

## Calc-50 Copy and Paste Functions

The copy and paste keys on screen 6 can be used to import or export numbers or function definitions.

The copy key will move data from Calc-50 to the system clipboard, where it can then be pasted into another program. There are three modes of operation for the copy key.

- (1) If a number is shown at the top of the calculator screen, that number is copied to the clipboard. It is copied showing its full precision, regardless of the format with which the number is currently displayed. Note that the value shown on screen 6 will be real when the copy key is pressed, but that number may have a non-zero imaginary part if it was computed on screen 9. The functions on the real screens operate only on the real part of the number, but the copy command will include the imaginary part if it is non-zero.
- (2) In program mode with a function definition shown at the top of the calculator screen, all of the currently defined functions are copied to the clipboard.
- (3) If “unknown” is shown at the top of the calculator screen, for example after taking the square root of  $-1$  on screen 1, then the values stored in all the calculator’s registers are copied to the clipboard. This can be useful if several values are to be used in another program, like the 14  $x_i$ ,  $w_i$  parameters found in the Gauss Quadrature page, or the 50 points on the solution curve from the Differential Equation page of the Calc-50 Examples.

The paste key takes the information from the system clipboard where it has been copied from another program and imports it into Calc-50. The information is examined to see which of the 3 formats above it has.

A list of function definitions is recognized when the data begins with one of the function definition headers “f0:”, “f1:”, ..., “f9:”. More than one function definition can be included with a single paste operation.

When all the calculator registers are to be defined, the data begins with the header line that is produced by option 3 of the copy command: “stack x,y,z,t”. The data should have the same format used by the copy command:

Header line: stack x,y,z,t

4 lines with numbers to define x,y,z,t

Header line: financial registers n,i,pv,pmt,fv

5 lines with numbers to define n,i,pv,pmt,fv

Header line: sto registers 0, 1, 2, ..., 100

101 lines with numbers to define the general storage registers

Otherwise, the data conforms to the format from option 1 of the copy command. It contains a single number that will be entered into the stack and shown at the top of the calculator screen.

When copying data from another program for import to Calc-50, take care that it is plain text. For example, copying from a pdf file may pick up unicode symbols that are not plain text. These will be ignored when translating imported data to Calc-50.

Copying commands from the Calc-50 example pages or other pdf sources can include things like  $\sqrt{x}$ . These are used as key labels for giving Calc-50 commands, but will not get translated during the paste operation because they are not plain text.

Opening the help screen for the square root key in Calc-50 reveals that the plain text equivalent for the square root symbol is “sqrt”. This is also what appears in a function definition when the square root key is pressed.

Another thing to be careful about when copying from pdf files is that even when the underlying data is plain text, doing a copy from Safari or another pdf-aware app may not completely capture all of the highlighted text.

It can also happen that it is difficult to get Safari to highlight all of the text, especially when there are multiple lines with longer lines in the middle of the section of text.