Name:_____   Class:_____

Basic Skills - Activity 1
Basic skills for using Maths Helper Plus

'Maths Helper Plus' is a computer program for doing high school maths. These are some skills you need in order to use the program properly. Tick the boxes: ☑   to indicate which skills you have completed.

☐ **Skill 1 - Starting Maths Helper Plus:**
Your teacher will show you how to start Maths Helper Plus on your computer system.
A common way to start it is by double clicking on the program icon:——————————➤
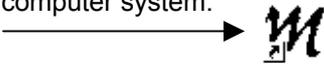
- Practice starting Maths Helper Plus now.

☐ **Skill 2 - Moving the 'splitter bar':**
When Maths Helper Plus starts, it displays two windows called the 'text view' and the 'graph view'. The two windows are separated by the 'splitter bar'. (See below)
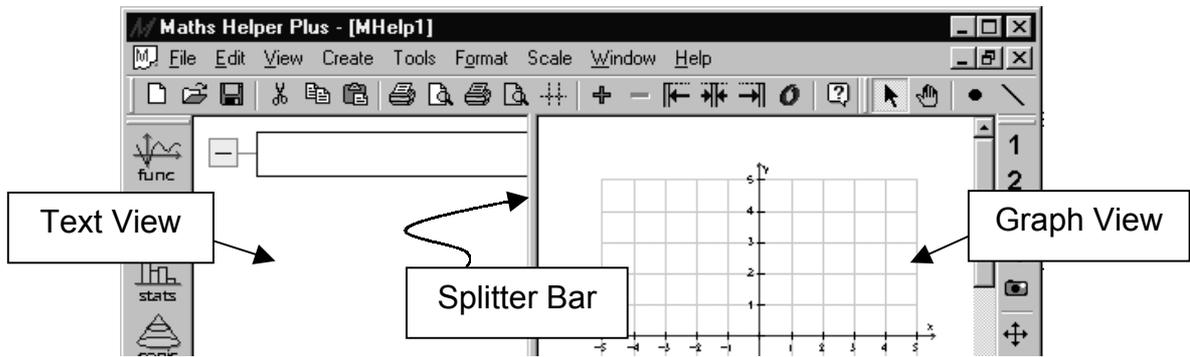
Sometimes you only want to see the text view or the graph view. Other times you want to see some of each.
Method 1 There are keyboard shortcuts for moving the splitter bar:
'Ctrl+T' means to hold down a 'Ctrl' key while you press the 'T' key. This displays the text view only.
Ctrl+G displays the graph view only, and Ctrl+B displays both views.

Method 2 Move the mouse cursor over the splitter bar. When the shape of the cursor changes to a horizontal arrow, click and drag with the mouse. Release the mouse button when the splitter bar is where you want it.

- Try the keyboard and the mouse methods for moving the splitter bar.

☐ **Skill 3 - Entering your data:**
Maths Helper Plus can accept many kinds of mathematical information, called 'input data'.
Three common types of input data are: (x,y) points, statistical data, and equations,

You enter your data into the input box on the text view:

To activate the input box for editing, either press the F3 key, OR click inside the input box with the mouse.

NOTE: If the input box is already selected (see skill 4 on the next page) no F3 or mouse clicking is needed. Just start typing!

Follow these steps to type these points: (1,2) (2,1) (4,4) into Maths Helper Plus:
1. Press the F3 key The 'short cuts' box will appear. You can click on the shortcut buttons to type special symbols.
If it displays itself in an inconvenient place, point to the words: 'Shortcut box' (at its top) with the mouse, then click and drag it somewhere out of the way.
2. Type your data
3, Press the Enter key

The graph view displays dots for the points on the graph, and the text view displays the data you typed in a double edit box:

You can type a descriptive label here.

(1,2) (2,1) (4,4)   Your input data is displayed here.
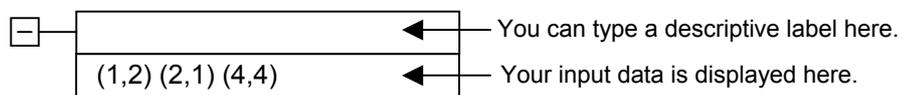
To type further data sets, you don't need to press the F3 key each time. As long as you used the 'Enter' key to complete your last data entry, the input box will be selected automatically, ready for your next entry. You can press 'Enter' again to display the shortcuts box, or just start typing your next data if you don't care about the shortcuts box!

Create four more data sets using the input data given below:

| Type of data set:	Input Data	Graph view display:
(x,y) points	(1,0) (2,1) (3,2) (4,3) (5,4)	Plotted points.
equation	y = x − 1	Graph of the equation.
equation	y = −x + 1	Graph of the equation.
Set of statistical data	1;2;1;4;3;1;2;4;1;1;2	Histogram plot of the data.

☐ **Skill 4 - Selecting a data set**
An 'expand box' is attached to every data set on the text view:
The selected data set has a yellow expand box.

- Find the selected data set on your text view.

To select a data set, you click beside its double edit box on the text view:

- Select a different data set by clicking beside it on the text view.

Expand box

(1,2) (5,2) (4,4)

Click here to select

(1,2) (5,2) (4,4)
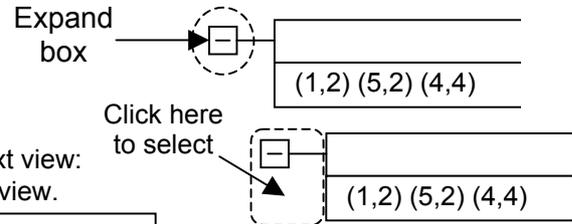
NOTE: Usually, you can also move the selection by clicking the up arrow or down arrow keys on your keyboard, although this facility is sometimes disabled.

☐ **Skill 5 - Selecting (x,y) point and equation data sets** Carefully point with the mouse to the line graph of an equation or the exact middle of a plotted point. Now click the left mouse button. This will select that data set and its expand box will turn yellow.

- Try identifying your plotted points and line graphs by clicking on them.
  Watch for the expand box that becomes yellow.

☐ **Skill 6 - Editing your data:** To change the input data you have already entered:

Method 1: Select the data set, then either (1) press Enter to begin editing the data, or (2) To add more data at the end of existing data, begin typing without pressing Enter.

NOTE: To edit the descriptive label, hold down 'Shift' while you press 'Enter'.

Method 2: Click on the data, make your changes, then click outside of the edit box. Try this:

- Click on the input data: (1,2) (2,1) (4,4)
- Change (2,1) to (5,2)
- Click outside of the edit box

(1,2) (5,2) (4,4)
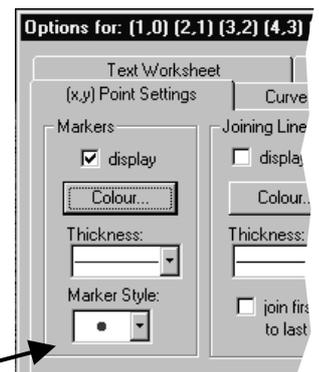
☐ **Skill 7 - Displaying the options dialog box**
Every data set has an options dialog box where you can choose to display graphs and calculations for your input data. The options available depend on the type of data set.

To display the options dialog box:
Method 1: Select the data set, then hold down 'Ctrl' while you press 'Enter', or
Method 2: Double click the mouse on the text view beside the data.
Try this:

- Double click on the text view beside the statistical data set to display its options dialog box.
- Select the 'Calculations' tab at the top of the dialog box, then click to select 'range'.
- Click OK to close the dialog box.
  The text view now displays the calculations for finding the range of this data.

- Double click exactly in the centre of a plotted (x,y) point to display the options dialog for the set of points.
  (You can also display it by double clicking beside the data set on the text view.)
- In the '(x,y) Point Settings' tab, choose some of the available options and note the effect on the graph.
  Click OK to close the dialog box.

Options for: (1,0) (2,1) (3,2) (4,3)

Text Worksheet
(x,y) Point Settings | Curve

Markers | Joining Line

☑ display | ☐ display

Colour... | Colour...

Thickness: | Thickness:

Marker Style: | ☐ join firs
• ▼ | to last

☐ **Skill 8 - Deleting unwanted data sets**
To delete one data set you don't want, select it as described above, then hold down a 'Ctrl' key while you press the 'Delete' key.

- Select and delete one data set.

To delete ALL data sets, you choose the 'Delete All' command in the 'Edit' menu.
Delete all remaining data sets.