Mathematics

Practice Test Paper 9

(Chapter 13: Statistics)

Class X | 2026–27

Time Allowed: 45 Minutes | Maximum Marks: 25

General Instructions

1. All 13 questions are compulsory. The paper has four sections: A, B, C and D.
2. Section A - 5 marks; Section B - 8 marks; Section C - 9 marks; Section D - 3 marks.
3. Choose one correct option in Section A. Show the necessary steps and reasoning in Sections B, C and D.
4. Round non-terminating answers to two decimal places. Use of calculators is not allowed.

SECTION A

(5 questions × 1 mark = 5 marks)

1. A class has width 12 and upper limit 48. Its class mark is:

(A) 36 (B) 40
(C) 42 (D) 44

2. If $\Sigma fu = 0$ in the step-deviation method, the mean is:

(A) h (B) a
(C) a + h (D) 0

3. If 5 is added to every observation, a mean of 24 becomes:

(A) 29 (B) 120
(C) 19 (D) 24

4. For the table below, the median-class frequency f is:

Class interval	0–10	10–20	20–30	30–40	40–50
Frequency	5	9	17	11	8

(A) 8 (B) 9
(C) 11 (D) 17

5. The number of observations at least 30 is:

Class interval	0–10	10–20	20–30	30–40	40–50
Frequency	6	8	9	10	7

(A) 25 (B) 15
(C) 17 (D) 20

SECTION B

(4 questions × 2 marks = 8 marks)

6. Estimate the mode of the grouped lengths.

Length (mm)	20–30	30–40	40–50	50–60
Frequency	3	11	7	4

7. There are 46 students in the table. Find p and the modal class.

Marks	0–10	10–20	20–30	30–40
Students	8	9	p	12

8. Taking a = 15, calculate d = x − a for each class and hence find Σfd.

Class interval	0–10	10–20	20–30
Frequency	3	4	5

9. The mean of a grouped distribution is 58. If a = 50, h = 4 and Σf = 25, find Σfu.

SECTION C

(3 questions × 3 marks = 9 marks)

10. Find the mean daily distance travelled by the buses using the assumed mean method.

Distance (km)	60–80	80–100	100–120	120–140	140–160	160–180
Frequency	4	8	14	10	6	3

11. The leaf lengths were measured to the nearest millimetre. Use continuous class boundaries to find the median length.

Length (mm)	Frequency
118–126	3
127–135	5
136–144	9
145–153	12
154–162	5
163–171	4
172–180	2

12. Estimate the modal family size for the grouped survey data.

Family size	1–3	3–5	5–7	7–9	9–11
Frequency	7	8	2	2	1

SECTION D

(Application Based Question - 3 marks)

13. A survey recorded daily water use by households. Use the grouped data to answer the following.

Water (litres)	50–75	75–100	100–125	125–150
Frequency	4	6	14	6

(i) Find the total frequency.

(ii) Find the number in the highest class.

(iii) Estimate the mode.