6.7 Simple Interest

**Simple Interest:** money earned on a savings account or an investment. It can also be the money you pay for borrowing money (loan).

\[
\text{Simple interest} = \text{Principal} \times \text{Annual Interest Rate} \times \text{Time}
\]

\[
I = P \times r \times t
\]

($) ($) (% per yr.) (years)

*Formula I = prt*
*you will be given 3 of these values and will solve for the 4th one.

**Example 1: Finding Interest Earned**

You put $500 in a savings account. The account earns 3% simple interest per year.

a) what is the interest earned after 3 years?

\[
I = P \cdot r \cdot t
\]

\[
I = 500 \cdot 0.03 \cdot 3
\]

\[
I = 45
\]

\[
$45
\]

b) what is the balance after 3 years?

balance after 3 years = principal + interest

\[
\text{balance} = 500 + 45 = $545
\]

Example 2 on back →
Example 2: Finding the interest rate

You put $1000 in an account. The account earns $100 simple interest in 4 years. What is the annual interest rate?

\[ I = P \cdot r \cdot t \]

\[ 100 = 1000 \cdot r \cdot 4 \]

\[ \frac{100}{1000} = 4000r \]

\[ \frac{100}{4000} = r \]

\[ 0.025 = r \]

rate = 2.5%