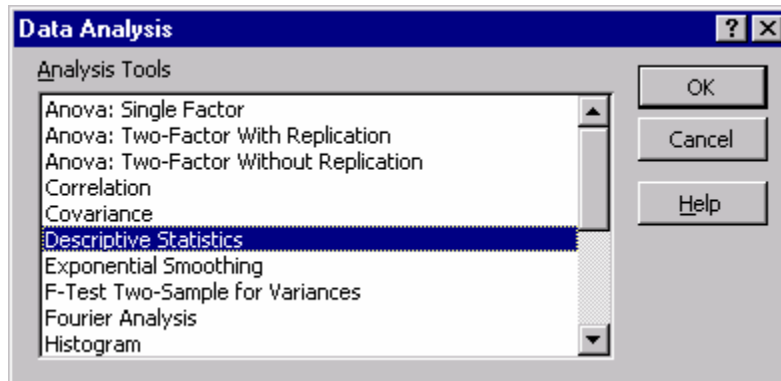


Getting Descriptive Statistics from Excel Program

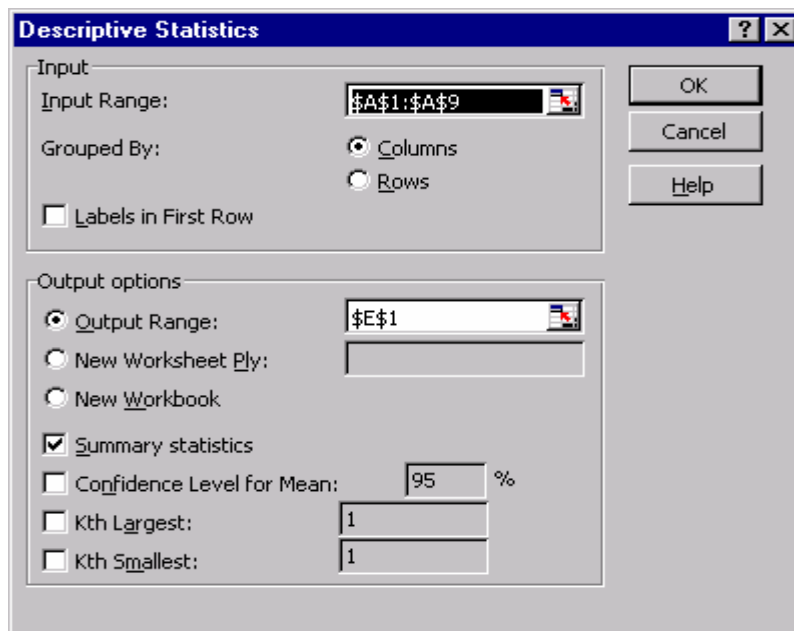
Introduction to Statistics
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How to use Excel to do *data analysis*?

1. To activate the Data Analysis Add-In for package of statistics:
 - Select **Tools** on the Worksheet menu bar.
 - Select **Add-Ins** from the **Tools** menu.
 - Check the box for **Analysis ToolPak**.
2. Formula:
 - **=AVERAGE** (. .) to get mean.
 - **=MODE** (. .) to get mode
 - **=MEDIAN** (. .) to get median
3. Select **Data Analysis** from **Tools** menu.
Select **Descriptive Statistics** as below:



Click the areas for **Input Range** and **Output Range**.
Also, select **Summary statistics** as below:



Example:

The following data represent the record high temperatures for each of the 50 states.

Enter data in a column then click Tools, Data Analysis, Descriptive Statistics, and Summary Statistics.

112	100	127	120	134	118	105	110	109	112
110	118	117	116	118	122	114	114	105	109
107	112	114	115	118	117	118	122	106	110
116	108	110	121	113	120	119	111	104	111
120	113	120	117	105	110	118	112	114	114

<i>Temperature</i>	
Mean	114.1
Standard Error	0.880746437
Median	114
Mode	118
Standard Deviation	6.227817779
Sample Variance	38.78571429
Kurtosis	1.152728086
Skewness	0.422863608
Range	34
Minimum	100
Maximum	134
Sum	5705
Count	50

Kurtosis characterizes the relative peakedness or flatness of a distribution compared with the normal distribution. Positive kurtosis indicates a relatively peaked distribution. Negative kurtosis indicates a relatively flat distribution.

Skewness characterizes the degree of asymmetry of a distribution around its mean. Positive skewness indicates a distribution with an asymmetric tail extending toward more positive values. Negative skewness indicates a distribution with an asymmetric tail extending toward more negative values.

Example

SKEW (3, 4, 5, 2, 3, 4, 5, 6, 4, 7) equals 0.359543

Standard Error = $\frac{s}{\sqrt{n}}$ where s is the **standard deviation**.