

## **Lesson 2: Using Excel functions for Descriptive Statistics**

Starting on the next page are examples of how to find descriptive statistics using COUNT, SUM, AVERAGE, MAX, MIN, MODE, and MEDIAN.

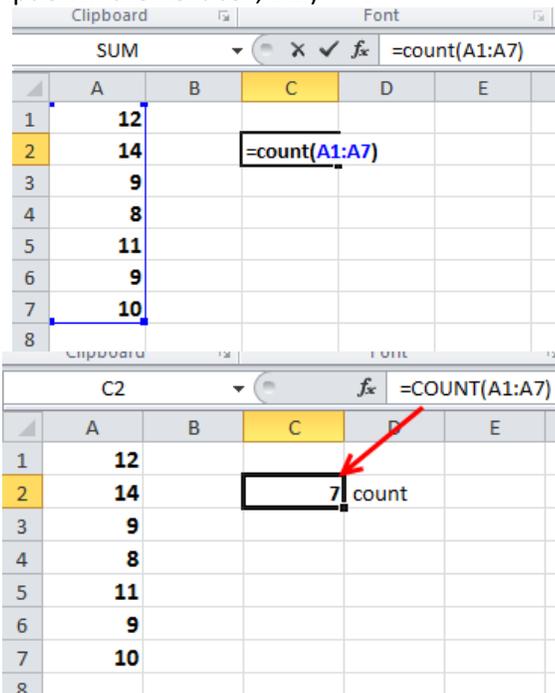
Once you have the MAX and MIN you can determine the range by taking the difference between the MAX and MIN values.

A word of caution about the MODE: It only returns one mode if more than one is present. So, if you have two or more modes it only returns the first one it encounters in the list of data. If there is no mode in the data MODE returns the value #N/A.

**COUNT** – displays the number of items in a group (or array) of cells

Format: **=COUNT**(starting cell : ending cell)

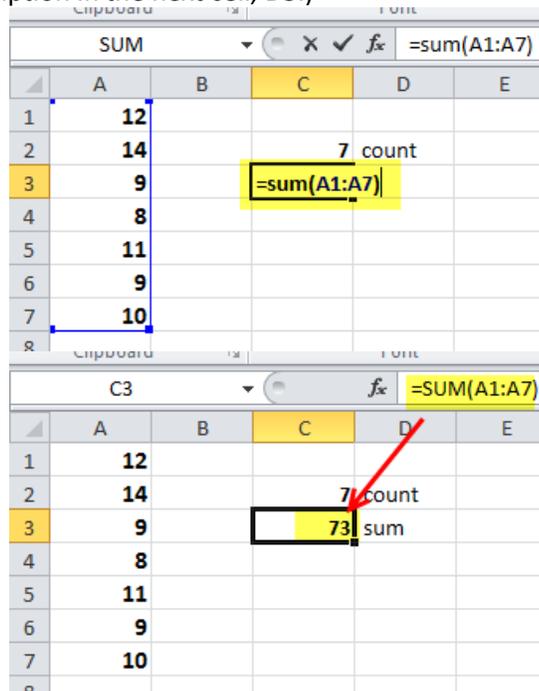
Choose a cell to type the function (e.g., C2 in the example below)  
(I've typed a description in the next cell, D2.)



**SUM** – adds the numbers in a group (or array) of cells

Format: **=SUM**(starting cell : ending cell)

Choose a cell to type the function (e.g., C3 in the example below)  
(I've typed a description in the next cell, D3.)



**AVERAGE** – Calculates the average of the numbers in a group (or array) of cells

Format: **=AVERAGE**(starting cell : ending cell)

Choose a cell to type the function (e.g., C4 in the example below)

(I've typed a description in the next cell, D4.)

	A	B	C	D	E
1	12				
2	14			7 count	
3	9			73 sum	
4	8		=average(A1:A7)		
5	11				
6	9				
7	10				

	A	B	C	D	E
1	12				
2	14			7 count	
3	9			73 sum	
4	8		10.42857	average or mean	
5	11				
6	9				
7	10				

**MAX** – displays the largest number in a group (or array) of cells

Format: **=MAX**(starting cell : ending cell)

Choose a cell to type the function (e.g., C5 in the example below)

(I've typed a description in the next cell, D5.)

	A	B	C	D	E
1	12				
2	14			7 count	
3	9			73 sum	
4	8		10.42857	average or mean	
5	11		=max(A1:A7)		
6	9				
7	10				

	A	B	C	D	E
1	12				
2	14			7 count	
3	9			73 sum	
4	8		10.42857	average or mean	
5	11		14	largest number	
6	9				
7	10				

**MIN** – displays the smallest number in a group (or array) of cells

Format: **=MIN**(starting cell : ending cell)

Choose a cell to type the function (e.g., C6 in the example below)  
(I've typed a description in the next cell, D6.)

	A	B	C	D	E
1	12				
2	14			7 count	
3	9			73 sum	
4	8			10.42857 average or mean	
5	11			14 largest number	
6	9		=min(A1:A7)		
7	10				

	A	B	C	D	E
1	12				
2	14			7 count	
3	9			73 sum	
4	8			10.42857 average or mean	
5	11			14 largest number	
6	9		8	smallest number	
7	10				

**MODE** – displays the number that occurs most often in a group (or array) of cells. If there is no mode #N/A is displayed. If there is more than one mode it displays only the first one it encounters.

Format: **=MODE**(starting cell : ending cell)

Choose a cell to type the function (e.g., C7 in the example below)  
(I've typed a description in the next cell, D7.)

	A	B	C	D	E
1	12				
2	14			7 count	
3	9			73 sum	
4	8			10.42857 average or mean	
5	11			14 largest number	
6	9			8 smallest number	
7	10		=mode(A1:A7)		

	A	B	C	D	E
1	12				
2	14			7 count	
3	9			73 sum	
4	8			10.42857 average or mean	
5	11			14 largest number	
6	9			8 smallest number	
7	10		9	mode	

**MEDIAN** – displays the number that is in the middle of a group (or array) of cells

Format: **=MEDIAN**(*starting cell : ending cell*)

Choose a cell to type the function (e.g., C8 in the example below)

(I've typed a description in the next cell, D8.)

The image shows two screenshots of an Excel spreadsheet. The top screenshot shows the formula bar with the formula `=median(A1:A7)` entered. The spreadsheet data is as follows:

	A	B	C	D	E
1	12				
2	14			7 count	
3	9			73 sum	
4	8		10.42857	average or mean	
5	11			14 largest number	
6	9			8 smallest number	
7	10			9 mode	
8			=median(A1:A7)		

The bottom screenshot shows the formula bar with the formula `=MEDIAN(A1:A7)` entered. The spreadsheet data is as follows:

	A	B	C	D	E
1	12				
2	14			7 count	
3	9			73 sum	
4	8		10.42857	average or mean	
5	11			14 largest number	
6	9			8 smallest number	
7	10			9 mode	
8			10	median	

A red arrow points from the description 'median' in cell D8 to the result '10' in cell C8.

**STDEV** – displays the standard deviation of a set or array of data.

Format: **=STDEV**(starting cell : ending cell)

Choose a cell to type the function (e.g., C9 in the example below)

(I've type a description in the next cell, D9.)

	A	B	C	D	E
1	12				
2	14			7 count	
3	9			73 sum	
4	8			10.42857 average or mean	
5	11			14 largest number	
6	9			8 smallest number	
7	10			9 mode	
8				10 median	
9			=stdev(a1:a7)		

	A	B	C	D	E
1	12				
2	14			7 count	
3	9			73 sum	
4	8			10.42857 average or mean	
5	11			14 largest number	
6	9			8 smallest number	
7	10			9 mode	
8				10 median	
9			2.070197	standard deviation	