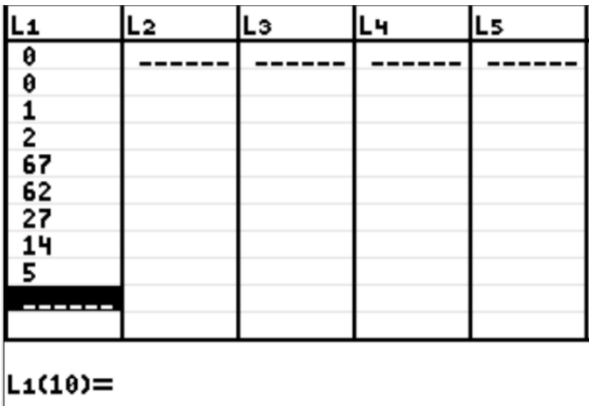
TI-83/84 Descriptive Statistics

The TI-83/84 calculator will directly give you many of the common descriptive statistics for a data set. The statistics given directly are:

Sample mean: $\overline{x}$
Sample standard deviation: S_x
Population standard deviation: σ_x
Sample size: *n*
Minimum data value: minX
Quartile 1: Q_1
Median: med
Quartile 3: Q_3
Maximum data value: maxX

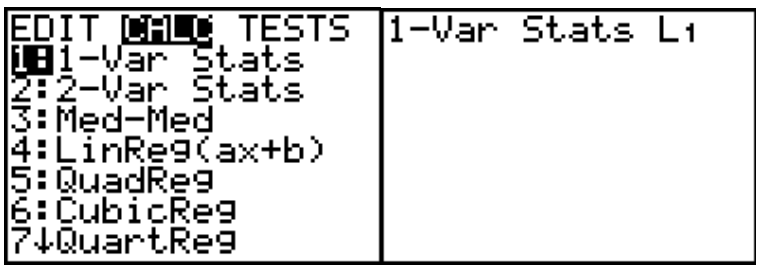
Example
The table below gives the number of moons for each planet in the solar system.

Planet	Number of Moons
Mercury	0
Venus	0
Earth	1
Mars	2
Jupiter	67
Saturn	62
Uranus	27
Neptune	14
Pluto	5

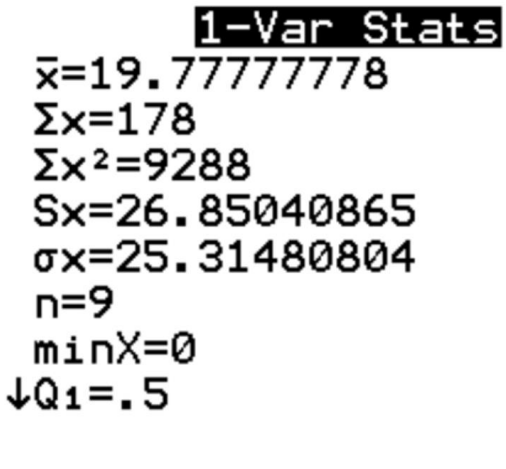


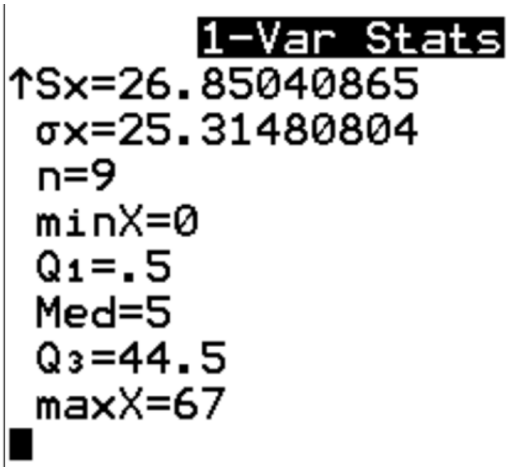
First enter the data into list L_1 as shown.

Press STAT again, scroll over to the **CALC** menu and select 1 for 1-Var Stats. Press ENTER and the command 1-Var Stats will appear on the screen in the TI-83, or in new models, the Stat Wizard screen will pop up. Then tell the calculator to use the data in list L_1 by pressing 2nd and 1 key for list L_1. On the 83, just type this after 1-Var Stats on the main screen. In the Stat Wizard, type this on the line for **List**. The frequency line is for frequency or probability distributions. Leave it blank here.

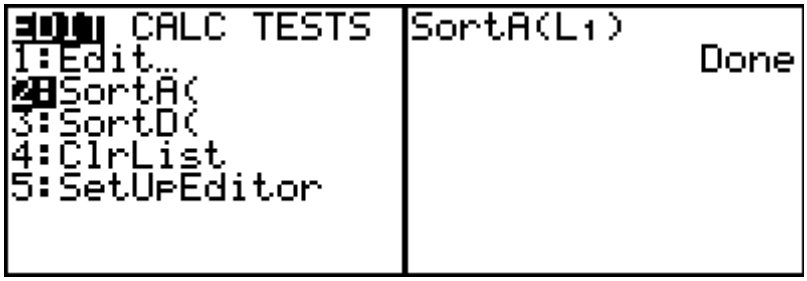


To execute, press ENTER, or scroll down to calculate and press ENTER. Then the next two screens contain the descriptive statistics for the moon data. Note the arrow ↓ on the last line. This tells you to use the down arrow key to display more results. Scroll down to see the rest of the results for the moon data.





To find the range, take the maximum value (**maxX**) and subtract the minimum value (**minX**). You can find the mode by sorting the data in ascending order and scanning the sorted list to see which value occurs most often. To sort the data, press STAT, select 2:**SortA(** which stands for sort in ascending order. Press ENTER and the **SortA** command appears on the screen. Type in 2nd and 1 for L_1 and press ENTER. **Done** appears on the screen. Press STAT and **Edit** to return to list L_1 and notice that the data is now sorted in ascending order. A scan of the moon data shows that 0 is the mode.



To leave the data screen, press 2nd MODE for **Quit** to return to the main screen.