

**Bottom Memory Display.** If you pressed **SST** repeatedly, you would eventually reach step 100 and two dashes would appear in the display:

- 35 0 1 -

This is only to let you know that you are at the bottom of memory. If you press **SST** one more time, the program pointer comes again to the top of memory.

**Full Memory Display.** If the 100th step of program memory contains anything other than **9** **NOP**, the display in W/PRGM mode always appears with a dash on the right to let you know that program memory is full. For example, if the program pointer was pointed at a **RTN** somewhere in the middle of a program and the program memory was full, the display would look like this:

24 -

## Clearing Memory

The key sequence **f** **PRGM** cannot be stored in program memory. It is used to clear program memory. Whenever you intend to redefine one or more of the program control keys **A** thru **E**, you must clear program memory first. Otherwise, as you key in your program, the default programs are pushed down in memory and unless your program is 100 steps, you may end up with two programs controlled by one program control key.

To clear program memory, switch to W/PRGM mode and press:

**f** **PRGM**

This fills the entire 100-step memory with **9** **NOP** codes and sets the program pointer to the top of memory.

## Writing Your Own Program

Now that you know a little more about the program memory of your calculator, let's write another program.

This program will calculate the volume of a sphere using the simple formula:  $\text{Volume} = r^3 \times \pi \times 4/3$ . All you will have to do is key in the radius (r) and press **A**. To key in the program follow the procedure below:

1. Set the program mode switch to W/PRGM.
2. Press **f** **PRGM** to clear program memory and set the program pointer to the top of memory marker.
3. Press the keys in the order shown. Take the time to identify each key by its keycode.

Keycodes	Keys	Comments
23	<b>LBL</b>	Program execution begins here when <b>A</b> is pressed.
11	<b>A</b>	
03	<b>3</b>	Calculates $r^3$ .
35	<b>9</b>	
05	<b>y<sup>x</sup></b>	Calculates $r^3 \times \pi$ .
35	<b>9</b>	
02	<b>π</b>	
71	<b>×</b>	Calculates $r^3 \times \pi \times 4/3$ .
04	<b>4</b>	
71	<b>×</b>	
03	<b>3</b>	
81	<b>÷</b>	Defines the end of the program.
24	<b>RTN</b>	

If you make a mistake, clear the program by pressing **f** **PRGM** and start over. You'll learn how to correct mistakes and edit your programs shortly.