

New features of Maple and other updates Spring 2006

Equation numbers In order to refer to results computed earlier in a worksheet, it is common to **assign** those results to a name. An alternative, introduced in Maple 10, is an **equation label** used to identify the last result in an **execution group**. When a result is needed, its equation number may be inserted through the menu bar of your Maple window, a context menu, or a keyboard shortcut (typically CTRL-L). The effect is to bring up a dialog box in which you enter the current label. These labels are automatically updated if commands are inserted or deleted.

These numbers refer to results in the worksheet, so they do not depend on the order in which commands are executed. Furthermore, they are usually automatically updated as you edit the worksheet, so they should always refer to the same value. If output is removed, the reference to an equation label will change to “??”, but executing the worksheet restores the correct label and its result. On the other hand, references have been seen to be destroyed by modifying the **outline** of the worksheet, so use of this feature is best left to later stages of preparing the worksheet.

The Maple Plot Builder Features of the Plot Builder introduced in Maple 9 were attractive, but later releases have modified this tool in ways that are less satisfactory for our course projects. Future use of this will be confined to the **supplementary worksheet** where it still may be useful in building instructions for some plots. However, these instructions may need further editing are re-execution before being **copied** to the main worksheet. It seems that computers are not yet smart enough to anticipate all of the adjustments you want to make in a graph.

Options The **Document Mode** introduced with Maple 10 has features that are supposed to be easier for beginners to use. They emphasize the appearance of the completed document, but they allow the underlying Maple instructions to be hidden. Since you will be graded on the Maple instructions you use and your interpretation of the results of those instructions, this format is less useful in course projects. Desirable options that should be set in the Tools → Options... notebook are **Input Display: Maple notation** — on the **Display** page — and **Default format for new worksheets: worksheet** — on the **Interface** page. The other settings should be safe for our use.

Lines that don't have the [**>**] prompt may not behave as indicated in the project description, and possibly lead to errors in your worksheet. Using the **T** or [**>**] tools in the Maple window to insert **text** or **Maple input** lines, respectively, should avoid odd behavior in your worksheets.

Printing When you print your worksheet in a Rutgers student lab, you need to use your **RUconnection card** to identify yourself at the computer next to the printer before the printer will accept your job. You will also be able to modify the instructions to the printer (including canceling jobs that you no longer want to print).

End of Maple update document