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

∴ 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

Gain = SP - CP
⇒ 20 = 100 - CP
⇒ CP = 100 - 20 = 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.

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

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

Given:

SP = Rs. 144

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

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

$\therefore$ CP = Rs. 168

SP = Rs. 144

New SP = Rs. 189

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

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

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

$$= 12.5\%$$

The correct answer is 12.5%.

All the given options are wrong.

Q6

Answer :

(d) Rs. 72

SP of the pen = Rs. 48

Loses = 20%

Then , $\mathbf{CP} = \left\{ \frac{100}{(100 - \textbf{Loss \%})} \times \mathbf{SP} \right\}$

$= \left\{ \frac{100}{(100 - 20)} \times 48 \right\}$

$= \mathbf{Rs.\ 60}$

In order to gain 20%:

$\mathbf{SP} = \left\{ \frac{(100 + \textbf{Gain \%})}{100} \times \mathbf{CP} \right\}$

$= \left\{ \frac{(100 + 20)}{100} \times 60 \right\}$

$= \frac{120}{100} \times 60$

$= \mathbf{Rs.\ 72}$

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

∴ CP = Rs 15

SP = Rs 12

Loss = CP - SP = $\mathbf{Rs}\ (15 - 12) = \mathbf{Rs}\ 3$

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

********** END **********