

# Simple Interest

Goal: Students will learn how to complete problems with simple interest.

Where have you heard the term interest?



# Simple Interest

$$I = Prt$$

I = interest

P = principal (original) amount

r = rate (percent --> move decimal left 2 places )

t = time (in years)

Example ~

If you invest \$50 at a simple interest rate of 3.5% per year for 3 years, how much interest would you earn?

$$I = Prt$$

$$I = (50)(.035)(3)$$

$$I = \$5.25$$

*Where do you suppose students make mistakes with this equation?*

# Application of Simple Interest

David opened a bank account by depositing \$1500. After six months he received \$52.50. What was the interest rate?

Equation:  $I = Prt$

$$52.50 = (1500)(r)(.5)$$

$$52.50 = 750r$$

$$.07 = r$$

Solve: 7%

Kyle opened a savings account that earns 8% annual interest. After 9 months, he received \$72 in interest. How much did he invest in the account in the beginning?



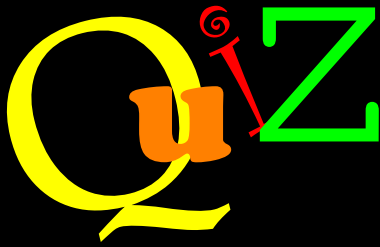
equation:  $I = Prt$

$$72 = P(.08)(.75)$$

$$72 = .06P$$

solution: **\$1200**





1. What does  $P$  represent in the simple interest formula?
2. What should be substituted in for  $t$ , if the interest is calculated for 12 months?
3. If the interest rate is 5%, what should be substituted in for  $r$ ?

p. 141 #29, 30, 49, 50

29. **Finance** You deposit \$1200 in a savings account that earns simple interest at a rate of 3% per year. How much interest will you have earned after 3 years?
30. **Finance** You deposit \$150 in a savings account that earns simple interest at a rate of 5.5% per year. How much interest will you have earned after 4 years?
49. **Finance** A savings account earns simple interest at a rate of 6% per year. Last year the account earned \$10.86 in interest. What was the balance in the account at the beginning of last year?
50. **Furniture** A furniture store offers a set of furniture for \$990. You can also purchase the set on an installment plan for 24 payments of \$45 each. If you choose the installment plan, what percent of the original price will you have paid when you finish? Round to the nearest percent.