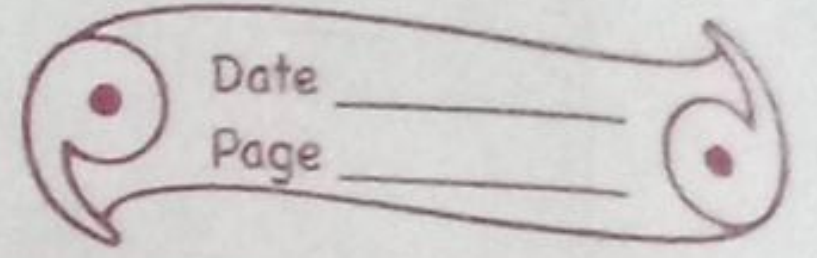


CHAPTER - 11

AVERAGE



Worksheet

1. Fill in the blanks \Rightarrow

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 ~~highest~~ 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.
$$\text{Sum of the values} = \text{Average} \times$$

No. of items / quantities

2. Do as directed →

a. Find the average of 1st Five prime numbers.

1st 5 prime numbers - 2, 3, 5, 7, 11

~~mean~~ Average = $\frac{\text{Sum of all the numbers}}{\text{Total numbers}}$

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

b. What is the average weight: 14 kg, 16 g, 36 g, 42 g

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

c. Find the average if number of items is 15 and the total value of items is 105.

$$\text{Sum of items} = 105$$

$$\text{Numbers of items} = 15$$

$$\text{So Average} = \frac{105}{15} = 7$$

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

$$= \frac{30 + 14 + 155}{35} = \frac{99}{35} \div 3$$

$$= \frac{33}{35} \times \frac{1}{3} = \frac{33}{35}$$

@ Find the missing value: No. of items are 21 and average is 21 then sum of the items is

Number of items = 21

Average of item = 21

then, sum of the item = 21×21

$$\begin{array}{r} 21 \\ \times 21 \\ \hline 21 \\ 420 \\ \hline 441 \end{array}$$

So, the sum of the item is 441.

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

Ans - Sum of height of five member = 150×5
= 750 cm

Sum of four member is $153 \text{ cm} + 150 \text{ cm} + 151 \text{ cm} + 152 \text{ cm} = 606$

So, the height of fifth member total sum of height of five members

$$= 750 - 606 = 144$$

So, the height of fifth member is 144 cm.

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

The average of 5 numbers = 25

The average of another 5 numbers = 35

So, the sum of first group = $25 \times 5 = 125$

The sum of second group of 5 numbers
= $35 \times 5 = 175$

So, Total sum of both groups
= $125 + 175 = 300$

Total sum of 10 numbers = 300

So, average of 10 numbers = $\frac{300}{10} = 30$

So, the average of 10 numbers is 30.

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

Mini's father earns on an average ₹ 9800 a week.

So, he earns in 52 weeks = $₹ 9800 \times 52$
= 5,09,600

So, he earns 5,09,600 in 52 weeks.

- d. Sonali age = $11 \times 12 + 10 = 142$ month
 Vandana age = $12 \times 12 = 144$ month
 Rohit age = $12 \times 12 + 7 = 151$ month
 Shweta age = $11 \times 12 + 6 = 138$ month
 Vaibhav age = $13 \times 12 = 156$ month
 Manik age = $12 \times 12 = 144$ month
 Lakir age = $11 \times 12 + 11 = 143$ month
 Chris age = $13 \times 12 + 2 = 158$ month

The average age =

$$\frac{142 + 144 + 151 + 138 + 156 + 144 + 143 + 158}{8}$$

$$= \frac{1176}{8} = 147 \text{ month}$$

12 years 3 months

Total weight of 8 student

$$33 \text{ kg} + 34 \text{ kg} + 38 \text{ kg} + 33 \text{ kg} + 36 \text{ kg} + 32 \text{ kg} + 36 \text{ kg} + 38 \text{ kg} = 280 \text{ kg}$$

$$\text{Average weight of student} = \frac{280}{8} = 35 \text{ kg}$$

e. Find the average of $11.35, 12.65, 11.7.25, 14.85, 15.55$

$$\text{Ans} - 11.35 + 12.65 + 11 + 7.25 + 14.85 + 15.55 \\ = 72.65$$

$$\text{Average} = \frac{72.65}{6} = 12.10$$