

Finding Basic Statistics Using Excel

Open an Excel spreadsheet and enter your data under one column. Do not leave any open cells between the data values. For the following, suppose your data is contained in cells B3 through B21.

To find each of the following statistics, click on an open cell in the spreadsheet and type the formula shown. You must start with the equals sign (=). When you have finished typing the formula, press the “Enter” button on your keyboard.

Mean	=AVERAGE(B3:B21)
Mode	=MODE(B3:B21)
Minimum	=MIN(B3:B21)
First Quartile	=QUARTILE(B3:B21, 1)
Median	=MEDIAN(B3:B21)
Third Quartile	=QUARTILE(B3:B21, 3)
Maximum	=MAX(B3:B21)
Midrange	=(MIN(B3:B21)+MAX(B3:B21))/2
Range	=MAX(B3:B21)-MIN(B3:B21)
Standard Deviation	=STDEV(B3:B21)
Standard Error	=STDEV(B3:B21)/SQRT(COUNT(B3:B21))
Interquartile Range	=QUARTILE(B3:B21, 3)-QUARTILE(B3:B21, 1)
Skewness	=SKEW(B3:B21)

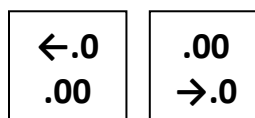
Example #31 p.143 (1st 4 columns) The following data represent the number of casinos in a sample of 16 different U.S. states.

3	7	14	114	2	3	7	8	26	4	3	14	70	3	21	1
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For this example, we will enter the data in an Excel spreadsheet under column A and compute the statistics listed above in column D. Column C will be used for the labels of each statistic. The simulated result is shown on the next page.

You do not usually see the formulas shown in column E. To see a formula, you would need to put the cursor on top of the cell containing that formula. For example, if you put the cursor on top of cell D10, you will see just above the spreadsheet, in the box to the left of f_x , the formula: =MAX(A2:A17)-MIN(A2:A17). “A2:A17” indicates that the data values are in cells A2 through A17. Excel automatically capitalizes column labels and letters in functions.

The following are a few notes about the formatting in Excel. Column B was made thinner because it just separates columns A and C. Columns C and D were widened to contain the full names of the statistics and the formulas. Notice that the numbers in column D all have two decimal-place accuracy. This was done using the buttons above the spreadsheet that look like:



The button on the left increases decimal places and the button on the right decreases decimal places.

	A	B	C	D	E
1	Casinos		Statistic	Value	Formula in Column D
2	3		Mean	18.75	=AVERAGE(A2:A17)
3	7		Mode	3.00	=MODE(A2:A17)
4	14		Minimum	1.00	=MIN(A2:A17)
5	114		First Quartile	3.00	=QUARTILE(A2:A17, 1)
6	2		Median	7.00	=MEDIAN(A2:A17)
7	3		Third Quartile	15.75	=QUARTILE(A2:A17, 3)
8	7		Maximum	114.00	=MAX(A2:A17)
9	8		Midrange	57.50	=(MIN(A2:A17)+MAX(A2:A17))/2
10	26		Range	113.00	=MAX(A2:A17)-MIN(A2:A17)
11	4		Standard Deviation	30.55	=STDEV(A2:A17)
12	3		Standard Error	7.64	=STDEV(A2:A17)/SQRT(COUNT(A2:A17))
13	14		Interquartile Range	12.75	=QUARTILE(A2:A17, 3)-QUARTILE(A2:A17, 1)
14	70		Skewness	2.58	=SKEW(A2:A17)
15	3				
16	21				
17	1				
18					