Analysing data in excel
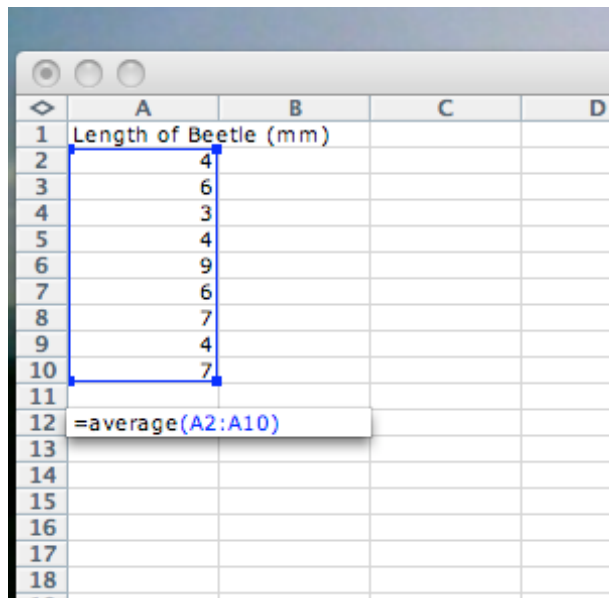
All of the following commands are found in the data analysis tool pack. Although these have been done on a Apple Mac computer, the basics are the same for all versions of excel – for the later examples the analysis toolpack should be installed (see video for help).
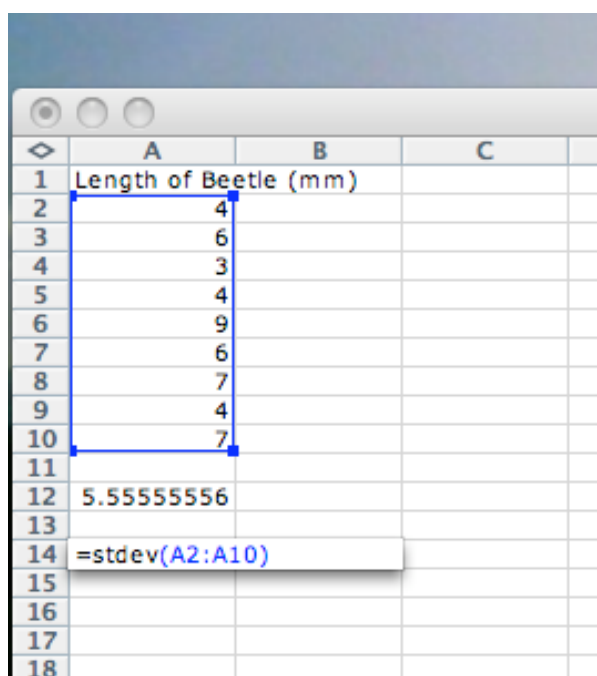
Measures of central tendency (Averages)

Typing in '=average(startrange:endrange)' as in the example above gives the mean beetle length. Instead of average you could also use the commands =median or =mode along with the range of data you are looking at will give the other averages.

Measures of dispersal

This gives the standard deviation of the beetle data.

You could also use the command =var to get the variance
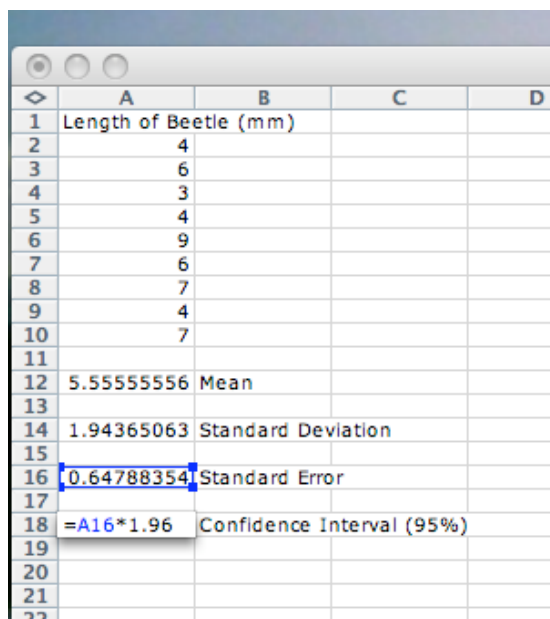
Measures of precision

You can calculate the precision of the mean (standard error or confidence intervals) using the following – once the standard deviation has been calculated.

To calculate S.E., the S.D. needs to be divided by the square root of the number of samples (here the number of samples is 9.
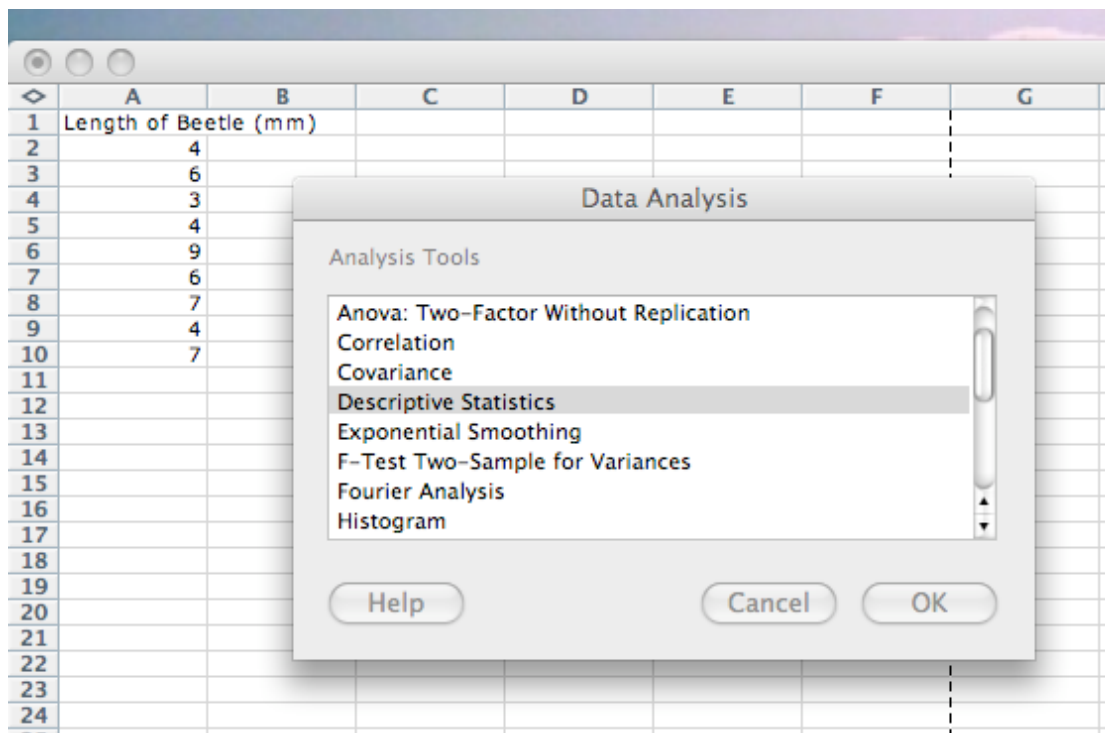

Confidence intervals can be calculated by multiplying the SE by a given value. For 95% C.I. multiply the S.E. by 1.96
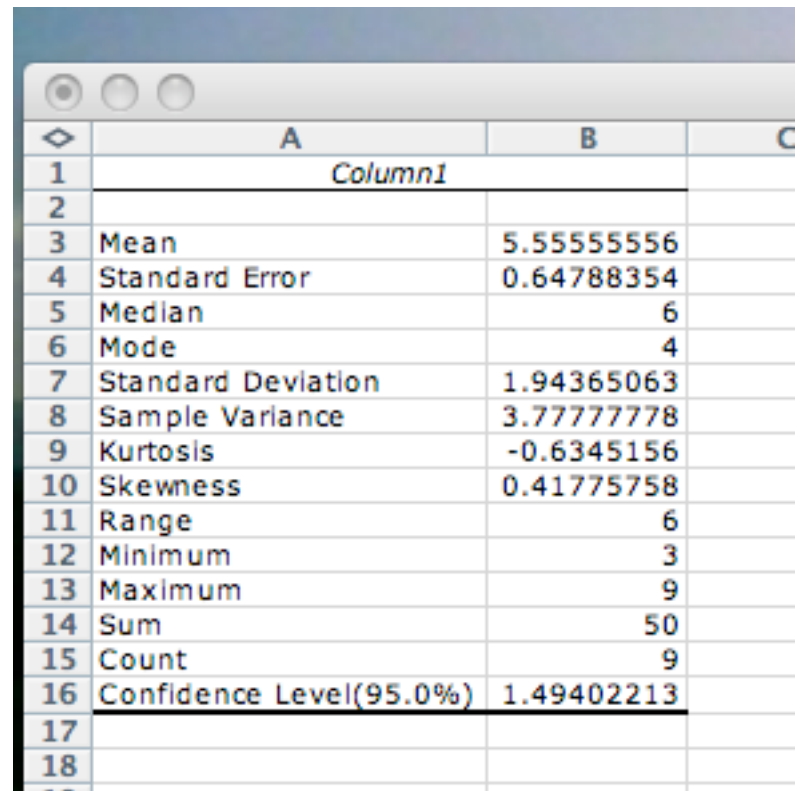
The use of descriptive statistics from the data analysis toolbox can also be useful.

Select the following options (for the above data):
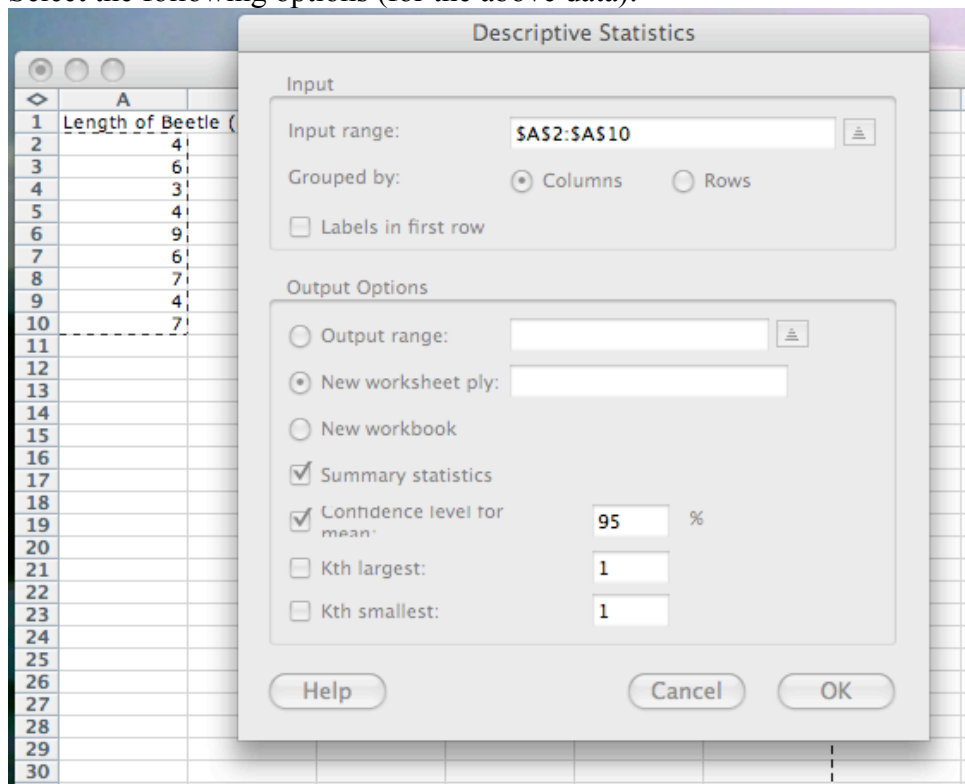
This will give you the following results:

	A	B	C
1	*Column1*		
2			
3	Mean	5.55555556	
4	Standard Error	0.64788354	
5	Median	6	
6	Mode	4	
7	Standard Deviation	1.94365063	
8	Sample Variance	3.77777778	
9	Kurtosis	-0.6345156	
10	Skewness	0.41775758	
11	Range	6	
12	Minimum	3	
13	Maximum	9	
14	Sum	50	
15	Count	9	
16	Confidence Level(95.0%)	1.49402213	
17			
18			