Date

23.1.2024

Class - VII

Subject - Mathematics.

Topic - Commercial Mathematics

Ex. 8.5.

formula for simple interest -

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

Amount = Principal + Simple Interest.

$$A = P + S.I.$$

1.(a) $P = ₹\ 10,000$, $T = 3$ years, $R = 5\%$

$$SI = \frac{10000 \times 3 \times 5}{100} = ₹1500$$

$$A = P + SI$$

$$= 10000 + 1500$$

$$= ₹\ 11500$$

∴ Ans- $SI = ₹\ 1500$, $A = ₹\ 11500$

(b) $P = ₹\ 5000$, $T = 1$ year, $R = 4\%$

$$SI = \frac{5000 \times 1 \times 4}{100} = ₹\ 200$$

$$A = 5000 + 200$$

$$= ₹\ 5200.$$

Note: Do c, and d by yourself.

2(a) Principal = ₹ 5000, $I = ₹1500$, $T = 3$ years.

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

$$R = \frac{\overset{10}{\cancel{1500}} \times 100}{5000 \times 3} = 10\%$$

Ans = 10%

(b) P = ₹ 3000, I = ₹ 720, T = 2 years

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

$$= \frac{\overset{36}{\cancel{720}} \times 100}{3000 \times 2} = 12\%$$

~~No~~ Ans = 12%

Note: Do c and d by yourself.

3 (a) P = ₹ 7000, I = ₹ 1400, R = 10% p.a

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

$$= \frac{\overset{2}{\cancel{1400}} \times 100}{7000 \times 10} = \cancel{2 \text{ years}}\ 2 \text{ years}$$

Ans = 2 years.

(b) P = ₹ 5000, I = ₹ 1050, R = 7% p.a

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

$$= \frac{\overset{21}{\cancel{1050}} \times 100}{5000 \times 7} = 3 \text{ years.}$$

Note - Do c and d by yourself.

4. P = ₹ 5000, R = 7% T = x years

$$SI\ (1) = \frac{P \times R \times T}{100} =$$

$$= \frac{5000 \times 7 \times x}{100} = 350x.$$

$P = ₹\,7000$, $R = 6\%$ $T = x$ years

$SI\ (II) = \frac{7000 \times 6 \times x}{100} = 420x$

$SI\ (II) - SI\ (I) = ₹\,350$

$420x - 350x = 350$

$70x = 350$

$x = \frac{350}{70} = 5$ years.

Ans = 5 years.

5. $P = ₹\,5000$, $R = 10\%$ $T = ?$

$A = 2 \times P$

$= 2 \times 5000 = ₹\,10,000$

$SI = A - P$

$= ₹\,(10,000 - 5000) = ₹\,5000.$

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

$= \frac{5000 \times 10}{5000 \times 10} = 10$ years.

Ans = 10 years.