RD Sharma Solutions Class 10 Maths Chapter 7 exercise 7.1: Chapter 7 of RD Sharma's Class 10 Maths covers Statistics, focusing on organizing and interpreting data to draw meaningful conclusions. Exercise 7.1 introduces students to the foundational concepts of statistics, including the classification of data, frequency distribution, and types of data (raw, grouped, and ungrouped).

This exercise also discusses measures like class intervals and frequency tables, which help organize data efficiently. Students learn to calculate cumulative frequency and interpret frequency distribution tables, enabling them to analyze data sets systematically. This groundwork prepares students for more advanced statistical concepts, such as mean, median, and mode, in subsequent exercises.

RD Sharma Solutions Class 10 Maths Chapter 7 Exercise 7.1 Overview

Chapter 7 of RD Sharma's Class 10 Maths focuses on Statistics, a crucial area that equips students with methods for organizing, analyzing, and interpreting data. Exercise 7.1 introduces basic statistical concepts like mean, median, and mode, which are measures of central tendency.

These concepts are essential for summarizing large data sets, making them easier to understand and interpret. Learning statistics helps students develop analytical skills that are valuable in both academics and real-life applications, such as in research, economics, and daily decision-making. The exercise builds a foundation for higher-level statistics in future studies.

RD Sharma Solutions Class 10 Maths Chapter 7 Exercise 7.1 Statistics

Below is the RD Sharma Solutions Class 10 Maths Chapter 7 Exercise 7.1 Statistics -

1. Calculate the mean for the following distribution:

x:	**5**	**6**	**7**	**8**	**9**
f:	**4**	**8**	**14**	**11**	**3**

Solution:

x	f	fx

5	4	20
6	8	48
7	14	98
8	11	88
9	3	27
	N = 40	**Σ** fx = 281

Mean = **Σ** fx/ N = 281/40

∴ Mean = 7.025

2. Find the mean of the following data:

x:	**19**	**21**	**23**	**25**	**27**	**29**	**31**
f:	**13**	**15**	**16**	**18**	**16**	**15**	**13**

Solution:

x	f	fx
19	13	247
21	15	315
23	16	368
25	18	450
27	16	432
29	15	435
31	13	403
	N = 106	Σ fx = 2620

Mean = **Σ** fx/ N = 2620/106

∴ Mean = 25

3. If the mean of the following data is 20.6. Find the value of p.

x:	**10**	**15**	**p**	**25**	**35**
f:	**3**	**10**	**25**	**7**	**5**

Solution:

x	f	fx
10	3	30
15	10	150
p	25	25p
25	7	175
35	5	175
	N = 50	Σ fx = 530 + 25p

We know that,

Mean = Σ fx/ N = (2620 + 25p)/ 50

Given,

Mean = 20.6

⇒ 20.6 = (530 + 25p)/ 50

(20.6 x 50) – 530 = 25p

p = 500/ 25

∴ p = 20

4. If the mean of the following data is 15, find p.

x:	**5**	**10**	**15**	**20**	**25**
f:	**6**	**p**	**6**	**10**	**5**

Solution:

x	f	fx

5	6	30
10	p	10p
15	6	90
20	10	200
25	5	125
	N = p + 27	Σ fx = 445 + 10p

We know that,

Mean = Σ fx/ N = (445 + 10p)/ (p + 27)

Given,

Mean = 15

⇒ 15 = (445 + 10p)/ (p + 27)

15p + 405 = 445 + 10p

5p = 40

∴ p = 8

5. Find the value of p for the following distribution whose mean is 16.6

x:	**8**	**12**	**15**	**p**	**20**	**25**	**30**
f:	**12**	**16**	**20**	**24**	**16**	**8**	**4**

Solution:

x	f	fx
8	12	96
12	16	192
15	20	300
P	24	24p
20	16	320

25	8	200
30	4	120
	N = 100	Σ fx = 1228 + 24p

We know that,

Mean = Σ fx/ N = (1228 + 24p)/ 100

Given,

Mean = 16.6

⇒ 16.6 = (1228 + 24p)/ 100

1660 = 1228 + 24p

24p = 432

∴ p = 18

6. Find the missing value of p for the following distribution whose mean is 12.58

x:	**5**	**8**	**10**	**12**	**p**	**20**	**25**
f:	**2**	**5**	**8**	**22**	**7**	**4**	**2**

Solution:

x	f	fx
5	2	10
8	5	40
10	8	80
12	22	264
P	7	7p
20	4	80
25	2	50

N = 50	Σ fx = 524 + 7p

We know that,

Mean = Σ fx/ N = (524 + 7p)/ 50

Given,

Mean = 12.58

⇒ 12.58 = (524 + 7p)/ 50

629 = 524 + 7p

7p = 629 – 524 = 105

∴ p = 15

7. Find the missing frequency (p) for the following distribution whose mean is 7.68

x:	**3**	**5**	**7**	**9**	**11**	**13**
f:	**6**	**8**	**15**	**p**	**8**	**4**

Solution:

x	f	fx
3	6	18
5	8	40
7	15	105
9	p	9p
11	8	88
13	4	52
	N = 41 + p	Σ fx = 303 + 9p

We know that,

Mean = Σ fx/ N = (303 + 9p)/ (41 + p)

Given,

Mean = 7.68

⇒ 7.68 = (303 + 9p)/ (41 + p)

7.68(41 + p) = 303 + 9p

7.68p + 314.88 = 303 + 9p

1.32p = 11.88

∴ p = 11.88/1.32 = 9

Benefits of Solving RD Sharma Solutions Class 10 Maths Chapter 7 Exercise 7.1

Solving RD Sharma Solutions for Class 10 Maths Chapter 7, Exercise 7.1 on Statistics offers several advantages, especially for students looking to build a strong foundation in statistics and excel in their exams. Here are the key benefits:

Clear Understanding of Basic Statistical Concepts: Exercise 7.1 introduces students to fundamental concepts such as mean, median, and mode. Solving these questions helps clarify these core topics and lays a solid groundwork for understanding more complex statistical ideas in later chapters.

Practical Problem-Solving Skills: The exercise includes a variety of problems that require students to calculate measures of central tendency (mean, median, and mode). Regular practice strengthens problem-solving skills and enhances analytical thinking, which is useful not only for exams but also in real-world scenarios.

Confidence in Exam Preparation: Chapter 7 is an important part of the Class 10 Maths syllabus, and statistics often carry significant weight in board exams. By practicing RD Sharma solutions, students gain confidence in tackling questions efficiently and accurately, boosting their overall exam preparedness.

Step-by-Step Learning Approach: RD Sharma solutions provide a step-by-step methodology for solving problems. This approach helps students understand each step involved in statistical calculations, which improves their logical approach and reduces chances of errors.

Concept Application for Advanced Learning: Mastering Exercise 7.1 helps students prepare for higher-level statistics topics in Class 11 and Class 12, where concepts from this chapter are expanded upon.