

RD Sharma Solutions Class 10 Maths Chapter 7 Exercise 7.2: In RD Sharma Class 10 Maths Chapter 7, Exercise 7.2 on Statistics, students learn about organizing, interpreting, and analyzing data effectively. This exercise focuses on calculating measures of central tendency, including mean, median, and mode, for grouped and ungrouped data. It introduces methods like the assumed mean and direct method for finding the mean, equipping students with tools to simplify complex data sets.

The exercise emphasizes practical applications, helping students understand how statistical data is analyzed in real life. Overall, Exercise 7.2 builds a foundation for understanding data trends and patterns, essential for advanced statistical concepts.

RD Sharma Solutions Class 10 Maths Chapter 7 Exercise 7.2 Overview

Chapter 7, Exercise 7.2 in RD Sharma's Class 10 Maths book focuses on Statistics, specifically on measures like mean, median, and mode. These concepts are vital because they help students understand how data can be organized, analyzed, and interpreted, which is essential for making informed decisions. Mean represents an average value, median is the central point, and mode is the most frequent observation.

Understanding these measures aids in summarizing large data sets and finding patterns. This foundational knowledge is critical in various fields such as economics, social sciences, and data analysis, enhancing students' analytical and problem-solving skills.

RD Sharma Solutions Class 10 Maths Chapter 7 Exercise 7.2 Statistics

1. The number of telephone calls received at an exchange per interval for 250 successive one- minute intervals are given in the following frequency table:

No. of calls (x):	0	1	2	3	4	5	6
No. of intervals (f):	15	24	29	46	54	43	39

Compute the mean number of calls per interval.

Solution:

Let the assumed mean(A) = 3

No. of calls x_i	No. of intervals f_i	$u_i = x_i - A = x_i - 3$	$f_i u_i$
0	15	-3	-45
1	24	-2	-48
2	29	-1	-29
3	46	0	0
4	54	1	54
5	43	2	86
6	39	3	117
	$N = 250$		$\Sigma f_i x_i = 135$

Mean number of calls = $A + \Sigma f_i x_i / N$

$$= 3 + 135/250$$

$$= (750 + 135) / 250 = 885 / 250$$

$$= 3.54$$

2. Five coins were simultaneously tossed 1000 times, and at each toss the number of heads was observed. The number of tosses during which 0, 1, 2, 3, 4 and 5 heads were obtained are shown in the table below. Find the mean number of heads per toss.

No. of heads per toss (x):	0	1	2	3	4	5
No. of tosses (f):	38	144	342	287	164	25

Solution:

Let the assumed mean(A) = 2

No. of heads per toss x_i	No of intervals f_i	$u_i = x_i - A = x_i - 2$	$f_i u_i$
0	38	-2	-76
1	144	-1	-144
2	342	0	0
3	287	1	287

4	164	2	328
5	25	3	75
N = 1000			$\Sigma f_i x_i = 470$

Mean number of heads per toss = $A + \Sigma f_i x_i / N$

$$= 2 + 470/1000$$

$$= 2 + 0.470$$

$$= 2.470$$

3. The following table gives the number of branches and number of plants in the garden of a school.

No of branches (x):	2	3	4	5	6
No of plants (f):	49	43	57	38	13

Calculate the average number of branches per plant.

Solution:

Let the assumed mean (A) = 4

No of branches x_i	No of plants f_i	$u_i = x_i - A = x_i - 4$	$f_i u_i$
2	49	-2	-98
3	43	-1	-43
4	57	0	0
5	38	1	38
6	13	2	26
N = 200			$\Sigma f_i x_i = -77$

Average number of branches per plant = $A + \Sigma f_i x_i / N = 4 + (-77/200)$

$$= 4 - 77/200$$

$$= (800 - 77)/200$$

$$= 3.615$$

4. The following table gives the number of children of 150 families in a village

No of children (x):	0	1	2	3	4	5
No of families (f):	10	21	55	42	15	7

Find the average number of children per family.

Solution:

Let the assumed mean (A) = 2

No of children x_i	No of families f_i	$u_i = x_i - A = x_i - 2$	$f_i u_i$
0	10	-2	-20
1	21	-1	-21
2	55	0	0
3	42	1	42
4	15	2	30
5	7	3	21
	N = 150		$\Sigma f_i x_i = 52$

Average number of children for family = $A + \Sigma f_i x_i / N = 2 + 52/150$

$$= (300 + 52)/150$$

$$= 352/150$$

$$= 2.35 \text{ (corrected to neat decimal)}$$

Benefits of Solving RD Sharma Solutions Class 10 Maths Chapter 7 Exercise 7.2

Solving RD Sharma Solutions for Class 10 Maths, Chapter 7, Exercise 7.2 on Statistics offers several benefits, particularly for building foundational knowledge in statistics and enhancing problem-solving skills. Here are the key benefits:

Strengthens Conceptual Understanding: This exercise covers key statistical concepts, such as mean, median, and mode, which are essential for understanding data analysis. Practicing these helps students grasp the underlying principles of data interpretation.

Builds Analytical Skills: By working through various problems, students develop the ability to analyze and interpret data. This exercise includes different types of questions that encourage critical thinking, which is valuable for exams and real-life applications.

Improves Calculation Skills: Statistics involves various calculations, and this exercise provides ample practice in performing accurate and quick calculations, especially with averages, cumulative frequency, and measures of central tendency.

Prepares for Board Exams: The Class 10 Maths curriculum aligns with board exam requirements. Solving RD Sharma's Exercise 7.2 provides targeted practice, as the types of questions in the exercise are often similar to those seen in exams, aiding in better preparation.

Enhances Problem-Solving Techniques: The exercise teaches students efficient problem-solving techniques. For instance, calculating the assumed mean or using mid-point in grouped data simplifies complex calculations, making it easier to tackle challenging problems.

Boosts Confidence: Regular practice with RD Sharma solutions builds confidence. By solving a variety of problems, students become familiar with different question patterns, helping reduce anxiety and improve their overall performance in the subject.