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 fa*n 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.
C.P of *the* second fan = Rs. $(3605 - 1592.50)$
= Rs. 2012.50

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

Total money spent on buying *the* toffees $= \left(\frac{x}{2}\right)\left(\frac{10}{11}\right) + \left(\frac{x}{2}\right)\left(\frac{10}{9}\right)$

$= \frac{200x}{198}$

$= \frac{100}{99}\,x$

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.

Loss $= C.P - S.P$

$= \frac{100}{99}\,x - x$

$= \frac{100x - 99x}{99}$

$= \frac{x}{99}$

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 **********