**Chapter 1 Short Summary**

(Note: I use the & symbol to indicate that you need to press one key *and* another key to obtain a particular result.)

\* *Parts of Maple*

-> Palette

-> Context bar

-> Math/Text (F5 switches between the two modes)

\* *Document vs Worksheet*

(File -> New document/worksheet)

-> *Worksheets* – good for just math computations/programs

-> *Documents* – word processing +math

\* *Math mode*

-> The default is math mode when you open new file

-> Italic font is often used to typeset math variables.

-> A grey dashed rectangle appears around input

-> (CTRL & =) evaluates (or re-evaluates) a mathematical statement, (the cursor must be anywhere in the input area). (OR edit menu -> evaluate and display inline).

-> In Math mode, the *enter/return* key executes the whole math region and displays the result cantered on the next line, with an output label. (The output/equation label can be turned off).

-> Shift & Enter, starts a new line in math and text mode. Can be used to enter multi-line expressions.

\* *Multiplication*

-> To multiply two variables, either use asterisk or a space, (e.g. $a\*x$, OR, $a x$). (Maple automatically enters a space for some number times a variable e.g. $2 x$)

-> $ax$ without a space between is treated as a single variable

-> to multiply two numbers you must explicitly include the asterisk e.g. $2\*3$. Without it maple will produce an error.

(Remark: the asterisk can always be used to indicate multiplication)

\* *Two-dimensional layout*

-> Fraction: type $1/2$ to produce $½$ in maple.

-> e.g. To enter $\frac{x+y}{x-y}$ in maple….select the whole numerator before typing /. Or use brackets. Or type first character then / and go back and edit with arrow keys.

-> Indices: press $x\^6$ to get $x^{6}$ in maple.

-> To get out of a denominator or power, use arrow keys. Left cursor elsewhere on the page also works. Or F5, to start writing text.

-> e.g. note that $(x\^\frac{1}{2})\^2$ will evaluate to $x$.. and $(x\^2)\^\frac{1}{2}$ will evaluate to $sqrt(x)$.

\* *Palettes*

-> Palettes can be dragged around, open/closed, deleted etc. View->Palettes…to manipulate palettes more generally.

-> Templates have coloured symbols – placeholders that need to be replaced – use **tab** to tab through various placeholders and **shift tab** to go backwards.

-> Do not edit templates apart from replacing the placeholders as it may produce errors. (Remark: Some editing is permissible although should be avoided-refer to lecture notes for details and various errors.)

-> Infinity symbol etc… can be selected from ‘common symbols’ palette and can act as a placeholder.

\* *Writing*

-> Spellchecker. Press F7 or find in Tools tab. (uses Canadian dictionary)

-> Hyperlinks. Select the text -> Format menu -> Convert to -> Hyperlink -> Enter URL in dialogue box. OR Select Hyperlink from Insert menu.

-> Insert Images. Drag and drop, or copy and paste.

-> Create collapsible sections/subsections. Insert menu -> section/subsection. OR Format Menu -> Indent/Outdent (shortcuts can be used too). OR use buttons on toolbar.

-> Pressing shift & enter starts a new line.

-> Formatting Styles can be customised. Styles are chosen according to the nesting of the section or subsection, by default.

-> (Maple doesn’t handle spacing as intelligently as Microsoft Word)

**\*** *Shortcuts*(most work in both math and text modes)

-> Double-clicking a word selects it. Triple-clicking selects the paragraph. Shift & click selects cursor up to where you click (or extends selection).

-> Dragging a selection moves it. Ctrl & Dragging, copies it.

> Ctrl & Delete, deletes whole paragraph or selection group

> Ctrl & right/left arrow, moves the edit cursor by a word at a time. Ctrl & Shift & right/left arrow, selects by one word at a time. Shift & Home/End selects to the beginning or end of a line.

> Ctrl & A, select all. Ctrl & B, bold.

\* *Printing*

-> Before you produce any page-oriented output, open the File / Page Setup... dialogue and ensure that the settings are correct. Because Maple is Canadian, the page size defaults to Letter. In Europe, we normally use the A4 paper size, so change the paper size to A4.

-> You can insert a page break at the cursor position by using the Insert menu or the keyboard shortcut Ctrl & Enter.

-> To turn into pdf… File menu->Export As->Pdf. Note that this is a page-oriented output format and so respects the page settings.

\* *Help*

-> Maple help: [www.maplesoft.com/support/help/](http://www.maplesoft.com/support/help/)

(Ignore references to Maple Sim and Toolboxes, and select Maple before you run a search.\_

-> Quick Help. Press F1.

-> Quick Reference. Ctrl & F2 …or via help menu.

\* *Errors*

-> Maple does not detect logical errors such as $1=0$

-> (Error, unable to match delimiters)

Delimiter is the technical term for whatever sets the beginning and end of an expression.

-> Note that the error message is a hyperlink that will take you to appropriate help page.