6 - 5
Simple Interest

interest: money paid to an individual or bank for using money

If you put money in the bank (savings account, etc.), the bank will __pay__ you interest for letting them use your money.

If you borrow money from the bank, the bank will __charge__ you interest for using their money.

principal: amount earning interest

rate: percent per year

time: how long it's borrowed or stays in the bank

Simple Interest

$$I = prt$$

Interest = principal · rate · time
$\qquad\qquad$ \$ $\qquad$ % $\qquad\qquad$ yrs
$\qquad\qquad\qquad\quad$ as
$\qquad\qquad\qquad$ decimal

Ex: Find the interest on $3,000 borrowed for 2 years at a rate of 08% / year.

$$I = prt$$

$$I = 3,000 \times .08 \times 2$$

$$I = \boxed{\$480}$$

Ex: Savings of $5,000 are invested for 4 years. This investment returns $1,000 in interest. Find the rate of interest.

$$I = prt$$

$$1,000 = 5,000 \times r \times 4$$

$$\frac{1,000}{20,000} = \frac{20,000 \times r}{20,000}$$

$$.05 = r$$

$$\boxed{5\%}$$

Ex: Peter borrows $4,200 at an annual interest rate of 11.5%. The term of the loan is 36 months. (3 yr) Find the interest and total amount due on the loan.

$$I = prt$$

$$I = 4,200 \times .115 \times 3$$

$$I = \boxed{\$1,149}$$

$$4200 + 1149 = \boxed{\$5,649}$$

Homework:

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