

[7.2] Using the built-in function documentation in CATALOG

AMS 2.03 has a new feature in the CATALOG display in which user-defined programs and functions can be listed, in addition to the built-in functions. The functions are listed in alphabetical order, along with the folder they are in. This is very useful.

Even more useful is the fact that you can display a little documentation on the status line of the display. The status line is the very bottom line of the LCD display. This line will show the first comment in the program after the *Func* or *Prgm* statement. Also, if you press [F1], which is the Help menu tab, a dialog box opens that shows the same comment, but in a larger font which is much easier to read.

For example, these are the first few lines of a linear regression function:

```
linregk(xl,y1,h,k)
func
©(xlist,ylist,h,k) return {b,a} for y=b*x+a through (h,k)
...
```

When this program is selected in CATALOG, the status line shows

```
©(xlist,ylist,h,k) return {b,a} for y=b*x+a through (h,k)
```

Consider using this feature to give the user all the critical documentation needed to use the function:

1. The input arguments for the function. In my example, the arguments are (xlist,ylist,h,k). I use parenthesis to indicate that these are the arguments. I use the names *xlist* and *ylist* to remind me that these are lists, and that they are the x- and y-data values for the regression. Note that the names used in the comment need not be the actual variable names; they can be more descriptive. Also, the phrase *through (h,k)* shows that *h* and *k* define a point.
2. The function output. In the example I use the phrase *returns {b,a}* to indicate that the functions returns two numbers in a list.
3. What the function actually does. The phrase *for y=b*x+a* shows that the function finds a linear regression function.
4. Any restrictions on the input variables. My example doesn't need this, but you could add a phrase like *h>0, k>0*.
5. The modes in which the function should be run.

It may be difficult to display all this information in the status line, but the dialog box will display 13 lines of about 30 characters each.