

## Chapter- 11

## AVERAGE

## WORKSHEET

## 1. Fill in the blanks :

- a. The average of a set of values is the sum of the values divided by the number of values in the set.
- b. Average is a number which is roughly between the smallest and the largest number or quantity.
- c. The average gives us an idea about the general value of a group.
- d. The average is the arithmetical mean value of the number of given values.
- e. Sum of the values = Average  $\times$  number of values

## 2. Do as directed :

- a) Find the average of 1
- <sup>st</sup>
- five prime numbers.

$$\text{Ans. } \frac{2+3+5+7+11}{5} = \frac{28}{5} = 5.6$$

- b) What is the average weight: 14g, 16g, 36g, 42g

$$\text{Ans. } \frac{14+16+36+42}{4} = \frac{108}{4} = 27\text{g}$$

- c) Find the average if number of item is 15 and the total value of item is 105 .

$$\text{Ans. } \begin{aligned} \text{Number of item} &= 15 \\ \text{Total value} &= 105 \\ \text{Average} &= \frac{105}{15} = 7 \end{aligned}$$

- d) Find the average of
- $\frac{6}{7}, \frac{2}{5}, \frac{11}{7}$

$$\begin{aligned} \text{Ans. } &= \frac{6}{7} + \frac{2}{5} + \frac{11}{7} = 33\frac{99}{35} \times \frac{1}{35} \\ &= \frac{6 \times 5}{7 \times 5} + \frac{2 \times 7}{5 \times 7} + \frac{11 \times 5}{7 \times 5} = \frac{33}{35} \\ &= \frac{30}{35} + \frac{14}{35} + \frac{55}{35} \end{aligned}$$

$$\text{ODM Educational Group} = \frac{99}{35}$$

So average

$$= \frac{99}{35} \div 3$$

e) Find the missing value: No. of items are 21 and average is 21 then Sum of the items is

441.

Ans. Sum of items

$$= \text{No of items} \times \text{Average}$$

$$= 21 \times 21$$

$$= 441$$

3. Solve as per the given instructions:

a) The average height of a family of five is 150cm, if the height of 4 family members is 153cm, 150cm, 151cm, and 152cm, find the height of the fifth member.

Ans. Total height of 5 members

$$= \text{Average} \times \text{No of members}$$

$$= 150 \times 5 = 750 \text{ cm}$$

Total of height of 4 members

$$= 153 + 150 + 151 + 152 = 606 \text{ cm}$$

So, Height of 5<sup>th</sup> member

$$= \text{Total ht} - \text{ht of 4 members}$$

$$= 750 - 606 = 144 \text{ cm}$$

b) The average of 5 numbers is 25 and the average of another 5 numbers is 35. Find the average of the 10 numbers taken together.

Ans.

$$\text{Sum of nos} = \text{No} \times \text{Average}$$

$$\text{Sum of 1<sup>st</sup> 5 nos} = 5 \times 25 = 125$$

$$\text{Sum of another 5 nos} = 5 \times 35 = 175$$

$$\text{Sum of all 10 nos} = 125 + 175 = 300$$

So, average of 10 nos

$$= \frac{\text{Sum of nos}}{\text{Nos}} = \frac{300}{10} = 30$$

c) Mini's father earns on an average ₹ 9800 a week. How much does he earn in 52 weeks?

Ans. Mini's

Mini's father earns on an average

$$= ₹ 9800$$

How much does he earn in 52

$$\text{weeks} = 9800 \times 52$$

$$\begin{array}{r} 9800 \\ \times 52 \\ \hline 19600 \\ + 49000 \\ \hline 509600 \end{array}$$

So, he earns ₹ 5,09,600 in 52 weeks.

d) 8 students of a class went for medical checkup. The table below shows the record of their weight and age. Find the average age and weight of the students

Name	Age	Weight
Sonali	11 years 10 months	33kg
Vandana	12 years	34kg
Rohit	12 years 7 months	38kg
Shweta	11 years 6 months	33kg
Vaibhav	13 years	36kg
Manik	12 years	32kg
Zakir	11 years 11 months	36kg
Chris	13 years 2 months	38kg

Ans. Total age =  $11y - 10m + 12y + 12y + 7m + 11y + 6m + 13y + 12y + 11y + 11m + 13y + 2m = 95y + 36m = 98y$   
 Ave. age =  $98y \div 8 = 12y + 8m$   
 Total weight =  $33 + 34 + 38 + 33 + 36 + 32 + 36 + 38 = 280 \text{ Kg}$   
 Average weight =  $\frac{280}{8} = 35.5 \text{ Kg}$

e) Find the average of 11.35, 12.65, 11, 7.25, 14.85, 15.55

Ans.

11.35  
 12.65  
 11  
 7.25  
 14.85  
 + 15.55  
 -----  
 72.65

Average =  $\frac{72.65}{6} = 12.11$

\*\*\*\*\*