

# ▶ 2.30

## Word Problem with Percent and Money: Problem Type 2

### • Example 1

Jeremy inherits \$20,000 and invests part of the money in bonds with an interest rate of 11 percent. The remainder of the money is in savings at a 9 percent rate. What amount has he invested at each rate if he receives \$2040 in interest for 1 year?

Let  $x$  be the part of the \$20,000 invested at 11 percent. Thus,  $20,000 - x$  is the amount, in dollars, invested at 9 percent. Since the interest received is \$2040, we get

$$2040 = \frac{11}{100}x + \frac{9}{100}(20,000 - x).$$

Solving this equation for  $x$  we have

$$x = 12,000$$

Thus, Jeremy invested \$12,000 at 11% and \$8000 at 9%.

### ● ● ● CHECK YOURSELF 1

Jan has \$2000 more invested in a stock that pays 9 percent interest than in a savings account paying 8 percent. If her total interest for 1 year is \$860, how much does she have invested at each rate?

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### ● ● ● CHECK YOURSELF ANSWER

1. \$4000 at 8%, \$6000 at 9%.
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# 2.30 Exercises

Name \_\_\_\_\_

Section \_\_\_\_\_

Date \_\_\_\_\_

## A N S W E R S

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

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

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

Solve each of the following problems. Be sure to show the equations used for the solution.

**1. Investment.** Otis has a total of \$12,000 invested in two accounts. One account pays 8 percent and the other 9 percent. If his interest for 1 year is \$1010, how much does he have invested at each rate?

**2. Investment.** Amy invests a part of \$8000 in bonds paying 12 percent interest. The remainder is in a savings account at 8 percent. If she receives \$840 in interest for 1 year, how much does she have invested at each rate?

**3. Investment rates.** Martha has \$18,000 invested. Part of the money is invested in a bond that yields 11 percent interest. The remainder is in her savings account, which pays 7 percent. If she earns \$1660 in interest for 1 year, how much does she have invested at each rate?