

# 2.23

## Word Problem on Proportions: Problem Type 1

### • Example 1

A gas-oil mixture needed for an industrial engine requires  $\frac{1}{16}$  gal of oil to 1 gal of gasoline. If  $2\frac{1}{2}$  gal of oil are used, how much gasoline will be needed?

The proportions can be written as

$$\frac{\frac{1}{16}}{1} = \frac{\frac{5}{2}}{x}$$

$$\frac{x}{16} = \frac{5}{2}$$

$$2x = 80$$

$$x = 40$$

40 gal of gas are needed.

### • • • CHECK YOURSELF 1

A particular recipe requires 3 cups of flour to 1 cup of sugar. Find the number of cups of flour needed if  $1\frac{1}{2}$  cups of sugar is used.

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### • • • CHECK YOURSELF ANSWER

1.  $4\frac{1}{2}$  cups.

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# 2.23 Exercises

Name \_\_\_\_\_

Section \_\_\_\_\_

Date \_\_\_\_\_

## A N S W E R S

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

Solve.

1. A recipe calls for 2 cups of water to  $\frac{1}{2}$  cup of flour. Find the number of cups of flour needed if 3 cups of water are used.

2. If  $2\frac{1}{2}$  yards of concrete are needed for each driveway, how many driveways can be done with 40 yards of concrete?

3. A gas-oil mixture requires that for each 1 gallon of gasoline,  $1\frac{1}{2}$  cans of oil are needed. How many cans of oil will be needed for 18 gallons of gas?

4. If 1 gallon of paint will cover  $3\frac{1}{3}$  walls, how many gallons will be needed for 16 walls?