

INTERESTS

A DEFINITIONS

Definition **Principal**

The **principal** is the original amount of money that is either invested or loaned.

Definition **Interest**

Interest is the cost paid for borrowing money or the amount earned from lending or investing money.

B SIMPLE INTEREST

Definition **Simple Interest**

The **simple interest** is calculated each year as a fixed percentage of the principal (original amount) borrowed or invested.

Proposition **Simple Interest Formula**

The simple interest, denoted by I , is calculated as:

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

where:

- P is the principal (original amount)
- r is the interest rate per year (expressed as a decimal)
- t is the time (in years)

The final amount, denoted by A , is:

$$A = P + I$$

Ex: Find the simple interest on a principal of \$500 at a rate of 3% per year over 5 years.

Answer:

$$\begin{aligned}\text{Interest} &= 5 \times 3\% \times 500 \\ &= 5 \times \frac{3}{100} \times 500 \\ &= 75 \text{ dollars}\end{aligned}$$