

SECTION

6B

Ready to Go On? Skills Intervention**6-7 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.

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

Vocabulary

interest
simple interest
principal

Using the Simple Interest Formula

Find each missing value.

1. $I = \$$ _____, $P = \$1,000$, $r = 4\%$, $t = 10$ years
2. $I = \$$ _____, $P = \$800$, $r = 4\%$, $t = 10$ years
3. $I = \$$ _____, $P = \$600$, $r = 4\%$, $t = 10$ years
4. $I = \$$ _____, $P = \$1,000$, $r = 3\%$, $t = 10$ years
5. $I = \$$ _____, $P = \$800$, $r = 3\%$, $t = 10$ years
6. $I = \$$ _____, $P = \$600$, $r = 3\%$, $t = 10$ years
7. $I = \$$ _____, $P = \$1,000$, $r = 2\%$, $t = 10$ years
8. $I = \$$ _____, $P = \$800$, $r = 2\%$, $t = 10$ years
9. $I = \$$ _____, $P = \$600$, $r = 2\%$, $t = 10$ years
10. $I = \$240$, $P = \$200$, $r =$ _____%, $t = 20$ years
11. $I = \$240$, $P = \$200$, $r = 12\%$, $t =$ _____ years
12. $I = \$240$, $P = \$$ _____, $r = 4\%$, $t = 30$ years
13. $I = \$300$, $P = \$3,000$, $r =$ _____%, $t = 5$ years
14. $I = \$300$, $P = \$3,000$, $r = 5\%$, $t =$ _____ years
15. $I = \$300$, $P = \$$ _____, $r = 5\%$, $t = 1$ year
16. $I = \$600$, $P = \$1,000$, $r =$ _____%, $t = 10$ years
17. $I = \$600$, $P = \$$ _____, $r = 12\%$, $t = 5$ years
18. $I = \$1200$, $P = \$1,000$, $r = 12\%$, $t =$ _____ years

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Vocabulary

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principal

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 I .

$I = _ \cdot _ \cdot _$

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.

$2,880 = _ \cdot t$

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.