Name _____ Period _____

Simple Interest

Facts to Know

When money is borrowed, you must pay to use it because someone else is losing an opportunity to use it while you have it. What you pay to use the money is called *interest*. The rate of interest is a percent. The money you borrow is called the *principal*. Simple interest is paid only on the principal.

The Interest Formula

To calculate the amount of simple interest on a loan, use this formula:

$$\text{Interest} = \text{Principal} \times \text{Rate of Interest} \times \text{Time (or) } I = PRT$$

Rate of Interest

The rate of interest is always given as a percent. You often see rates of interest on loans and investments posted outside of banks.

Time

Time in connection with loans is always expressed in years or parts of a year.

$$1 \text{ month} = \frac{1}{12} \text{ of a year} \qquad 6 \text{ months} = \frac{6}{12} \text{ or } \frac{1}{2} \text{ year}$$

Calculating Interest

To find simple interest, use the formula $I = PRT$

Sample: How much would a loan of $500 be at 6% interest for 6 months?

Step 1 → Use the interest formula. The formula to calculate interest is this:
Interest = Principal x Rate of Interest x Time (I = P x R x T)

Step 2 → Change the rate, given as a percent, to a fraction and reduce. Set up time as a fraction of a year.

$$R = \frac{6}{100} = \frac{3}{50}$$

$$T = \frac{6}{12} = \frac{1}{2}$$

Step 3 → Multiply *principal* x *rate* x *time*. Cancel where possible.

$$I = \frac{\cancel{500}^{\,5}}{1} \times \frac{3}{\cancel{50}_{\,\cancel{10}}} \times \frac{1}{\cancel{2}_{\,1}} = \$15$$

You can also change the percent to a decimal (6% = .06) and the time to a decimal (6 months = $\frac{6}{12}$ = .5) and then multiply.

$$I = \$500.00 \times .06 \times .5 = \$15$$