \$36,000 with a raise of \$2000 each year.

a. After how many years would Janine's salary be the same with both companies?

\_\_\_\_\_

b. What would that salary be?

\_\_\_\_\_

14. Xian and his cousin both collect stamps. Xian has 56 stamps, and his cousin has 80 stamps. Both have recently joined different stamp-collecting clubs. Xian's club will send him 12 new stamps per month, and his cousin's club will send him 8 new stamps per month.

a. After how many months will Xian and his cousin have the same number of stamps?

\_\_\_\_\_

b. How many stamps will that be?

\_\_\_\_\_

# What Do You Call It When Police Interrogate a Cow's Husband?

Solve each problem and find your solution in the rectangle below. Cross out the box containing that solution. When you finish, there will be six boxes not crossed out. Print the letters from these boxes in the spaces at the bottom of the page.

- ① Eight more than a number is 20. Find the number.
- ② Twelve less than a number is  $-3$ . Find the number.
- ③ Three more than a number is  $-5$ . Find the number.
- ④ Nine less than a number is  $-24$ . Find the number.
- ⑤ If 10 is subtracted from a number, the result is 23. Find the number.
- ⑥ If 32 is added to a number, the result is  $-4$ . Find the number.
- ⑦ If a number is increased by 6, the result is 50. Find the number.
- ⑧ If a number is decreased by 16, the result is  $-2$ . Find the number.
- ⑨ The length of a tennis court is 78 feet. This is 51 feet more than the width. What is the width?
- ⑩ Andy hit 14 homeruns this season. If this is 9 fewer than he hit last season, how many homeruns did he hit last season?
- ⑪ Jennifer added \$120 to her savings account during July. If this brought her balance to \$700, how much had she saved previously?
- ⑫ The temperature in Frostburg is  $-7^{\circ}\text{C}$ . This is  $18^{\circ}\text{C}$  less than the temperature in Coldspot. Find the temperature in Coldspot.
- ⑬ After 9 new members joined the ski club, there were 38 members. How many members had been in the club previously?
- ⑭ The altitude of a submarine is  $-60$  meters. If this is 25 meters less than its previous altitude, what was its previous altitude?

CO	IN	JA	WS	LK	QU	IT	SH	AM	ES
14	33	$-35$ m	\$580	12	$-75$ m	29	$-15$	9	\$565
OO	TI	ME	ON	ST	TO	AB	OP	ED	LE
$-36$	$8^{\circ}\text{C}$	27 ft	31	$-8$	$11^{\circ}\text{C}$	17	44	23	32 ft

OBJECTIVE 4-c: To solve word problems using equations.