A E E S e -LEARNING PROGRAMME

COMPARING QUANTITIES

MODULE – 3/3

CLASS - 7

CHAPTER NUMBER - 8

Simple Interest

When we borrow some money from the bank then we have to pay some interest to the bank.

The money which we borrow is called the Principal.

The extra money which we have to pay to the bank to use that borrowed money is called interest.

At the end of the year we return the money to the bank with interest, that money is called Amount.

Amount = Principal + interest

$$\text{SIMPLE INTEREST} = \frac{P \times T \times R}{100}$$

Where,

P = Principal

T = Time period

R = Rate of Interest

Example: 1

Sunita borrows a loan of Rs 50,000 at 15% per year as the rate of interest. Find the interest she has to pay at end of one year.

Solution: P = Rs 50000

T = 1 year

R = 15%

Simple interest = $\frac{P \times T \times R}{100}$

$= \frac{50000 \times 1 \times 15}{100}$

= Rs 7500

Example: 2

Find the simple interest on ₹ 648 for 8 months at $16\frac{2}{3}$ % per annum. Also, find the amount .

Solution : P= ₹ 648

T = 8 months = $\frac{8}{12}$ years

R = $16\frac{2}{3}$ % = $\frac{50}{3}$ %

Simple interest = $\frac{P \times T \times R}{100}$

= $\frac{648 \times 8 \times 50}{12 \times 3 \times 100}$

= $\frac{648}{9}$ = Rs72

Amount = Rs 648 + Rs 72= Rs 720

Formula to find Time, Rate of Interest and Principal

$$\text{Principal} = \frac{S.I \times 100}{T \times R}$$

$$\text{Time} = \frac{S.I \times 100}{P \times R}$$

$$\text{Rate of Interest} = \frac{S.I \times 100}{P \times T}$$

Find the rate of interest when ₹ 1200 amounts to ₹ 1320 in 2 years

Principal = Rs 1200

Amount = Rs 1320

Simple interest = A – P

= 1320 – 1200 = Rs 120

Time = 2 years

R = ?

$$\text{Rate of interest} = \frac{I \times 100}{P \times T}$$

$$= \frac{120 \times 100}{1200 \times 2} = 5\ \%$$

Find the principal when simple interest at 16% per annum for $2\frac{1}{2}$ years is ₹ 3840

Solution: Simple Interest= Rs 3840

R= 16%

T= $2\frac{1}{2}$ years = $\frac{5}{2}$ years

$$\text{Principal} = \frac{I \times 100}{R \times T}$$

$$= \frac{3840 \times 100 \times 2}{16 \times 5}$$

= Rs 9600

Find the time when ₹ 1250 amounts to ₹ 1950 at 16% per annum

Solution: P = Rs 1250

A = Rs 1950

S.I = A – P

= 1950 – 1250

= Rs 700

R = 16%

$$T = \frac{I \times 100}{P \times R}$$

$$= \frac{700 \times 100}{1250 \times 16}$$

$$= \frac{7}{2} \text{ years} = 3\frac{1}{2} \text{ years}$$

THANK U

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