

Section 2: Data presentation and interpretation

Crucial points

1. **Choose the right diagram for the data**

When working with a large data set in spreadsheet form, you can generate all sorts of diagrams quickly and easily. However, this does not mean that all diagrams are appropriate for the data you are working with.

2. **Remember that the vertical scale for a histogram is frequency density**

In a histogram, the frequency represented by each bar is found from the area of the bar, not the height. So for a particular class,
$$\text{frequency} = \text{class width} \times \text{frequency density}.$$

3. **Make sure that you choose a sensible number of classes when grouping data**

This depends on how much data you have to group (see the Notes and Examples).

4. **Make sure you know the difference between measures of central tendency and measures of spread**

Measures of central tendency (averages) include the mean, median, mode and midrange. You might use these to compare, for example, the heights of two sets of children to see which group on average are taller. Measures of spread include the range, interquartile range, variance and standard deviation. You might use these to compare, for example, the heights of two sets of children to see which group had a greater variation in height.

5. **Know how to use your calculator to work out statistical measures**

Your calculator should have functions for working out the mean and standard deviation of a set of data. Make sure you know how to input the data and how to carry out the calculations.