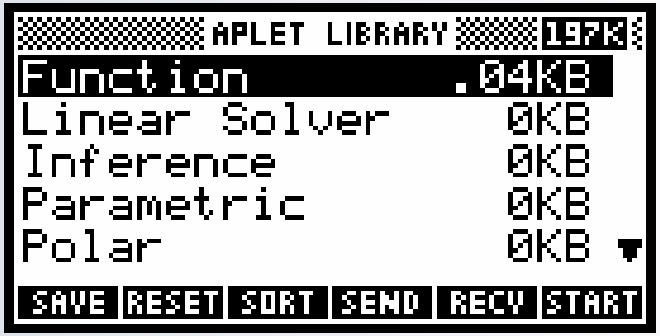
Plotting and Interpreting

Linear and Quadratic Graphs

Plotting Graphs the Easy Way

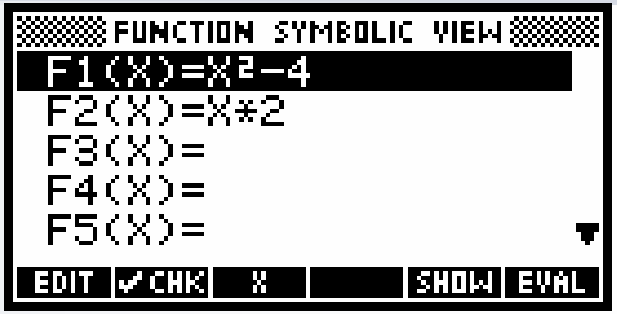
Step 1: Choose an Aplet

The choice of Aplet to use when graphing depends on the type of function.
We use **Aplet** **Function**



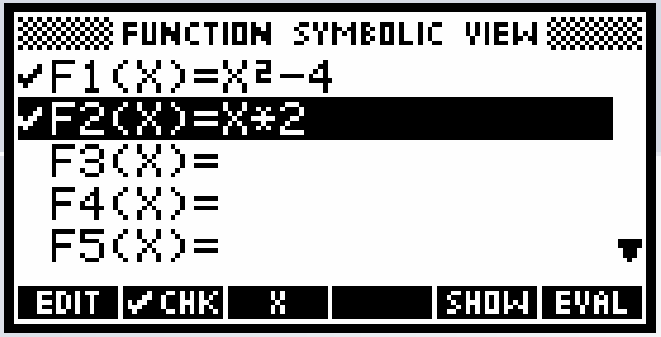
Step 2: Enter a Function

- Simply type your expression and press **ENTER** or **OK**



What if I did it wrong?

- To overwrite an existing entry, press **DEL** or just type over it.
- Press **SHIFT CLEAR** to delete all functions.
- The **Function Symbolic View** for the **Function aplet** is shown but others are similar e.g. the
- **SYMB** (Symbolic) view is another way to enter equations and functions.



- The 'X' button is normally used to enter **X** in an expression.
- Using **ALPHA** is also possible, as is using screen key 3 (see right).
- The tick **CHK** mark next to the function determines whether the function is to be graphed or ignored. Use (screen key 2) to add or remove the mark.

Step 3: PLOT

- Just press **PLOT** to produce a graph.
- **PLOT** shows the graph/s entered that were ticked when you entered the equations.

What if my graphs do not have the correct scale?

We can fix this easily in the **PLOT** window .

- **ZOOM**
- **TRACK TRACE**
- **GOTO**
- **FCN**
- **DEFN**
- **MENU**

PLOT Window

ZOOM

- Can use **AUTOSCALE** to change the scale for the graph automatically so that it fits in the view window.

- **SHIFT PLOT** will scale the graph too but you have to type in values for the x-axis and y-axis.

DEFN

DEFN gives the equation of a line.
We use this as well when we have entered a list of plotted points to find the equation of a line (this is similar to RULE FINDER)

PLOT Window

TRACK TRACE

- TRAC follows the exact *line* and
- TRACE follows the x or y *axis*.

GOTO

GOTO is the option to go straight to a ‘x’ point to find the corresponding ‘y’

PLOT Window

FCN

- FCN ROOT shows (x,y) where X = 0
- FCN SLOPE gives the gradient as SLOPE:1
- FCN SIGNED AREA will be used when we look at only a section of the graph in future
- FCN EXTREMUM is used to find the maximum or minimum point. For line graphs it will say CONSTANT to show line continues

Mobile Phone example

.Chitchat

$C = 0.2x + 0.2$

Vodafide

$C = 0.1x + 1$

Sketch the graphs on calculator

Triangle Solver

Using triangle solver aplet for solutions of right and non right angled traingles

Use the solve function

Warming and cooling