

7-8**Study Guide and Intervention****Simple Interest**

Simple interest is the amount of money paid or earned for the use of money. To find simple interest I , use the formula $I = prt$. Principal p is the amount of money deposited or invested. Rate r is the annual interest rate written as a decimal. Time t is the amount of time the money is invested in years.

Example 1 Find the simple interest earned in a savings account where \$136 is deposited for 2 years if the interest rate is 7.5% per year.

$$I = prt$$

Formula for simple interest

$$I = 136 \cdot 0.075 \cdot 2$$

Replace p with \$136, r with 0.075, and t with 2.

$$I = 20.40$$

Simplify.

The simple interest earned is \$20.40.

Example 2 Find the simple interest for \$600 invested at 8.5% for 6 months.

$$6 \text{ months} = \frac{6}{12} \text{ or } 0.5 \text{ year}$$

Write the time as years.

$$I = prt$$

Formula for simple interest

$$I = 600 \cdot 0.085 \cdot 0.5$$

$p = \$600$, $r = 0.085$, $t = 0.5$

$$I = 25.50$$

Simplify.

The simple interest is \$25.50.

Exercises

Find the interest earned to the nearest cent for each principal, interest rate, and time.

1. \$300, 5%, 2 years
\$30

2. \$650, 8%, 3 years
\$156

3. \$575, 4.5%, 4 years
\$103.50

4. \$735, 7%, $2\frac{1}{2}$ years
\$128.63

5. \$1,665, 6.75%, 3 years
\$337.16

6. \$2,105, 11%, $1\frac{3}{4}$ years
\$405.21

7. \$903, 8.75%, 18 months
\$118.52

8. \$4,275, 19%, 3 months
\$203.06