

Standard Deviation on the TI-83 or TI-86

(The output also contains intermediate sums and other stats)

Raw or List	Array (sorted)	Ungrouped Frequency Distribution	Grouped Frequency Distribution
1	2	x Freq	Class Freq
7	7	3 2	5-8 2
3	5	4 5	9-12 7
2	9	5 8	13-16 19
5	14	6 3	17-20 8

Data Forms

Raw, list or array data



Although you can put the data (raw data) in *any* list, it is suggested that you put the raw data in list L1. If you use another list, such as L5, you must tell the calculator in the 1-VarStat command thus: 1-VarStat L5 (or OneVar L5 on the TI-86)

TI-83

- Put the raw data in L1. Use STAT EDIT
- Press STAT move to CALC and select 1:1-Var Stats
- Enter 2nd L1
- Press ENTER

The sums below are the sums that appear in the formulas. This is a good way to check your "hand" work, or use the sums to set up your formulas. $\bar{A}x$ and $\bar{A}x^2$

Mean → \bar{x}
 Sample standard deviation → S_x
 Population standard deviation → σ_x

Scroll up and down with the arrow keys to see all data

TI-86

- Put the raw data in L1. Use 2nd STAT EDIT or 2nd LIST EDIT. When done press 2nd QUIT (You may want to run SetList from the PRGM NAMES menu first. Get it from the Math Lab TI-86 along with ZGetKey. This makes your TI-86 lists look like TI-83 lists.)
- Press 2nd STAT select CALC then OneVa
- Press ALPHA then L then 1.
- Press ENTER twice then press EXIT twice (to move the menu off the screen).

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 Sample standard deviation → S_x
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5	14	6 3	17-20 8

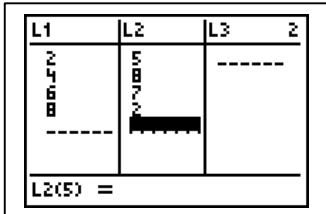
Data Forms

Grouped Data (using the midpoints [marks]) or Ungrouped Data in Frequency Distributions

Although you can put the midpoints (marks) and frequencies in *any* lists, it is suggested that you put the midpoints in list L1 and the frequencies in list L2. If you use other lists, such as L5 and L6, you must tell the calculator in the 1-VarStat command thus: 1-VarStat L5,L6 (or OneVar L5,L6 on the TI-86)

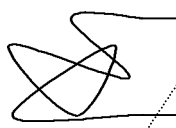
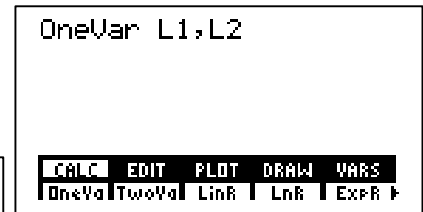
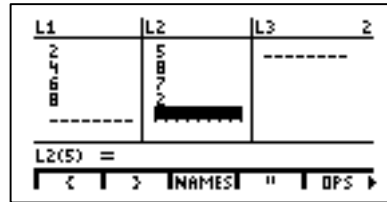
TI-83

- Put the midpoints or one number classes in L1 and the frequencies in L2. Use STAT EDIT
- Press STAT move to CALC and select 1:1-Var Stats
- Enter 2nd L1 then a comma (,) then 2nd L2
Press ENTER



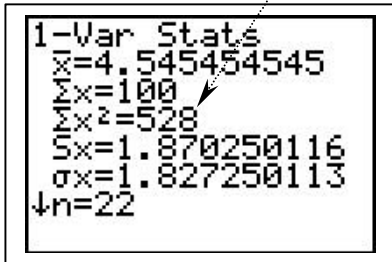
TI-86

- Put the midpoints or one number classes in L1 and the frequencies in L2. Use 2nd STAT EDIT
- Press 2nd QUIT then 2nd STAT then select CALC then select OneVa
- PRESS ALPHA then L then 1 then a comma (,) then ALPHA then L then a 2
Press ENTER

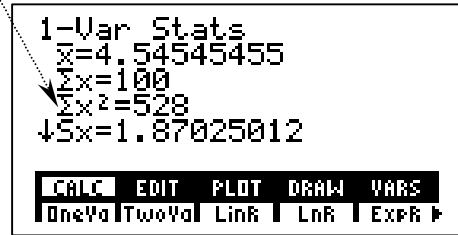


Same as ungrouped data from here on.
Note $\Sigma x = \Sigma fx$ and $\Sigma x^2 = \Sigma fx^2$ (if you need these values to "show work")
See previous page and see to right.

*The sums are the sums that appear in the formulas.
This is a good way to check your "hand" work, or use the sums to set up your formulas.*



Scroll Up/Down with the arrow keys to see all the data



NOTE: The CALC menu selection of 1-Var Stats (or OneVar on the TI-86) means there is one variable (x) involved. In the case of grouped data, there are two lists; L1 and L2. They are the midpoints and the frequencies. However there is still only one variable, x.