

4.3 Statistical measures on one variable data

4.3.1 Statistical measurement of data


Suppose you want to do statistical measures on the following sorted data:

4	4	5	5	5	6	6	6	6	6
7	7	8	8	8	8	8	8	9	9

- ① Create a new document and select Add List & Spreadsheet, and enter each values in the chosen list (here A):

The screenshot shows a spreadsheet window titled '*Doc' with 'RAD' mode selected. The spreadsheet has columns A, B, C, and D, and rows 1 through 5. The data entered is as follows:

	A	B	C	D
1	4.			
2	4.			
3	5.			
4	5.			
5	5.			

- ② Press , select Statistics > Stat Calculations > One-Variable Statistics. Select the parameters as follows:

The screenshot shows the 'One-Variable Statistics' dialog box with the following settings:

- X1 List: a[]
- Frequency List: 1
- Category List: (empty)
- Include Categories: (empty)
- 1st Result Column: c[]

Buttons: OK, Cancel

Press  and these results are displayed:

Title	One-Va...
\bar{x}	5.3
Σx	53.
Σx^2	287.
$Sx := S_{n-1}X$	0.823

Here is the table of notations:

\bar{x} : mean	n: size of the sample
Σx : sum of all values	MinX: minimal value
Σx^2 : sum of all squares of values	Q_1X : lower quartile
Sx: standard deviation of the sample	MedianX: median
σx : estimation of the the population's standard deviation	Q_3X : upper quartile
	MaxX maximal value


4.3.2 Statistical measurement with list of values and frequency list

Consider the following data

values	4	5	6	7	8	9
frequency	2	3	5	2	6	2

- ① Create a new document and select Add List & Spreadsheet. Enter the values in one list (here: A) and the frequency list in a second (here: B):

	A	B	C	D
=				
1	4.	2.		
2	5.	3.		
3	6.	5.		
4	7.	2.		
5	8.	6.		

② Press , select Statistics > Stat Calculations > One-Variable Statistics. Fill the parameters as follows:

One-Variable Statistics

X1 List: ▶

Frequency List: ▶

Category List: ▶

Include Categories: ▶

1st Result Column:

OK Cancel

Press . These results should be displayed:

\bar{x}	6.65
$\sum x$	133.
$\sum x^2$	931.
$s_x := s_{n-1}x$	1.57
$\sigma_x := \sigma_n x$	1.53

(See the end of 4.3.1 at page 56 to have the table of notations)