List Statistics

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Comments welcomed. Attitudes are not.

A program to produce some statistical data from a list stored in the TI-86. The program calculates mean, variance, standard deviation, frequency and relative distributions, and a histogram. `LStat` redimentions and updates the following built-in lists on the TI-86: `fStat`, `xStat`, and `yStat`. If also creates a new list named `lStat` for use in its computations.

Limitations

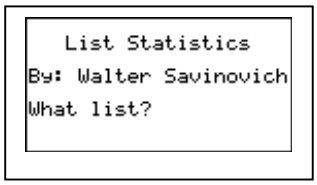
LStat is designed to work with lists that contain 128 elements of less. This is due to the number of lines available for display on the calculator itself. Further lists containing elements smaller than .001 may not behave properly.

Example Data

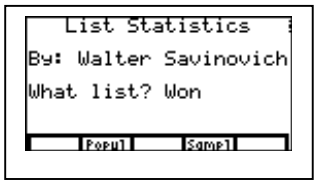
The baseball data below, taken from the second month of the 1996 season, is used to illustrate the operation of LStat.

Team	% of Games Won	Batting Average	Pitching ERA
Atlanta	66	0.277	2.75
San Diego	63	0.273	3.22
Montreal	57	0.275	3.95
Los Angeles	53	0.242	2.95
San Francisco	52	0.261	4.83
Colorado	51	0.283	5.90
Philadelphia	50	0.236	4.39
Florida	50	0.241	3.80
Houston	50	0.270	4.02
St. Louis	44	0.266	4.70
New York	42	0.265	4.40
Cincinnati	42	0.244	5.04
Chicago	41	0.247	4.60
Pittsburgh	38	0.252	4.69

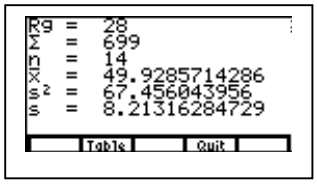
Running LStat



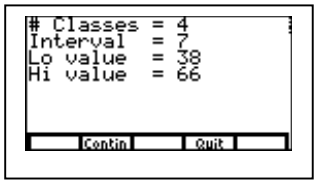
The first input required from you is that of the name of the list containing the data to process.



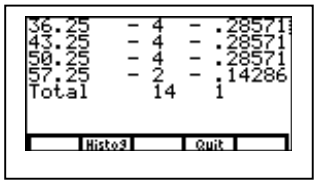
Once entered, `LStat` will ask you if the list consists of the population or a sample.



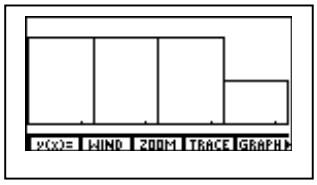
The TI-86 will then display the following: range, summation of the elements, number of elements, the mean, variance, and standard deviation. You are then asked if you want to see the table or quit.



Choose table to continue and the calculator displays its calculations for the number of classes and the interval between classes. It further displays the minimum and maximum values in the list. At this point press continue to see the actual table.



As the calculator cycles through the list, it displays dynamically the changing values until such time that all elements are processed. The table consists of three columns: The lower limit of the class, the frequency of the class, and the relative frequency of the class. It further displays the summation of the frequency and the relative frequency.



Pressing `Histogram` will have the TI-86 display the histogram associated with your list

Of course, anytime you see the option to `Quit`, the program will terminate at that point.

Once the TI-86 has displayed the graph, you can flip back and forth between the graph and the table by pressing the `EXIT` and `GRAPH` keys alternately. When done, press the `EXIT` key until the graph disappears from the screen, then press the `CLEAR` key to clear the display.