“Step Sheet: Calculating Statistical Measurements in Excel”

Using Microsoft Excel with Statistical Functions

This step sheet will help you use the statistical functions capabilities of Microsoft Excel

Using Microsoft Excel

To set up a document for your statistical data, follow these steps.

Opening Microsoft Excel

Step 1
Click the Start menu button then point to Programs. The programs submenu appears containing the Microsoft Excel icon.

Step 2
Click the Microsoft Excel icon to open the program.

Step 3
A new blank workbook should automatically appear. If not, from the File menu, choose New. Select a new blank workbook from the dialog box.

When the new workbook opens, you will have a blank spreadsheet ready to accept your text and data.

Creating a Data Table

Step 1
Find cell number A2 and type a title for your project.

Step 2
Next, you will create a table for your project data. The table headers will vary depending on the type and quantity of data you have collected. Look at the “Sample: Statistical Measurements in Excel” attachment to see an example of a data table created to represent the number of students in 21 different classrooms.

Step 3
Enter your specific data into the spreadsheet beginning with cell B4. Continue until all your data is entered in B cells.

Step 4
To sort your data, drag from cell B4 through the bottom right corner of your table data until all your data and headers are highlighted.

Step 5
From the Menu bar, select Tools, then Data, then Sort.

Step 6
When the Sort window appears, use the Sort By section to choose the appropriate header for your data. In the “Sample: Statistical Measurements in Excel” attachment, you will notice that Number of People was selected.

Step 7
In the Sort By section, click the circle in front of Ascending.

Step 8
Click OK. Your data will be sorted appropriately.

Creating a Central Tendencies Table

Step 1
To the right of your data table in cell E4, type Central Tendencies.

Step 2
Type Range, Mean, Median, and Mode in cells E5, E6, E7, and E8.

Step 3
Highlight cells F5 through F8.

Step 4
When the Format Cells window appears, choose the Number tab.

Step 5
From Category, choose Number, then type 0 in the field next to Decimal places. Click OK.

Calculating the Range

Step 1
Place your cursor in cell F5, the one just to the right of Range. Type in the equal sign, then click in the cell with the largest number in your table which should be at the bottom of your data table.

Step 2
Type in the minus sign and click in the cell of the smallest number in your table which should be at the top of your data table.

Step 3
Click the Enter key and the range for your data, the difference between the largest and smallest numbers, will appear in cell F5.

Calculating the Mean

Step 1
Place your cursor in cell F6, the one just to the right of Mean. From the Insert menu, choose Function.

Step 2
Highlight Statistical from the Function category list on the left side of the window.

Step 3
From the list of Statistical functions that appear in the right side of the window, choose Average, then click OK.

Step 4
When the Average window appears, enter your data in the field next to Number 1. Use the following format: C5:C25. The first cell represents the top cell in your data table and the second cell represents the last cell in your data table. Remember to separate the two with a colon.

Step 5
Click OK and the mean, or average, will appear in cell F6.

Calculating the Median

Step 1
Place your cursor in cell F7, the one just to the right of Median. From the Insert menu, choose Function.

Step 2
Highlight Statistical from the Function category list on the left side of the window.

Step 3
From the list of Statistical functions that appear in the right side of the window, choose Median, then click OK.

Step 4
When the Median window appears, enter your data in the field next to Number 1. Use the following format: C5:C25. The first cell represents the top cell in your data table and the second cell represents the last cell in your data table. Remember to separate the two with a colon.

Step 5
Click OK and the median will appear in cell F7.

Calculating the Mode

Step 1
Place your cursor in cell F8, the one to the right of Mode. From the Insert menu, choose Function.

Step 2
Highlight Statistical from the Function category list on the left side of the window.

Step 3
From the list of Statistical functions that appear in the right side of the window, choose Mode, then click OK.

Step 4
When the Mode window appears, enter your data in the field next to Number 1. Use the following format: C5:C25. The first cell represents the top cell in your data table and the second cell represents the last cell in your data table. Remember to separate the two with a colon.

Step 5
Click OK and the mode will appear in cell F8.

Building Charts for Your Data

Step 1
Before you can use the Chart Wizard to create a graph from your data table, you must use the cursor to drag through the information you need in your table. You will not need to include the title in the cells you highlight for your histogram.

Step 2
Click the Chart Wizard icon on the toolbar.

Step 3
A series of windows will appear asking for information about your chart. The first thing you must decide is which type of graph you would like. For the histogram, choose column and use the one already selected in the upper left corner. Click Next.

Step 4
The next window will show you a sample of your data as a histogram. Click the Next button.

Step 5
Click the field under Chart Title and type in an appropriate title for your data chart. Click Next.

Step 6
The final step of the Chart Wizard asks you to decide if you want your chart to be an object in your current workbook or a new workbook page. Leave it as an object and click Finish.

Step 7
Your completed histogram will appear on top of your sheet. You can move it around the page and resize it with the handles on the corners.

Step 8
You can use the Drawing application from the toolbar to identify and label the measures of central tendency on your histogram. Within the Drawing application, use the Draw tool to group your chart and any labels you add for easy transport to PowerPoint or other applications.