

Comparing Averages and Ranges

Choosing the right average and range

	Advantages	Disadvantages
Mode	It's easy to find. It doesn't get distorted by outliers . Can be used for non-numeric data. It's always a value in the data set.	It doesn't always exist, or there are several modes . Not always a good representation of the data — it doesn't use all the data values .
Median	It's easy to find for ungrouped data. It doesn't get distorted by outliers.	Not always a good representation of the data — it doesn't use all the data values . It isn't always a value in the data set.
Mean	It is usually the most representative average — it uses all the data values.	It can be distorted by outliers. It isn't always a value in the data set.

	Advantages	Disadvantages
Range	It's easy to find.	It can be distorted by outliers.
Interquartile range	It doesn't get distorted by outliers.	Not always a good representation of the data — it doesn't use all the data values .

Comparison of data using median and interquartile range

- Performance is compared through median eg in two sets of data having marks scored by each pupil in 2 classes then a bigger median will indicate better performance
- Consistency (and variation) is compared through IQR
Bigger IQR means more variation in data hence less consistency