

Work sheet solution

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1. Solution:

Cost of 1 dozen pencils = tk.10.80

Cost of 4 dozen pencils = 4×10.80

$$= 43.2 \text{ taka}$$

Selling price of each pencil = 80 paise

Total number of pencils = $12 \times 4 = 48$

SP of 48 pencils

$$= 48 \times 80 \text{ paise}$$

$$= 3840 \text{ paise}$$

$$= \text{tk.}38.40$$

Here, $SP < CP$.

Loss = $CP - SP = (43.2 - 38.4 \text{ taka})$

$$= \text{tk.} 4.8$$

Loss % = $(\text{Loss}/CP) \times 100$

$$= (4.8/43.2) \times 100$$

$$= 480/43.2$$

$$= 11.11\%$$

2. Solution:

CP of 1 dozen oranges = tk. 26

CP of 1 orange = $26/12 = \text{tk.} 2.16$

$$\text{CP of 5 oranges} = 2.16 \times 5 = \text{tk. } 10.8$$

$$\text{Now, SP of 5 oranges} = \text{tk. } 13$$

$$\text{Gain} = \text{SP} - \text{CP} = \text{tk. } (13 - 10.8) = \text{tk. } 2.2$$

$$\text{Gain \%} = (\text{Gain}/\text{CP}) \times 100$$

$$= (2.2/10.8) \times 100$$

$$= 20.3\%$$

3. Solution:

$$\text{CP} = \text{tk. } 12$$

$$\text{Profit \%} = 10$$

We know that

$$\text{SP} = \{(100 + \text{profit \%})/100\} \times \text{CP}$$

$$= \{(100 + 10)/100\} \times 120$$

$$= \{(110/100)\} \times 120$$

$$= 1.1 \times 120$$

$$= 132 \text{ takas}$$

4. Solution:

$$\text{Cost of one dozen eggs} = \text{tk. } 6.40$$

$$\text{Cost of 50 dozen eggs} = 50 \times 6.40 = \text{tk. } 320$$

$$\text{Total number of eggs} = 50 \times 12 = 600$$

$$\text{Number of eggs left after removing the broken ones} = 600 - 20 = 580$$

$$\text{SP of 1 egg} = 55 \text{ paise}$$

$$\text{So, SP of 580 eggs} = 580 \times 55$$

$$= 31900 \text{ paise}$$

$$= 31900/100 \text{ taka}$$

$$= 319 \text{ takas}$$

$$\text{Loss} = \text{CP} - \text{SP} = \text{tk. } (320-319) = \text{tk. } 1$$

$$\text{Loss \%} = (\text{Loss}/\text{CP}) \times 100$$

$$= (1/320) \times 100$$

$$= 0.31\%$$

5. Solution:

Amount Mr. Virmani paid to purchase the house = tk. 365000

Amount he spent on repair = tk. 135000

Total amount he spent on the house (CP) = (365000 + 135000) taka

$$= \text{tk. } 500000$$

SP of the house = tk. 550000

Gain = SP – CP

$$= \text{tk. } (550000 - 500000)$$

$$= \text{tk. } 50000$$

Gain % = (Gain/CP) × 100 =

$$(50000/500000) \times 100$$

$$= 5000000/500000$$

$$= 10\%$$