

PROFIT, LOSS AND DISCOUNT

PERIOD 1

SUBJECT : MATHEMATICS
CHAPTER NUMBER: 8
CHAPTER NAME : PROFIT, LOSS AND DISCOUNT

CHANGING YOUR TOMORROW

Learning outcome

Students will be able to able to review the profit and loss.

Exercise- 8(A)

Question 1.

Megha bought 10 note-books for Rs.40 and sold them at Rs.4.75 per note-book. Find, her gain percent.

Exercise- 8(A)

C.P. of 10 note-books = Rs.40

S.P. of 10 note-books@Rs.4.75 per note-book
= $4.75 \times 10 = \text{Rs.}47.50$

Gain = S.P. - C.P.

= Rs.47.50 - Rs.40 = Rs.7.50

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

$$= \frac{7.50}{40} \times 100 = \frac{750}{40} \%$$

$$= \frac{75}{4} \% = 18\frac{3}{4} \%$$

Exercise- 8(A)

Question 2.

A fruit-seller buys oranges at 4 for Rs.3 and sells them at 3 for Rs.4 Find his profit percent.

Solution:

Let number of oranges bought = 12

[Note : L.C.M. of 4 and 3 = 12]

$$\therefore \text{C.P. of oranges} = \text{Rs. } \frac{3}{4} \times 12 = \text{Rs. } 9$$

$$\text{and S.P. of oranges} = \text{Rs. } \frac{4}{3} \times 12$$

$$= \text{Rs. } 16$$

$$\therefore \text{Profit} = 16 - 9$$

$$= \text{Rs. } 7$$

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

$$= \frac{7}{9} \times 100 = \frac{700}{9} \% = 77\frac{7}{9} \%$$

Exercise- 8(A)

Question 3.

A man buys a certain number of articles at 15 for Rs. 112.50 and sells them at 12 for Rs.108. Find ;

- (i) his gain as percent;
- (ii) the number of articles sold to make a profit of Rs.75.

Solution:

Let number of articles bought = 60

Note : L.C.M. of 15 and 12 = 60

$$\begin{aligned}\therefore \text{C.P. of the articles} &= \text{Rs. } \frac{112.50}{15} \times 60 \\ &= \text{Rs. } \frac{112.50 \times 60}{15} = 112.50 \times 4 = \text{Rs. } 450.00\end{aligned}$$

$$\begin{aligned}\text{and S.P. of the articles} &= \text{Rs. } \frac{108}{12} \times 60 \\ &= \text{Rs. } 108 \times 5 = \text{Rs. } 540\end{aligned}$$

$$\begin{aligned}(i) \text{ Gain} &= \text{S.P.} - \text{C.P.} = \text{Rs. } 540 - \text{Rs. } 450 \\ &= \text{Rs. } 90\end{aligned}$$

$$\begin{aligned}\therefore \text{Gain\%} &= \frac{\text{Gain}}{\text{C.P.}} \times 100 \\ &= \frac{90}{450} \times 100 = \frac{100}{5} = 20\%\end{aligned}$$

(ii) To make a profit of Rs.90, the number of articles needed to be sold = 60

To make a profit of Re.1 the number of articles needed to be sold = $\frac{60}{90}$

To make a profit of Rs.75, the number of articles needed to be sold

$$= \frac{60}{90} \times 75 = \frac{4500}{90} = 50$$

Exercise- 8(A)

Question 4.

A boy buys an old bicycle for Rs. 162 and spends Rs. 18 on its repairs before selling the bicycles for Rs. 207. Find his gain or loss percent.

Solution:

Buying price of the old bicycle = Rs.162

Money spent on repairs = Rs. 18

Real C.P. of the bicycle= 162+18 = Rs.180

S.P. of the bicycle = Rs.207

Profit = S.P. – C.P. = 207 – 162 = Rs. 45

$$\begin{aligned}\text{Gain\%} &= \frac{\text{Profit}}{\text{C.P.}} \times 100 \\ &= \frac{45}{180} \times 100 = \frac{100}{4} = 25\%\end{aligned}$$

Exercise- 8(A)

Question 5.

An article is bought from Jaipur for Rs. 4,800 and is sold in Delhi for Rs. 5,820. If Rs. 1,200 is spent on its transportations, etc. ; find the loss or the gain as percent.

Solution:

Cost price = Rs. 4,800

Selling Price = Rs. 5,820

Transport etc. charges = Rs. 1,200

Total cost price = Rs. 4,800 + Rs. 1,200 = Rs. 6,000

Loss = Rs. 6000 – Rs. 5820 = Rs. 180

$$\therefore \text{Loss\%} = \frac{180}{6000} \times 100 = 3\%$$

Home Assignment

Exercise 8(A) - 1 to 7

THANKING YOU
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