

Mean and Median (Statistics)

Chapter 19: Mean and Median (Statistics) · Topic 1

Key Concept

The mean is calculated by summing all values and dividing by the count, giving an overall average that can be affected by extreme values.

The median is the middle value when data is arranged in order, and it's less affected by extreme values (outliers) than the mean.

For grouped data, the mean can be calculated using the formula involving class midpoints and frequencies.

Choosing between mean and median depends on the data - median is often preferred when outliers might skew the mean significantly.

Quick Revision Notes

- Mean = sum of values $\div$ count.
- Mean can be affected by extreme values.
- Median is the middle value in ordered data.
- Median is less affected by outliers.
- Grouped data mean uses class midpoints and frequencies.
- Choice between mean/median depends on data.
- Median suits data with outliers.
- Both measures summarise data differently.

Practice Questions

- 1 Calculate the mean of a dataset with an outlier.
- 2 Calculate the median of the same dataset.
- 3 Compare how the outlier affects mean versus median.
- 4 Discuss when median is preferred over mean.
- 5 Calculate mean for grouped data with class midpoints.
- 6 Solve two mean/median problems.