

Test paper- Class 9th- Statistics

1. The mean of 5, 10, 15, 20, and 25 is:

- A) 10
- B) 15
- C) 20
- D) 25

Answer: B) 15

2. The median of the data set {3, 7, 10, 15, 20} is:

- A) 7
- B) 10
- C) 15
- D) 20

Answer: B) 10

3. The mode of the data {4, 5, 6, 6, 7, 8, 6, 9} is:

- A) 5
- B) 6
- C) 7
- D) 8

Answer: B) 6

4. If a data set consists of only one observation, the mean is equal to:

- A) 0
- B) The observation itself
- C) The sum of all observations
- D) Cannot be determined

Answer: B) The observation itself

5. The measure of central tendency that is affected most by extreme values is:

- A) Mean
- B) Median
- C) Mode
- D) None of these

Answer: A) Mean

6. The sum of all frequencies in a frequency distribution is called:

- A) Mean
- B) Cumulative frequency
- C) Total frequency
- D) Relative frequency

Answer: C) Total frequency

7. The difference between the highest and lowest values in a dataset is called:

- A) Mean
- B) Median
- C) Range
- D) Mode

Answer: C) Range

8. If each observation in a data set is increased by 5, then the mean will:

- A) Decrease by 5
- B) Increase by 5
- C) Remain unchanged
- D) Become zero

Answer: B) Increase by 5

9. Which of the following is NOT a measure of central tendency?

- A) Mean
- B) Mode
- C) Median
- D) Range

Answer: D) Range

10. If the mode of a dataset is 18 and the median is 20, then which of the following is the most likely mean?

- A) 18
- B) 19
- C) 20
- D) 22

Answer: D) 22

1. Find the Mean, Median, and Mode

The marks obtained by 10 students in a mathematics test are:
45, 50, 55, 60, 50, 65, 70, 50, 80, 90.

- Find the **mean, median, and mode** of the given data.
 - Explain the significance of each measure in understanding the dataset.
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2. Construct a Frequency Distribution Table

The following are the ages (in years) of 30 people in a group:
23, 25, 28, 30, 25, 29, 30, 27, 32, 35, 28, 29, 30, 32, 35, 27, 26, 28, 30, 25, 26, 27, 30, 29, 32, 33, 35, 36, 30, 27.

- Construct a **frequency distribution table** with class intervals of **25-27, 28-30, 31-33, and 34-36**.
 - Find the **mean** of the given data using the assumed mean method.
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3. Calculate the Mean from a Frequency Table

The following table shows the number of books read by students in a month:

Number of Books	0-2	3-5	6-8	9-11	12-14
Number of Students	5	8	15	7	5

- Calculate the **mean number of books read per student** using the **direct method**.
 - Explain how the mean is useful in analyzing the reading habits of students.
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4. Draw a Histogram

The marks obtained by students in an exam are given in the following table:

Marks Range	0-10	10-20	20-30	30-40	40-50
Number of Students	3	7	12	15	8

- Draw a **histogram** to represent this data.
 - Explain how a histogram helps in understanding the distribution of marks.
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5. Application-Based Question on Mean and Median

A teacher records the heights (in cm) of 15 students in her class as follows:
145, 150, 152, 160, 158, 157, 155, 162, 164, 165, 168, 170, 172, 174, 176.

- Find the **mean height** of the students.
 - Find the **median height** of the students.
 - If a new student with a height of **180 cm** joins the class, how will the **mean** and **median** change?
 - Explain which measure (mean or median) is more affected by the new student's height and why.
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6. Here is a simple **bar graph** representing the number of students in different classes of a school.

Data Table: Number of Students in Different Classes

Class	6th	7th	8th	9th	10th
Students	40	35	50	45	30

Now, let's generate a **bar graph** for this data.