

# 6.7 Simple Interest

EQ: How can you find the amount of simple interest on a savings account? How can you find the amount of interest owed on a loan?

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

$$\boxed{\text{Simple interest}} = \boxed{\text{Principal}} \times \boxed{\text{Annual Interest Rate}} \times \boxed{\text{Time}}$$

$$I = P \times r \times t$$

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

← in decimal or fraction form

\* 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?

$$I = P \cdot r \cdot t$$

$$I = 500 \cdot 0.03 \cdot 3$$

$$I = 45$$

$$\boxed{\$45}$$

b) what is the balance after 3 years?

principal  
a.k.a.  
what you started with →  $500 + 45 = \boxed{\$545}$

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?

$$I = P \cdot r \cdot t$$

$$100 = 1000 \cdot r \cdot 4$$

$$\frac{100}{4000} = \frac{4000r}{4000}$$

$$0.025 = r$$

$$\text{rate} = 2.5\%$$