

# Class 10 Mathematics – Chapter: Statistics

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## 1. Introduction

Statistics deals with collecting, organizing, summarizing, and interpreting data.

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## 2. Collection of Data

- Primary data: Collected firsthand by surveys, experiments.
- Secondary data: Collected from existing sources like books, websites.

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### 3. Presentation of Data

- Tabular form: Using frequency distribution tables.
- Graphical form: Bar graphs, histograms, pie charts, etc.

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### 4. Measures of Central Tendency

- Mean: Average of data values.

$$\text{Mean} = \frac{\sum f_i x_i}{\sum f_i}$$

where  $f_i$  is frequency,  $x_i$  is data value.

- Median: Middle value when data is arranged in order.
- Mode: Most frequently occurring value.

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## 5. Calculation of Median

- Arrange data in ascending order.
- Find cumulative frequencies.
- Locate median class and apply formula.

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## 6. Calculation of Mode

- Identify modal class (highest frequency).
- Use formula involving modal class limits and frequencies.

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## 7. Important Tips for Exams

- Practice drawing graphs carefully.
- Know formulas for mean, median, and mode well.
- Understand when to use which measure.

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Practice interpretation questions.