

Graphical Representation (Histograms and Ogives)

Chapter 23: Graphical Representation (Histograms and Ogives) · Topic 1

Key Concept

A histogram uses adjacent bars (no gaps) to show frequency distribution, with bar width representing class intervals and height representing frequency.

An ogive (cumulative frequency curve) plots cumulative frequency against upper class boundaries, useful for finding median and quartiles graphically.

To find the median from an ogive, we locate $n/2$ on the cumulative frequency axis and trace across and down to find the corresponding value.

These graphical tools help us visualise and interpret grouped data more effectively than raw numbers alone.

Quick Revision Notes

- A histogram uses adjacent bars, no gaps.
- Bar width = class interval; height = frequency.
- An ogive plots cumulative frequency.
- It's plotted against upper class boundaries.
- Ogives help find median and quartiles graphically.
- We locate $n/2$ on cumulative frequency axis for median.
- Trace across and down to find the value.
- These tools help visualise grouped data effectively.

Practice Questions

- 1 Create a histogram for a grouped dataset.
- 2 Create an ogive for the same dataset.
- 3 Find the median using your ogive.
- 4 Discuss the difference between a histogram and a bar chart.
- 5 Discuss why ogives help find quartiles.
- 6 Explain how to read a histogram.