

## 3-3

## Practice

## Solving Equations by Using Multiplication and Division

Solve each equation. Then check your solution.

1.  $8j = 96$

2.  $-13z = -39$

3.  $-180 = 15m$

4.  $243 = 27c$

5.  $\frac{y}{9} = -8$

6.  $-\frac{j}{12} = -8$

7.  $\frac{a}{15} = \frac{4}{5}$

8.  $\frac{g}{27} = \frac{2}{9}$

9.  $\frac{q}{24} = \frac{1}{6}$

10.  $-1 = -\frac{4}{7}t$

11.  $-\frac{3}{8}w = -9$

12.  $-\frac{3}{15}s = 4$

13.  $-3x = \frac{3}{2}$

14.  $\frac{8}{5}a = \frac{4}{3}$

15.  $\frac{5}{3}h = \frac{11}{6}$

16.  $5n = \frac{11}{4}$

17.  $2.5k = 20$

18.  $-3.4e = -3.74$

19.  $-1.7b = 2.21$

20.  $0.26p = 0.104$

21.  $4.2q = -3.36$

Write an equation for each problem. Then solve the equation.

22. Negative nine times a number equals  $-117$ . Find the number.

23. Negative one eighth of a number is  $-\frac{3}{4}$ . What is the number?

24. Five sixths of a number is  $-\frac{5}{9}$ . Find the number.

25.  $2.7$  times a number equals  $8.37$ . What is the number?

26. One and one fourth times a number is one and one third. What is the number?

27. **PUBLISHING** Two units of measure used in publishing are the *pica* and the *point*. A pica is one sixth of an inch. There are 12 points in a pica, so Points =  $12 \cdot$  Picas. How many picas are equivalent to 108 points?

**ROLLER COASTERS** For Exercises 28 and 29, use the following information.

*Superman the Escape* in California is the fastest roller coaster in the world. Riders fall 415 feet in 7 seconds. Speeds reach a maximum of 100 miles per hour.

28. If  $x$  represents the average rate of fall of the roller coaster, write an expression to represent the situation (*Hint*: Use the distance formula  $d = rt$ .)

29. What is the average rate that riders fall in feet per second?