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 ~~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. Sum of the values = Average × No. of items / quantities

3. 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.

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

Sum of four member is 153cm + 150cm + 151cm + 152cm = 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 member is 25 and the average of another 5 number is 35. Find the average of the 10 numbers taken together.

The average 5 member = 25
The average another 5 members = 35
So, the sum of first group = 25 x 5 = 125
The sum of second group of 5 member
= 35 x 5 = 175
So, Total sum of both group
= 125 + 175 = 300

Total sum of 10 member = 300
So, average of 10 member = $\frac{300}{10} = 30$

So; the average of 10 members is 30.

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

Mini's father earn on an average ₹ 9800 a week.
So, he earn in 52 week = ₹ 9800 x 52
= 5,09,600
So, he earn 5,09,600 in 52 week.

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
Zakir 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
33kg + 34kg + 38kg + 33kg + 36kg + 32kg + 36kg + 38kg = 280 kg
Average weight of student $= \frac{280}{8} = 35$ kg.

e. Find the average of 11·35, 12·65, 11, 7·25, 14·85, 15·55

Ans- $11 \cdot 35 + 12 \cdot 65 + 11 + 7 \cdot 25 + 14 \cdot 85 + 15 \cdot 55$

$= 72 \cdot 65$

$$\text{Average} = \frac{72 \cdot 65}{6} = 12 \cdot 10$$

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

$$= \frac{30 + 14 + 55}{35} = \frac{99}{35} \div 3$$

$$= \frac{\overset{33}{\cancel{99}}}{35} \times \frac{1}{\cancel{3}} = \frac{33}{35}$$

e) Find the missing value: No. of item 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.

2. Do as directed :->

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

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

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: 14kg 16g. 36g, 42g

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

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

Sum of items = 105

Numbers of items = 15

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