## Setting up the CASIO fx-83 GT PLUS calculator

The calculator operates in a number of modes, some of which include display of numbers as fractions rather than as decimals, and the use of degrees or radians to display angles.

- 1. To reset the calculator to the decimal display mode press SHIFT, SETUP, 2
- 2. To ensure angles are expressed and entered in degrees press SHIFT, SETUP, 3

## Using the CASIO fx-83 GT PLUS calculator to calculate simple arithmetical expressions

The calculator allows for entry of numbers and expressions using standard algebraic format. This includes the use of brackets, exponents and functions. The expression is evaluated when the Equals key is pressed using conventional arithmetical priorities. As an example:

```
56x(10-8)-10^{(2)} evaluates to 12 15x\sin(45) \div \sqrt{(2)} evaluates to 7.5
```

Single line expressions such as those above can be edited using the arrow keys (large oval button), the Del key, other keys as necessary, and then re-evaluated by pressing the Equals key. Pressing the AC key will clear the current expression.

## Using the CASIO fx-83 GT PLUS calculator to calculate the mean and sample standard deviation for a list of numbers

- 1. Press Mode, 1 to clear the statistics memory.
- 2. To enter the statistics mode which is suitable for calculating values from one variable, press Mode, 2, 1. The screen will show a blank table ready to enter data.
- 3. Enter the first value from your list and press the Equals key.
- 4. Repeat for the second value.
- 5. If you enter a value incorrectly press the arrow keys (large oval button) to go back to that row and re-enter the correct value.
- 6. Repeat until all values have been entered and press AC.
- 7. Note that the STAT function is accessed via the number 1 key. You can extract three calculated statistical results from your table of data as follows:
  - To retrieve the *number* of items you entered, press SHIFT, STAT, 4, 1, Equals To retrieve the *mean*, press SHIFT, STAT, 4, 2, Equals
  - To retrieve the **sample standard deviation**, press SHIFT, STAT, 4, 4, Equals
- 8. Do not forget to press the Equals key, otherwise the display shows the last item entered.
- 9. If you believe you may have entered a data item incorrectly press SHIFT, STAT, 2 and edit as above from step 5 onwards.
- 10. At the end of your session please press Mode, 1 to reset the calculator for the next user. This will clear all the statistical data entered.