Profit, Loss, Discount, Value Added Tax (VAT) Ex 13.1 Q21

**Answer:**

Let $the$ S.P $of$ $the$ $tricycle$ be Rs. $x$ and C.P be Rs. $y$

Gain $\% = 16\%$

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

Then we have,

$$x = y + \left(\frac{y \times 16}{100}\right)$$

$$x = y + 0.16y$$

$$x = 1.16y$$

When S.P increases by Rs. 100, $we$ $get$

$$\Rightarrow x + 100 = y + \left(\frac{y \times 20}{100}\right)$$

Put $ting$ $x = 1.6y$, $we$ $get$

$$\Rightarrow 1.16y + 100 = y + 0.2y$$

$$1.16y + 100 = 1.2y$$

$$0.04y = 100$$

$$y = \frac{100}{0.04}$$

$$= 2500$$

Thus, C.P $of$ $the$ tricycle $is$ Rs. 2500.

Profit, Loss, Discount, Value Added Tax (VAT) Ex 13.1 Q22

**Answer:**

$(i)$ Number of pens bought $= 16 \times 12 = 192$

Let the S.P of one pen $be$ Rs. $x$.

Therefore, $S.P$ of 192 pens = Rs. $192x$

S.P of 8 pens = Rs. $8x$

It is given that $S.P$ of 8 pens is equal to the loss on selling 192 pens.

Therefore, loss = Rs. $8x$

C.P of 192 pens = Rs. 576

So, loss = C.P − S.P

$$8x = 576 - 192x$$

$$200x = 576$$

$$x = \frac{576}{200} = 2.88$$

Therefore, loss = $8(2.88)$ = Rs. 23.04

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

$$= \frac{23.04 \times 100}{576}$$

$$= 4\%$$

$(ii)$ S.P of 1 pen = Rs. 2.88

Therefore, S.P of 1 dozen pens = $12x = 12 \times 2.88$

$$= \text{Rs. } 34.56$$

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