

## 6.7 Simple Interest

Interest is a fee paid or a charge made for lending or borrowing money. The amount of money borrowed is called the principal. The charge for interest is often given as a percent, called an interest rate. This rate is assumed to be per year, unless otherwise stated.

Formula for Simple Interest

$$I = p \cdot r \cdot t$$

interest     Principal     rate     time

Ex 1 Finding Interest for a Year

Find the interest on \$5000 at 6% for 1 year

$$I = p \cdot r \cdot t$$

$$I = (5000)(0.06)(1)$$

$$I = \$300$$

$$\begin{array}{r} \phantom{0}5 \\ \times 6 \\ \hline 30000 \end{array}$$

Ex 2 Finding Interest for MORE than a Year

Find the interest on \$4200 at 8% for three and a half years.

$$I = p \cdot r \cdot t$$

$$I = (4200)(0.08)(3.5)$$

$$(336)(3.5)$$

$$I = \$1176$$

$$\begin{array}{r} \phantom{0}42 \\ \times 8 \\ \hline 336.00 \end{array}$$

Ex 3 Finding Interest for LESS than a Year

Find the interest on \$840 at 8 1/2 % for 9 months

$$I = p \cdot r \cdot t$$

$$I = (840)(0.085)(0.75)$$

$$I = \$53.55$$

9 month  
12 months

$$\begin{array}{r} 32 \\ 84 \\ \times 85 \\ \hline 420 \\ 6720 \\ \hline 71400 \\ \times 175 \\ \hline 13570 \\ 49980 \\ \hline 53550 \end{array}$$

Formula For Amount Due

$$\text{Amount Due} = \text{Principal} + \text{Interest}$$

Ex 4 Finding The Amount Due

A loan of \$3240 has been made at 12% for 3 months, find the total amount due.

① Find Interest

$$I = p \cdot r \cdot t$$

$$I = (3240)(0.12)(0.25)$$

$$I = \$97.20$$

② Find Amount Due

$$\begin{array}{l} \text{Principal} + \text{Interest} \\ 3240.00 + 97.20 \end{array}$$

$$\text{Due: } \$3337.20$$