

Chapter 12. Life Mathematics

- **Learning Points:-**

- a) When $SP > CP$, there is a profit.

$$\text{Profit} = \text{selling price} - \text{cost price, i.e. } P = SP - CP$$

- b) When $CP > SP$, there is a loss.

$$\text{Loss} = \text{Cost Price} - \text{Selling Price, i.e. } L = CP - SP$$

- c) To calculate cost price:-

$$\text{Cost price} = \text{selling price} - \text{profit, i.e. } CP = SP - P$$

$$\text{Cost price} = \text{selling price} + \text{loss, i.e. } CP = SP + L$$

- d) To calculate selling price:-

$$\text{Selling price} = \text{cost price} + \text{profit, i.e. } SP = CP + P$$

$$\text{Selling price} = \text{cost price} - \text{loss, i.e. } SP = CP - L$$

- **Exercise 12.1**

Q.1) Find profit and loss for each of the following:-

- a) $CP = \text{Rs. } 124$, $SP = \text{Rs. } 153$

Soln:- Since $SP > CP$, there is a profit.

$$\text{Profit} = SP - CP$$

$$= 153 - 124 = \text{Rs. } 29$$

- b) $CP = \text{Rs. } 345$, $SP = \text{Rs. } 550$

- c) $CP = \text{Rs. } 2878$, $SP = \text{Rs. } 1878$

- d) $Cp = \text{Rs. } 2456$, $Sp = \text{Rs. } 1675$(H.W.)

Q.2) Atul bought a refrigerator for Rs. 12,740 and sold it for Rs. 10,280.

What is his Profit or loss ?

Soln:-Cost Price of a refrigerator = Rs. 12740

Selling price of a refrigerator = Rs. 10280

Since $CP > SP$, there is a loss.

Loss = Cost Price – Selling Price

$$= 12740 - 10280$$

$$\text{Loss} = \text{Rs. } 2460$$

- **Exercise 12.2**

Q.1) Find the cost price for the following:-

a. SP = Rs. 142, Profit = Rs. 22

Soln:- $CP = SP - P$

$$= 142 - 22 = \text{Rs.}120$$

Ans:- $CP = \text{Rs.} 120$

b. SP = Rs. 5463, Profit = Rs. 545

c. SP = 43526, Profit = Rs. 6538

d. Sp = Rs.2345, loss = Rs. 443

Q.2) Subhash sold his digital camera for Rs. 8820, at a loss of Rs. 1280.

What is the cost price of the digital camera ?

Soln:- Selling price of the camera = Rs. 8820

Loss = Rs. 1280

Cost price = selling price + loss

$$= 8820 + 1280$$

∴ Cost price of the digital camera = Rs.10100

- **Exercise 12.3**

Q.1) Find the selling price for the following:-

a) CP= Rs. 234, Profit = Rs. 66

Soln:- selling price = cost price + profit

$$= 234 + 66 = \text{Rs.} 300$$

Ans:- SP = Rs. 300

b) CP = Rs. 4587, Profit = Rs. 320

c) CP = Rs. 87467, Loss = Rs. 1234

d) CP = Rs. 868, loss =Rs. 74.....(H.W.)

Q.2) Akash bought a study table for Rs. 12986 and suffered a loss of Rs.1340 by selling it. At what price did he sell it ?

Soln:- Cost price of study table = Rs. 12986

Loss = Rs. 1340

Selling price = cost price – loss

$$= 12986 - 1340 = \text{Rs.} 11646$$

Ans:- The selling price of the study table is Rs. 11646.

- **Unitary Method:** Unitary method is the method of finding the value of a certain number of units by finding the value of 1 unit. A unit means one object.
- Exercise 12.4

Q.1) If the cost of 5kg of apples is Rs. 600, then what will be the cost of 27 kg of apples ?

Soln:- Cost of 5 kg of apples= Rs. 600

Cost of 1 kg of apples = Rs .600 ÷ 5

$$\begin{array}{r}
 120 \\
 5 \overline{) 600} \\
 \underline{- 5} \\
 10 \\
 \underline{- 10} \\
 000
 \end{array}$$

Cost of 1kg of apples is Rs.120

Cost of 27kg of apples = 27 x 120 = Rs.3240

Ans:- The cost of 27kg of apples is Rs. 3240

Q.2) Cost of 11 books is Rs. 1265. What will be the cost of 8 such books ?

Q.3) A bus can travel 120km in 3 hours. How much distance can it travel in 9 hours ?