

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 L₁ and the frequencies in L₂.

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.