

Name:

Class: 5

Section:

Time: 40

Minutes

Subject: Math

Topic: Average

Marks: 20

1. Write the correct answer in your answer script:

1 × 4 = 4

a. What is the average of 10, 20, 40 and 50?

Ans: 30.

b. What is average?

Ans: The average of a group of numbers of the same kind, is a single number which represents the group.

c. The average age of three sons and their father is 17 years old, what is the summation of their age?

Ans: 68 years.

d. The weight of 6 books is 924 grams. Find the average weight of these books?

Ans: 154 g.

2. The average age of father and 3 sons is 17 years. Father age is 38 years.

a. What is the sum of father and 3 sons age? **2**

b. Find the sum of 3 sons' age. **3**

c. If the average age of mother and 3 sons is 15 years, what is the age of mother? **3**

Solution:

a) Given,

Average age of father and 3 sons = 17 years

Number of quantities = 3+1 = 4

∴ The sum of father and three sons age = Average × Number of quantities

$$= (17 \times 4) \text{ years}$$

$$= 68 \text{ years}$$

Ans : 68 years.

b) From 'a' we get,

The sum of father and three sons age = 68 years

$$\begin{array}{r} \text{Father's age} \qquad \qquad \qquad = 38 \text{ years} \\ \hline \end{array}$$

$$\therefore \text{Age of three sons}' \qquad \qquad \qquad = 30 \text{ years}$$

Ans: 30 years.

c) From 'b' we get,

Total age of three sons' = 30 years

Given,

Average age of mother and 3 sons = 15 years

Number of quantities = 3+1 = 4

\therefore The sum of mother and three sons' age

$$= \text{Average} \times \text{Number of quantities}$$

$$= (15 \times 4) \text{ years}$$

$$= 60 \text{ years}$$

\therefore The age of mother = (60 – 30) years

$$= 30 \text{ years}$$

Ans: 30 years.

3. The price of 7 tennis ball is 406 taka. The average price of 1st 3 balls is 58 taka and last 3 balls are 55 taka.

a. What is the average price of the balls? **2**

b. What is the price of 4th ball? **3**

c. Difference between the total price of 1st 3 balls and last 3 balls is the average price of 10 pens. What is the total price of 10 pens? **3**

Solution:

a) Total price of 7 tennis ball = 406 taka

$$\begin{aligned}\therefore \text{Average price} &= (406 \div 7) \text{ taka} \\ &= 58 \text{ Taka}\end{aligned}$$

Ans: 58 Taka.

b) Given,

The average price of 1st 3 balls is 58 taka.

The average price of last 3 balls are 55 taka.

$$\begin{aligned}\therefore \text{Total price of 1}^{\text{st}} \text{ 3 balls} &= \text{Average} \times \text{Number of quantities} \\ &= (58 \times 3) \text{ Taka} \\ &= 174 \text{ Taka}\end{aligned}$$

$$\begin{aligned}\therefore \text{Total price of last 3 balls} &= \text{Average} \times \text{Number of quantities} \\ &= (55 \times 3) \text{ Taka} \\ &= 165 \text{ Taka}\end{aligned}$$

$$\begin{aligned}\therefore \text{Total price of 1}^{\text{st}} \text{ 3 balls and last 3 balls} &= (174+165) \text{ Taka} \\ &= 339 \text{ Taka}\end{aligned}$$

$$\begin{aligned}\therefore \text{Price of 4}^{\text{th}} \text{ ball} &= (406-339) \text{ Taka} \\ &= 67 \text{ Taka}\end{aligned}$$

Ans: 67 Taka.

c) From 'b' we get,

Total price of 1st 3 balls = 174 Taka

Total price of last 3 balls = 165 Taka

$$\begin{aligned}\therefore \text{Difference between the total price of 1}^{\text{st}} \text{ 3 balls and last 3 balls} &= (174-165) \text{ Taka} \\ &= 9 \text{ Taka}\end{aligned}$$

According to the question, the average price of 10 pens = 9 Taka

$$\begin{aligned}\therefore \text{Total price of 10 pens} &= \text{Average} \times \text{Number of quantities} \\ &= (9 \times 10) \text{ Taka} \\ &= 90 \text{ Taka}\end{aligned}$$

Ans: 90 Taka.