



Exercise 11B

Q1

Answer :

(b) 25%

CP of the book = Rs. 80

SP of the book = Rs. 100

Gain = SP - CP = Rs. (100 - 80) = Rs. 20

$$\text{Gain \%} = \left(\frac{\text{Gain}}{\text{CP}} \times 100 \right) \%$$

$$= \left(\frac{20}{80} \times 100 \right) \%$$

$$= 25\%$$

Q2

Answer :

(a) $12\frac{1}{2}\%$

CP of a football = Rs. 120

SP of a football = Rs. 105

CP > SP

\therefore Loss = CP - SP = Rs. (120 - 105) = Rs. 15

$$\text{Loss \%} = \left(\frac{\text{Loss}}{\text{CP}} \times 100 \right) \%$$

$$= \left(\frac{15}{120} \times 100 \right) \%$$

$$= \frac{25}{2} \%$$

$$= 12\frac{1}{2} \%$$

Q3

Answer :

(b) 25%

SP of the bat = Rs. 100

Gain = Rs. 20

$$\text{Gain} = \text{SP} - \text{CP}$$

$$\Rightarrow 20 = 100 - \text{CP}$$

$$\Rightarrow \text{CP} = 100 - 20 = \text{Rs. } 80$$

$$\text{Gain \%} = \left(\frac{\text{Gain}}{\text{CP}} \times 100 \right) \%$$

$$= \left(\frac{20}{80} \times 100 \right) \%$$

$$= 25\%$$

Q4

Answer :

(a) Rs. 180

SP of the racket = Rs. 198

Gain% = 10

$$\text{CP of the racket} = \left\{ \frac{100}{(100 + \text{Gain \%})} \times 100 \right\}$$

$$= \left\{ \frac{100}{(100 + 10)} \times 198 \right\}$$

$$= \frac{100}{110} \times 198$$

$$= \text{Rs. } 180$$

Q5

Answer :

Let the cost price be Rs. x .

$$\text{Loss} = \text{Rs. } \frac{x}{7}$$

$$\therefore \text{SP} = \left(x - \frac{x}{7} \right) = \text{Rs. } \frac{6}{7} x$$

Given:

$$\text{SP} = \text{Rs. } 144$$

$$\therefore \frac{6}{7} x = 144$$

$$\Rightarrow x = \frac{144 \times 7}{6} = \text{Rs. } 168$$

$$\therefore \text{CP} = \text{Rs. } 168$$

$$\text{SP} = \text{Rs. } 144$$

$$\text{New SP} = \text{Rs. } 189$$

$$\text{Gain} = \text{SP} - \text{CP} = \text{Rs. } (189 - 168) = \text{Rs. } 21$$

$$\text{Gain\%} = \left(\frac{\text{Gain}}{\text{CP}} \times 100 \right)\%$$

$$= \left(\frac{21}{168} \times 100 \right)\%$$

$$= 12.5\%$$

The correct answer is 12.5%.

All the given options are wrong.

Q6

Answer :

(d) Rs. 72

SP of the pen = Rs. 48

Losses = 20%

$$\begin{aligned}\text{Then, CP} &= \left\{ \frac{100}{(100 - \text{Loss \%})} \times \text{SP} \right\} \\ &= \left\{ \frac{100}{(100 - 20)} \times 48 \right\} \\ &= \text{Rs. 60}\end{aligned}$$

In order to gain 20%:

$$\begin{aligned}\text{SP} &= \left\{ \frac{(100 + \text{Gain \%})}{100} \times \text{CP} \right\} \\ &= \left\{ \frac{(100 + 20)}{100} \times 60 \right\} \\ &= \frac{120}{100} \times 60 \\ &= \text{Rs. 72}\end{aligned}$$

Q7

Answer :

(a) 20%

Let the cost price of each pencil be Rs. 1

Cost of 15 pencils = Rs 15

SP of 15 pencil = CP of 12 pencil = Rs 12

\therefore CP = Rs 15

SP = Rs 12

Loss = CP - SP = Rs (15 - 12) = Rs 3

$$\text{Loss\%} = \left(\frac{\text{Loss}}{\text{CP}} \times 100 \right)\%$$

***** END *****