

## SIMPLE INTEREST

### Simple Interest

Interest = Principal · Rate · Time

$$I = Prt$$

= Original Amount invested · Annual Interest Rate · Time in YEARS

Total Amount = Original Amount + Interest

$$A = P + I$$

$$= P + Prt$$

$$= P(1 + rt)$$

Example 1 \$3000 is invested for 1 year at a rate of 5%. How much interest is earned? What is the total amount after 1 year?

What are we being asked to find? The Interest Amount.

Given: Rate = 5% per year = .05 per year

Original Amount Invested = \$3000

$$\text{Interest} = \$3000 \cdot (.05/\text{yr}) \cdot (1 \text{ yr}) = \$150$$

$$\text{Total Amount} = \text{Original Amount} + \text{Interest} = \$3000 + \$150$$

Example 2 To start a carpet-cleaning business, a couple borrows \$5,500 to purchase equipment and supplies. If the loan has a 14% interest rate, how much must they repay at the end of the 90-day period?

What are we being asked to find? How much they repay.

Is that only the interest?

How much they repay = \_\_\_\_\_ + \_\_\_\_\_

Interest = Original Amount · Interest Rate · Time in Years

$$= \underline{\hspace{2cm}} \cdot \underline{\hspace{2cm}} \cdot \underline{\hspace{2cm}}$$