

Median and Mode of Grouped Data

Chapter 13: Statistics · Topic 2

Key Concept

These formulas allow precise estimation of the median and mode even when working with grouped (rather than individual) data, where the exact original values are unknown, only which class interval they fall into. Understanding when to use mean, median, or mode for grouped data depends on the nature of the data and what kind of 'typical value' is most meaningful or useful for the specific real-world context being analysed.

Quick Revision Notes

- The median class is where cumulative frequency first exceeds $n/2$ (n = total frequency).
- The mode is estimated from the modal class (the interval with highest frequency).
- Specific formulas use class boundaries, frequencies, and class width to estimate median/mode.
- These formulas work even with grouped data, where individual exact values are unknown.

Practice Questions

- 1 Find the modal class from a given grouped frequency distribution.
- 2 Explain how the median class is identified for grouped data.
- 3 Given a grouped frequency table, describe the steps to estimate its median.