

Using the CASIO *fx-7400G PLUS*

CALCULATIONS

Use MENU 1 (RUN)

Negative Numbers Use the (-) button







Powers Use the ^ button, including brackets if necessary
eg to find $2^{0.05t}$ when t is 60, press $2 \wedge (0.05 \times 60)$

Exponential Function Use the e^x button (i.e. SHIFT ln)
eg to find $e^{0.05t}$ when t is 60, press $e^x (0.05 \times 60)$

Memories To recall/use the previous answer press **Ans** i.e. SHIFT(-).
To store a number in a memory, press **Ⓜ ALPHA A** (or B, C, ...) EXE
To recall/use press **ALPHA A** (or B, C, ...)


TO DRAW THE GRAPH OF A FUNCTION

Use MENU 4 (GRAPH)

- To *delete previous functions*, press DEL (F2) then YES (F1).
- If you need to *change the type of function*, press  and select from Y= (for a function) or PARM (for points)
Pressing the arrow again allows you to choose inequalities and pressing it again takes you back to the start.
- To *draw the graph of a function* use the X, T button for the variable (even if a different letter is used). After entering the function, press EXE then DRAW (F4).
- To *correct a mistake* use  or  on the REPLY button to highlight the function, then  until you get to the error to over-write it.
- To *keep a function in the memory, but stop it being drawn* press SEL (F1).
- To *set co-ordinates* for a good picture of the graph, press V-Window (SHIFT F3) then enter the values you require for the axes. You will need to press EXE after each entry and use  on the REPLAY button to get to the Y menu.
- To *zoom in or out* press Zoom (SHIFT F2), then IN (F3) or OUT (F4).
If you wish to *change the scale factor* for zooming use FACT (F2).
To *zoom in on a particular section* of the graph press Box (F1), then use the arrows on the REPLAY button to move the cursor to where you want one corner of the box to be. Press EXE to set that corner, then use the arrows again to draw the box. Press EXE again when the box is as you want it. The section of the graph in the box will be enlarged to fill the screen.
To *return to the original graph*, press Zoom again then  so that you can select the ORIG (F1) option.
- To *find the coordinates of important points* on a curve use Trace (SHIFT F1), then the arrows on the REPLAY button. Press QUIT when you are finished.






TO FIND OUT HOW WELL A MODEL FITS DATA

Use MENU 4 (GRAPH) and the notes overleaf, using  when necessary to find the options you need.

- Use the PARM option to *enter the points* first.
- Then use the Y= option to *enter the function*.
- Press DRAW (F4) to plot the points and then the function.

TO FIND A FUNCTION TO MODEL DATA

Use MENU 2 (STAT)

- *Enter the data values*, pressing EXE after each value. There are 6 lists. Press  on the REPLAY button if you want to use lists 3, 4, 5 or 6.
- *To delete previous values*, press  then DEL A (F2) to delete a whole list and DEL (F1) to delete just the highlighted value.
- *To choose which lists the graph will use*, press GRPH (F1) then  then SET (F4). The display will show the set-up for Graph 1.

Use  on the REPLAY button to scroll down.

Check that the G-Type is Scat (if it isn't, press F1).

Use the F buttons to choose lists for the X and Y values on the graph.

The Freq should be set to 1.

M-type gives you a choice of different markers for the points.

If you want to select lists for another graph, highlight StatGraph1 at the top of the list, then use the F buttons to select another graph.

Finally press EXE or QUIT to return to the lists.

- *To draw a graph of the points* press GPH1 (F1) or one of the other F buttons.
- *To find a model*
Press X (F1) for a *linear* function or X² (F3) for a *quadratic* function.

Press  then one of the F buttons for other options.

eg Exp (F2) gives the best *exponential* function to model the data.

Note that the given *r* value is a measure of *how closely the function fits* the data.

A value of 1 or - 1 means the function is an exact fit.

Press DRAW (f4) to *draw the graph of the function over the points*.

Press QUIT to go back to the lists.

