Percentage

Lecture sheet – 6

Creative Question

1. *A seller sold an item of 1600 taka at a discount of 20%.*
   a. *What was the selling price of the item?*
   b. *What will the selling price be if the item is sold with the profit of 20%?*

Solution:

a) Given,

$$Cost\ price = 1600\ tk$$
$$Loss\ \% = 20\ \%$$

We know,

$$Selling\ Price = [\frac{(100-loss\%)}{100} \times Cost\ price]$$
$$= [\frac{(100-20)}{100} \times 1600]\ tk$$
$$= (\frac{80 \times 1600}{100})\ tk$$
$$= 1280\ tk$$

Ans: 1280 tk

b) Given,

$$Cost\ price = 1600\ tk$$
$$Profit\ \% = 20\ \%$$

We know,

$$Selling\ Price = [\frac{(100+Profit\%)}{100} \times Cost\ price]$$
$$= [\frac{(100+20)}{100} \times 1600]\ tk$$

$$= \left(\frac{120 \times 1600}{100}\right) \text{tk}$$
$$= 1920 \text{ tk.}$$

Ans: 1920 tk.

2. A fan is sold at 1280 taka at a discount of 20%.
  a. What is the cost price of the fan?
  b. If the fan sold at 1520 taka, what is the percentage of profit or loss?

Solution:

a) Given,
  Selling Price = 1280 tk
  Loss % = 20%
  We know,
$$\text{Cost price} = \left[\frac{100}{(100-Loss\%)} \times selling\ price\right]$$
$$= \left[\frac{100}{(100-20)} \times 1280\right] \text{tk}$$
$$= \left(\frac{100 \times 1280}{100}\right) \text{tk}$$
$$= 1600 \text{ tk}$$
  Ans: 1600 tk

b) Given,
  Selling price = 1520 tk
  From 'a' we get, cost price = 1600 tk
  Loss = Cost price – Selling price
$$= (1600 - 1520) \text{tk}$$
$$= 80 \text{ tk}$$

  We know,
$$\text{Loss \%} = \left[\frac{Loss}{Cost\ price} \times 100\%\right]$$
$$= \frac{80}{1600} \times 100\%$$
$$= 5 \%$$
  Ans: 5 %

Exercise (Do yourself)

1. A seller brought a pen at 20 taka and sold at 25 Taka.
   a. What was the percentage of his profit?
   b. What will the selling price be with the profit of 10%?

2. A seller bought a basket full of mangoes at 1200 taka and sold them with profit of 10%.
   a. What was the selling price of the mangoes?
   b. How much taka more would the selling price be if he wanted to sell the mangoes with profit of 15%?