

CHAPTER: 11

AVERAGE . Worksheet .

NO.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 of 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 / quantities .

e. Sum of the values = Average \times number of the value

NO.2: Do as directed :

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

A. \Rightarrow 1st five prime number is = 2, 3, 5, 7, 11

$$\Rightarrow \frac{2+3+5+7+11}{5}$$

$$\Rightarrow \frac{28}{5} = 5.6 \text{ (Ans)}$$

$$\begin{array}{r|l} 5 & 28 \\ & 25 \\ \hline & 30 \\ & 30 \\ \hline & 0 \end{array}$$

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

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

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

A. $\frac{105}{15} = 7$ (ANSWER)

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

A. $\Rightarrow \frac{6}{7} + \frac{2}{5} + \frac{11}{7}$

$\Rightarrow \frac{30 + 14 + 55}{35} = \frac{99}{35} = \frac{99}{35} \times \frac{1}{3} = \frac{33}{35}$

e. Find the missing value: No of item are 21 and average is 21 then sum of the item is

A. Average = $\frac{\text{Sum of the item}}{\text{Number of the item}}$

$\Rightarrow 21 = \frac{x}{21} \Rightarrow 21 \times 21 = x$

$\Rightarrow x = 441$ (Ans)

NO. 3a. The average height of a family of five is 150 cm, if the height of 4 family members is 153 cm, 150 cm, 151 cm and 152 cm, find the height of the fifth member.

A. The fifth family member height is =

$\Rightarrow 150 \times 5 = 750$ cm is the ^{total} sum

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

$\Rightarrow 750 \text{ cm} - 606 \text{ cm} = 144 \text{ cm}$ (ANS)

OR

Average = $\frac{153 \text{ cm} + 150 \text{ cm} + 151 \text{ cm} + 152 \text{ cm} + x}{5}$

$\Rightarrow 150 \text{ cm} = \frac{606 \text{ cm} + x}{5}$

$$\Rightarrow 606 \text{ cm} + x = 150 \text{ cm} \times 5$$

$$\Rightarrow 606 \text{ cm} + x = 750 \text{ cm}$$

$$\Rightarrow x = 750 \text{ cm} - 606 \text{ cm}$$

$$\Rightarrow x = 144 \text{ cm (Ans)}$$

\therefore Hence The fifth member height is 144 cm.

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

$$A. \text{ Average} = \frac{25 + 35}{2}$$

$$= \frac{60}{2} = 30 \text{ (Ans)}$$

\therefore The average of the 10 numbers taken together is 30.

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

$$A. \text{ Average earning of Mini's father in a week is} \\ = ₹ 9800$$

$$\Rightarrow \text{Average} = \frac{\text{Total earning of a week}}{7}$$

$$\Rightarrow ₹ 9800 = \frac{\text{Total earning of a week}}{7}$$

$$\Rightarrow \text{Total earning of a week} = ₹ 9800 \times 7$$

$$\Rightarrow \text{Total earning of a week} = ₹ 68,600$$

How much does he earn in 52 weeks?

Answer is = ₹68,600 × 52 weeks

⇒ ₹35,67,200 rupees (Answer)

d. 8 students of a class went for medical checkup.
A. The average age of the eight student is

Sonali = 11 year 10 month = 142 month.

Vandana = 12 year = 144 month.

Rohita = 12 year 7 month = 151 month.

Shweta = 11 year 6 month = 138 month.

Vaibhaw = 13 year = 156 month.

Manik = 12 year = 144 month.

Zakir = 11 year 11 month = 143 month.

Chris = 13 year 2 month = 158 month.

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

= $\frac{1176}{8}$ = 147 months = 12y. 3month.

Average Weight of the eight students:

⇒ $\frac{33\text{ kg} + 34\text{ kg} + 38\text{ kg} + 33\text{ kg} + 36\text{ kg} + 32\text{ kg} + 36\text{ kg} + 38\text{ kg}}{8}$

→ $\frac{280\text{ kg}}{8}$ = 35 kg.

∴ Hence the 8 students Average Age = 12y. 3mon
and Average Weight is = 35 kg.

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

$$A. \text{ Average} = \frac{11.35 + 12.65 + 11 + 7.25 + 14.85 + 15.55}{6}$$

$$\Rightarrow \frac{72.65}{6} \Rightarrow 12.18 \text{ (Answer)}$$