

Tender Heart High School, Sec.-33B chd
Class: VII

Subject: Mathematics

Teacher: Deepa

Topic: Chapter - 11 : Simple Interest

Basic terms of the chapter:

Principal: The money borrowed or lent out for a certain period of time is called the principal.

Interest: The additional amount/money paid by the borrower in lieu of the money used by him.

Amount: The total money paid by the borrower to the lender is called amount.

Formulae to find:

$$(i) \text{ S.I} = \frac{P \times R \times T}{100}$$

$$(ii) R = \frac{100 \times \text{S.I}}{P \times T}$$

$$(iii) T = \frac{100 \times \text{S.I}}{P \times R}$$

$$(iv) P = \frac{100 \times \text{S.I}}{R \times T}$$

Also Amount = $P + I$

Where R is the rate, T is the time period
 S.I is the simple interest

Exercise - 11 A

Soln 1: $\text{S.I} = ?$, amount = ?

$$(i) P = ₹ 8400, T = 4 \text{ yrs}, R = 8\% \text{ p a}$$

$$\text{S.I} = \frac{P \times R \times T}{100} = \frac{8400 \times 8 \times 4}{100}$$

$$= ₹ 2688$$

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$$\text{Amount} = P + I = \underline{\underline{₹11,088}}$$

$$(iii) P = ₹9275, T = 2 \text{ yrs}, R = 7\frac{1}{2}\% \text{ pa} = \frac{15}{2}\%$$

$$S.I = \frac{P \times R \times T}{100} = \frac{9275 \times \frac{15}{2} \times 2}{100} = \frac{9275 \times 15}{100} = ₹1391.25$$

$$\text{Amount} = P + I = \underline{\underline{₹10666.25}}$$

$$\text{Soln 2) Time} = ? , P = ₹7500, A = ₹8625, R = 7\frac{1}{2}\% \text{ pa} = \frac{15}{2}\%$$

$$S.I = A - P = ₹8625 - ₹7500 = ₹1125$$

$$T = \frac{100 \times S.I}{P \times R} = \frac{100 \times 1125}{7500 \times \frac{15}{2}} = \underline{\underline{2 \text{ years}}}$$

Soln 6 let the principal be "P"

$$S.I = \frac{3}{5}P, T = 5 \text{ yrs}, R = ?$$

$$R = \frac{S.I \times 100}{P \times T} = \frac{\frac{3}{5}P \times 100}{P \times 5} = 12\%$$

$$\text{Soln 10. } P = ? , R = 6\%, \text{ Amount} = ₹4130, T = 3 \text{ yrs}$$

$$S.I = \frac{P \times R \times T}{100} = \frac{P \times 6 \times 3}{100} = \frac{18P}{100}$$

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$$\text{Amount} = P + S.I$$

$$4130 = P + \frac{9P}{50}$$

$$= \frac{50P + 9P}{50}$$

$$= \frac{59P}{50}$$

$$\Rightarrow \frac{4130 \times 50}{59} = P$$

$$\boxed{\text{₹ } 3500 = P}$$

Soln) $P = ?$, $R = 11\%$, $A = \text{₹ } 10370$, $T = 2 \text{ yrs.}$

$$\text{Case I: } S.I = \frac{P \times 11 \times 2}{100 \times 50} = \frac{11P}{50}$$

$$\text{Amount} = P + I$$

$$10370 = P + \frac{11P}{50}$$

$$= \frac{50P + 11P}{50}$$

$$\frac{10370 \times 50}{61} = P$$

$$\boxed{\text{₹ } 8500 = P}$$

Case II $P = \text{₹ } 8500$, $T = 2 \text{ yrs}$, $R = 8\% \text{ p.a.}$

$$S.I = \frac{8500 \times 8 \times 2}{100} = \text{₹ } 1360$$

$$\text{Amount} = P + I$$

$$= \boxed{\text{₹ } 9860}$$

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