15. Statistics

Practice Set 54

1. The daily rainfall for each day of a week in a certain city is given in millimetres. Find the average rainfall during the week. 9, 11, 8, 20, 10, 16, 12.

Solution :

$$\text{Average} = \frac{\text{Total rain (in mm)}}{\text{Total number of days}}$$

$$= \frac{9 + 11 + 8 + 20 + 10 + 16 + 12}{7}$$

$$= \frac{86}{7}$$

$$= 12.2857 \approx 12.29 \text{ mm}$$

$\therefore$ The average rainfall is 12.29 mm

2. During the annual function of a school, a women's Self-help Group had set up a snacks stall. Their sales every hour were worth ₹ 960, ₹ 830, ₹ 945, ₹ 800, ₹ 847, and ₹ 970 respectively. What was the average of the hourly sales?

Solution :

$$\text{Average} = \frac{\text{Total sale (in ₹)}}{\text{Total number of hours}}$$

$$= \frac{960 + 830 + 945 + 800 + 847 + 970}{6}$$

$$= \frac{5352}{6}$$

$$= 892$$

∴ The average sale was ₹ 892 per hour.

3. The annual rainfall in Vidarbha in five years is given below. What is the average rainfall for those 5 years ?
900 mm, 650 mm, 450 mm, 733 mm, 400 mm.

Solution :

$$\text{Average rain fall} = \frac{\text{Total rain (in mm)}}{\text{Total number of years}}$$

$$= \frac{900 + 650 + 450 + 733 + 400}{5}$$

$$= \frac{3133}{5} = 626.6$$

∴ The average rainfall is 626.6 mm.

4. A farmer bought some sacks of animal feed. The weights of the sacks are givenbelow in kilograms. What is the averageweight of the sacks ? 49.8, 49.7, 49.5, 49.3, 50, 48.9, 49.2,48.8

Solution :

$$\text{Average weight (in kg)} = \frac{\text{Sum of the weights of sacks (in kg)}}{\text{Total number of sacks}}$$

$$= \frac{49.8 + 49.7 + 49.5 + 49.3 + 50 + 48.9 + 49.2 + 48.8}{8}$$

$$= \frac{395.2}{8}$$

$$= 49.4$$

∴ The average weight of the sacks is 49.4 kg.

Practice Set 55

1. The height of 30 children in a class is given in centimeters. Draw up a frequency table of this data.

131, 135, 140, 138, 132, 133, 135, 133, 134, 135, 132, 133, 140, 139, 132, 131, 134,133, 140, 140, 139, 136, 137, 136, 139, 137, 133, 134, 131, 140.

Ans. Frequency table :

Height (in cm)	Tally marks	Frequency
131	𝍸	3
132	𝍸	3
133	𝍸	5
134	𝍸	3
135	𝍸	3
136	𝍸	2
137	𝍸	2
138	𝍸	1
139	𝍸	3
140	𝍸	5
	Total frequency N = 30	

2. In a certain colony, there are 50 families. The number of people in every family is given below. Draw up the frequency table.

5, 4, 5, 4, 5, 3, 3, 3, 4, 3, 4, 2, 3, 4, 2, 2, 2, 2, 4, 5, 1, 3, 2, 4, 5, 3, 3, 2, 4, 4, 2, 3, 4, 3, 4, 2, 3, 4, 5, 3, 2, 3, 2, 3, 4, 5, 3, 2, 3, 2.

Ans. Frequency table :

Number of members	Tally marks	Frequency
1	|	1
2	𝍸 𝍸 |||	13
3	𝍸 𝍸 𝍸 |	16
4	𝍸 𝍸 |||	13
5	𝍸 ||	7
	Total frequency N = 50	

3. A dice was cast 40 times and each score noted is given below. Draw up a frequency table for this data.

3, 2, 5, 6, 4, 2, 3, 1, 6, 6, 2, 3, 5, 3, 5, 3, 4, 2, 4, 5, 4, 2, 6, 3, 3, 2,4, 3, 3, 4, 1, 4, 3, 3, 2, 2, 5, 3, 3, 4.

Ans.Frequency table :

Number on the upper face of the dice	Tally marks	Frequency
1	||	2
2	𝍸 |||	8
3	𝍸 𝍸 |||	13
4	𝍸 |||	8
5	𝍸	5
6	||||	4
	Total frequency N = 40	

4. The number of chapatis that 30 children in a hostel need at every meal is given below. Make a frequency table for these scores.

3, 2, 2, 3, 4, 5, 4, 3, 4, 5, 2, 3, 4, 3, 2, 5, 4, 4, 4, 3, 3, 2, 2, 2, 3, 4, 3, 2, 3, 2

Ans. Frequency table :

The number of chapatis	Tally marks	Frequency
2	𝍸 𝍸 ||||	9
3	𝍸 𝍸 𝍸	10
4	𝍸 𝍸 |||	8
5	|||	3
	Total frequency N = 30	

*****