

Descriptive Statistics For Grouped Data (Frequency Distribution) With The TI-83

The TI-83 calculator will calculate an estimate for the mean and sample standard deviation for grouped data (data in a frequency distribution)

Example

A random sample of 44 automobiles registered in Dallas, Texas show the ages of the cars to be:

Age (in years)	Midpoint	Frequency
1 to 3	2	9
4 to 6	5	12
7 to 9	8	20
10 to 12	11	3

Estimate the mean and standard deviation of the ages of the cars.

Let's put the midpoints in L_1 and the frequencies in L_2 .

L1	L2	L3	2
2.0000	9.0000	-----	
5.0000	12.0000		
8.0000	20.0000		
11.0000	3.0000		

L2(5) =			

Press STAT and highlight CALC, and select 1:1-Var Stats. Designate the data lists with the first list having the data and the second list having the frequencies. Do this by pressing 2nd L1 COMMA (above the 7) 2nd L2.

1-Var Stats L1,L
2

Press ENTER and the descriptive statistics of the grouped data will appear.

1-Var Stats
$\bar{x}=6.1591$
$\Sigma x=271.0000$
$\Sigma x^2=1979.0000$
$Sx=2.6845$
$\sigma x=2.6538$
$\downarrow n=44.0000$

From the screen above, an estimate for the mean is 6.1591 and the estimate for the sample standard deviation is 2.6845.