

Exercises – 12 A

Q. 1

Answer :

$$P = \text{Rs. } 6400, R = 6\%, T = 2 \text{ years}$$

$$S.I. = \frac{P \times R \times T}{100} = \frac{6400 \times 6 \times 2}{100}$$
$$= \text{Rs. } 768$$

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

$$= 6400 + 768$$

$$= \text{Rs. } 7168$$

Q. 2

Answer :

$$P = \text{Rs. } 2650, R = 8\%, T = 2\frac{1}{2} \text{ years} = \frac{5}{2} \text{ years}$$

$$S.I. = \frac{P \times R \times T}{100} = \frac{2650 \times 8 \times 5}{100 \times 2}$$
$$= \text{Rs. } 530$$

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

$$= 2650 + 530$$

$$= \text{Rs. } 3180$$

Q. 3

Answer :

$$P = \text{Rs. } 1500, R = 12\%, T = 3 + \frac{3}{12} = \frac{13}{4} \text{ years}$$

$$S.I. = \frac{P \times R \times T}{100} = \frac{1500 \times 12 \times 13}{100 \times 4}$$
$$= \text{Rs. } 585$$

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

$$= 1500 + 585$$

$$= \text{Rs. } 2085$$

Q. 4

Answer :

$$P = \text{Rs. } 9600$$

$$R = 7\frac{1}{2}\%$$

$$T = 5 \text{ months} = \frac{5}{12} \text{ years}$$

$$S.I. = \frac{P \times R \times T}{100}$$
$$= \frac{9600 \times 15 \times 5}{100 \times 2 \times 12}$$
$$= \text{Rs. } 300$$

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

$$= 9600 + 300$$

$$= \text{Rs. } 9900$$

Q. 5

Answer :

$$P = \text{Rs. } 5000, R = 9\%, T = 146 \text{ days} = \frac{146}{365} \text{ years}$$

$$S.I. = \frac{P \times R \times T}{100} = \frac{5000 \times 9 \times 146}{100 \times 365}$$
$$= \text{Rs. } 180$$

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

$$= 5000 + 180$$

$$= \text{Rs. } 5180$$

Q. 6

Answer :

$$P = \text{Rs. } 6400, \text{ S.I.} = \text{Rs. } 1152, R = 6\%$$

$$T = \frac{S.I. \times 100}{P \times R} = \frac{1152 \times 100}{6400 \times 6}$$

$$= \frac{1152}{384}$$

$$= 3 \text{ years}$$

Q. 7

Answer :

$$P = \text{Rs. } 9540, \text{ S.I.} = \text{Rs. } 1908, R = 8\%$$

$$T = \frac{S.I. \times 100}{P \times R} = \frac{1908 \times 100}{9540 \times 8}$$

$$= \frac{10}{4}$$

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

Q. 8

Answer :

$$P = \text{Rs. } 5000, A = \text{Rs. } 6450, R = 12\%$$

$$S.I. = A - P$$

$$= 6450 - 5000$$

$$= \text{Rs. } 1450$$

$$T = \frac{S.I. \times 100}{P \times R} = \frac{1450 \times 100}{5000 \times 12}$$

$$= \frac{29}{12}$$

$$= 2 \frac{5}{12}$$

$$= 2 \text{ years } 5 \text{ months}$$

Q. 9

Answer :

$$P = \text{Rs. } 8250, \text{ S.I.} = \text{Rs. } 1100, T = 2 \text{ years}$$

$$R = \frac{S.I. \times 100}{P \times T} = \frac{1100 \times 100}{8250 \times 2}$$

$$= \frac{1100}{165} = 6.67\%$$

Q. 10

Answer :

$$P = \text{Rs. } 5200, \text{ S.I.} = \text{Rs. } 975 \quad [T = 2 \frac{1}{2} \text{ years} = \frac{5}{2} \text{ years}]$$

$$R = \frac{S.I. \times 100}{P \times T} = \frac{975 \times 100 \times 2}{5200 \times 5}$$

$$= \frac{195}{26}$$

$$= 7.5\%$$

Q. 11

Answer :

$$P = \text{Rs. } 3560, A = \text{Rs. } 4521.20, T = 3 \text{ years}$$

$$S.I. = A - P = 4521.20 - 3560$$

$$= \text{Rs. } 961.20$$

$$R = \frac{S.I. \times 100}{P \times T} = \frac{961.20 \times 100}{3560 \times 3}$$

$$= \frac{96120 \times 100}{100 \times 3560 \times 3}$$

$$= 9\%$$

Q. 12

Answer :

$$P = \text{Rs } 6000, R = 12\%, T = 3 \text{ years } 8 \text{ months} = 3 \frac{8}{12} = \frac{44}{12} \text{ years}$$

$$S.I. = \frac{P \times R \times T}{100} = \frac{6000 \times 12 \times 44}{100 \times 12} = \text{Rs } 2640$$

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

$$= 6000 + 2640$$

$$= \text{Rs } 8640$$

Q. 13

Answer :

$$P = \text{Rs. } 12600 \quad R = 15\% \quad T = 3 \text{ years}$$

$$\text{S.I.} = \frac{P \times R \times T}{100} = \frac{12600 \times 15 \times 3}{100} = \text{Rs. } 5670$$

$$A = \text{Rs. } 12600 + \text{Rs. } 5670 = \text{Rs. } 18270$$

Hari had to pay Rs. 18270 to the money lender, but he paid Rs. 7070 and a goat.

$$\therefore \text{Cost of the goat} = \text{Rs. } 18270 - \text{Rs. } 7070 = \text{Rs. } 11200$$

Q. 14

Answer :

Let the sum be Rs. P.

$$\text{S.I.} = \text{Rs. } 829.50, \quad T = 3 \text{ years}, \quad R = 10\%$$

$$\text{Now, } P = \frac{\text{S.I.} \times 100}{R \times T}$$

$$= \frac{829.50 \times 100}{10 \times 3}$$

$$= \frac{8295}{3}$$

$$= 2765$$

Hence, the sum is Rs. 2765.

Q. 15

Answer :

Let the required sum be Rs. x .

$$A = \text{Rs. } 3920, \quad R = 7\frac{1}{2}\%, \quad T = 3 \text{ years}$$

Now,

$$\text{Now, } \text{S.I.} = \frac{P \times R \times T}{100} = \frac{x \times 15 \times 3}{2 \times 100} = \frac{9x}{40}$$

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

$$= x + \frac{9x}{40} = \frac{40x + 9x}{40} = \frac{49x}{40}$$

But the amount is Rs. 3920.

$$\Rightarrow \frac{49x}{40} = 3920$$

$$\Rightarrow x = \frac{3920 \times 40}{49} = \frac{156800}{49} = 3200$$

Hence, the required sum is Rs. 3200.

Q. 16

Answer :

$$\text{Given: } R = 11\%, \quad T = 2 \text{ years } 3 \text{ months} = 2 + \frac{3}{12} = \frac{27}{12} \text{ years}$$

Let the required sum be Rs. x .

$$\text{S.I.} = \frac{P \times R \times T}{100} = \frac{x \times 11 \times \frac{27}{12}}{100 \times \frac{1}{4}} = \frac{99x}{400}$$

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

$$= x + \frac{99x}{400} = \frac{400x + 99x}{400} = \frac{499x}{400}$$

But the amount is Rs. 4491.

$$\Rightarrow \frac{499x}{400} = 4491$$

$$\Rightarrow x = \frac{4491 \times 400}{499} = \frac{1796400}{499} = 3600$$

Hence, the required sum is Rs. 3600.

$$\therefore \text{S.I.} = \frac{P \times R \times T}{100} = \frac{3600 \times 11 \times 3}{100} = \text{Rs. } 1188$$

$$\therefore \text{Amount} = P + \text{S.I.} = 3600 + 1188 = \text{Rs. } 4788$$

Q. 17

Answer :

Let the required sum be Rs. x .

$$S.I. = \frac{P \times R \times T}{100} = \frac{x \times 8 \times 2}{100} = \frac{16x}{100}$$

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

$$= x + \frac{16x}{100} = \frac{100x + 16x}{100} = \frac{116x}{100}$$

But the amount is Rs. 12122.

$$\Rightarrow \frac{116x}{100} = 12122$$

$$\Rightarrow x = \frac{12122 \times 100}{116} = 10450$$

$$\text{Now, } S.I. = \frac{P \times R \times T}{100} = \frac{10450 \times 8 \times 2}{100} = \text{Rs. } 2508$$

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

$$= \text{Rs. } 10450 + \text{Rs. } 2508$$

$$= \text{Rs. } 12958$$

Q. 18

Answer :

$$P = \text{Rs. } 3600 \quad A = \text{Rs. } 4734 \quad T = 3 \frac{1}{2} = \frac{7}{2} \text{ years}$$

$$\begin{aligned} S.I. &= A - P \\ &= 4734 - 3600 \\ &= \text{Rs. } 1134 \end{aligned}$$

$$\begin{aligned} R &= \frac{S.I. \times 100}{P \times T} \\ &= \frac{1134 \times 100 \times 2}{3600 \times 7} \\ &= 9\% \end{aligned}$$

Q. 19

Answer :

$$P = \text{Rs. } 640, A = \text{Rs. } 768, T = 2 \text{ years } 6 \text{ months} = \frac{5}{2} \text{ years}$$

$$\begin{aligned} S.I. &= A - P \\ &= 768 - 640 \\ &= \text{Rs. } 128 \end{aligned}$$

$$R = \frac{S.I. \times 100}{P \times T} = \frac{128 \times 100 \times 2}{640 \times 5} = 8\%$$

$$P = \text{Rs. } 850, R = 8\%, T = 3 \text{ years}$$

$$\therefore S.I. = \frac{P \times R \times T}{100} = \frac{850 \times 8 \times 3}{100} = \frac{2040}{10} = \text{Rs. } 204$$

$$\begin{aligned} \therefore A &= P + S.I. \\ &= 850 + 204 \\ &= \text{Rs. } 1054 \end{aligned}$$

Q. 20

Answer :

$$P = \text{Rs. } 5600, A = \text{Rs. } 6720, R = 8\%$$

$$\begin{aligned} S.I. &= A - P \\ &= 6720 - 5600 \\ &= \text{Rs. } 1120 \end{aligned}$$

$$\begin{aligned} T &= \frac{S.I. \times 100}{P \times R} \\ &= \frac{1120 \times 100}{5600 \times 8} \\ &= \frac{1120}{448} \\ &= 2 \frac{1}{2} \text{ years} \end{aligned}$$