

Task 1: Analysing data

Answer the following questions, using **data set 1** on Handout 12.2. You may use a graphics calculator such as the TI-83.

- 1 Calculate the mean length of sentence.
- 2 Find the median length of sentence.
- 3 Compare the mean and the median. Discuss the usefulness of each statistic.
- 4 Draw a stem-and-leaf diagram of the data.
- 5 Discuss the outliers.
- 6 How would you describe the distribution?
- 7 Is it appropriate to draw a pie chart for this distribution? Justify your answer.
- 8 Is it appropriate to draw a bar chart for this distribution? Justify your answer.
- 9 Group the data, using six unequal class intervals.
- 10 Draw a histogram, using the unequal class intervals in 9 above. How correct is it to draw a histogram in this case?
- 11 Calculate the standard deviation of the raw data.
- 12 Is it possible to conclude anything about the lengths of sentences in Darwin's *Origin of the species*? Justify your answer.

Task 2: Using Autograph

- 1 Use *Autograph* to analyse and represent **data set 2** on **Handout 12.2**. Do this in as many ways as you can.
- 2 What can be said about the sentence lengths in Watson's *Microbiology of the gene*?
- 3 What comparisons can be made between data sets 1 and 2?