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LESSON
6-6 **Interactive Study Guide**
Simple Interest

Whether you save money or borrow money, **interest** is either paid or collected for the use of the money. One type of interest banks use is called **simple interest**. This is an amount paid only on the **principal**, or the original amount deposited or borrowed.

Vocabulary
interest
principal
simple interest

Simple interest = principal • rate • time or $I = p \cdot r \cdot t$

Using the Simple Interest Formula

If $p = \$450$, $r = 8.5\%$, and $t = 3$ years, find p .

$I = _ \cdot _ \cdot _$ Write the formula.

$I = 450 \cdot _ \cdot 3$ Write 8.5% as a decimal.

$I = _$ Find the product.

The simple interest is _____

Loan Application

Ben borrows \$8,000 from the bank at 12% simple interest. The loan payoff is \$10,880. How long will it take for him to pay off the total amount?

1. Understand the Problem

What is the unknown? _____

The principal is _____ The interest rate is _____ The total amount is _____

2. Make a Plan

Find the amount of simple interest by using the formula $A = _ + _$, where A is the total amount borrowed. Then use $I = _ \cdot _ \cdot _$ to find the amount of time.

3. Solve

_____ = _____ + I What values do you substitute for $A = p + I$?

_____ = _____ What amount do you subtract from each side?

_____ = I I is equal to what number?

$2,880 = 8,000 \cdot _ \cdot t$ Use $I = p \cdot r \cdot t$. Write 12% as a decimal.

$2,880 = _ t$ Simplify the right side of the equation.

$_ = t$ Divide.

4. Look Back

After 3 years, Ben will have paid \$2,880 in interest for an \$8,000 loan, paying a total of \$10,880.

$I = _ \cdot _ \cdot _ = 2,880$ So, it will take _____ to pay off the \$8,000 loan.