



Profit, Loss, Discount, Value Added Tax (VAT) Ex 13.1 Q19

Answer :

It is given that *the S.P* is same for both the fans.

Let C.P of *the* first fan be Rs. x

Therefore, C.P of *the* second fan = Rs. $(3605 - x)$

Profit *on* the first fan = 15%

Loss *on* the second fan = 9%

For the first fan,

$$S.P = C.P \left(\frac{100 + \text{gain \%}}{100} \right)$$

$$= x \left(\frac{115}{100} \right)$$

$$= \frac{23x}{20}$$

For the second fan,

$$S.P = C.P \left(\frac{100 - \text{loss \%}}{100} \right)$$

$$= (3605 - x) \left(\frac{91}{100} \right)$$

Since *S.P of both the fans is the same*,

$$\frac{23x}{20} = (3605 - x) \left(\frac{91}{100} \right)$$

$$2300x = 91(72100 - 20x)$$

$$2300x = 6561100 - 1820x$$

$$4120x = 6561100$$

$$x = \text{Rs. } 1592.50$$

Thus, C.P of *the* first fan *is* Rs. 1592.50.

$$\begin{aligned} \text{C.P of the second fan} &= \text{Rs. } (3605 - 1592.50) \\ &= \text{Rs. } 2012.50 \end{aligned}$$

Profit, Loss, Discount, Value Added Tax (VAT) Ex 13.1 Q20

Answer :

Let the *total* number of toffees bought be x .

Let $\frac{x}{2}$ toffees at the rate of 11 are bought for Rs. 10, and $\frac{x}{2}$ toffees at the rate of 9 are bought for Rs. 10

$$\begin{aligned}\text{Total money spent on buying the toffees} &= \left(\frac{x}{2}\right)\left(\frac{10}{11}\right) + \left(\frac{x}{2}\right)\left(\frac{10}{9}\right) \\ &= \frac{200x}{198} \\ &= \frac{100}{99} x\end{aligned}$$

It is given that x toffees are sold at one rupee per toffee.

Therefore, the selling price of x toffees = Rs. $x \times 1$ = Rs. x

As $C.P$ is more than $S.P$, it will be a loss.

$$\text{Loss} = C.P - S.P$$

$$\begin{aligned}&= \frac{100}{99} x - x \\ &= \frac{100x - 99x}{99} \\ &= \frac{x}{99}\end{aligned}$$

$$\text{Loss \%} = \frac{\text{Loss}}{C.P} \times 100$$

$$\frac{\frac{x}{99}}{\frac{100x}{99}} \times 100 = 1\%$$

Total loss on the whole transaction would be 1%.

***** END *****