

## [7.6] Recursion limits

The 89/92+ support recursion, which means that a function can call itself. Since the operating system must save the state information of the calling program, there is a limit to the depth to which recursion can be used. I used this test routine to determine the maximum recursion calling depth:

```
rectest(k)
func
when(k=0, k, rectest(k-1))
endfunc
```

This program simply calls itself repeatedly, decrementing the  $k$  variable, until  $k = 0$ .

The program runs correctly for values of  $k$  of 41 or less. When  $k$  is 42 or greater, the program fails with a "Memory" error message. This limit does not seem to be sensitive to the amount of RAM and archive used. I did my testing with a TI-92 Plus, AMS version 2.05.