

Microsoft Excel

----- Quick Tips on Spreadsheets in Excel -----

**THE BEST WAY TO LEARN TO USE EXCEL IS TO USE IT.
DO HOMEWORK CALCULATIONS USING EXCEL.
BALANCE YOUR CHECKBOOK.
ANYTHING!**

- To **center text**, etc. in a cell:

Click on "**format**", then "cells" then "alignment"

- To get and **average value** for a column/row of data:

Click on "=" on the toolbar, then click on the down arrow to the left of the "=" sign, then select "average", followed by highlighting the data of interest.

- To get other **function** values for a column/row of data:

Click on the "=" on the toolbar and follow the path given for finding the average (sum, standard deviation, etc.)

- To get **advanced data analysis** functions:

Select "tools" on the main menu bar, the data analysis and pick the function of interest (regression, etc.)

- To **sort** a column of data:

Select "data" on the main toolbar, followed by "sort", followed by the type of sort desired.

- To make an **absolute reference** (the cell reference doesn't change on copying.):

Replace the cell reference (ie. B5) with dollar signs leading the cell reference (ie. \$B\$5).

- **Replicating cell contents** (increments cell references):

Highlight cell(s) to be duplicated and drag "cross" in lower right corner. Cell references in formulas will increment unless fixed.

Example: Values entered in columns A and B are used in the formula, $=(1/A1^2)-(1/B1^2)$, which is entered in C1 and then replicated down column C.

	A	B	C
1	1	2	0.750
2	1	3	
3	2	3	
4	2	4	
5	3	4	

	A	B	C
1	1	2	0.750
2	1	3	0.889
3	2	3	0.139
4	2	4	0.188
5	3	4	0.0486

- **Incrementing numbers** down a column (1, 2, 3, ...):

Input first number, highlight cell, hold control down and drag “cross” in lower right corner down column.

- **Using a cell reference as a constant in a formula.** One way to do this is to fix the row and column reference to the cell by using the “\$” format.

for example in the formula $=c5/b25$ if b25 is a constant like the speed of light then if the formula is being replicated you want it to stay b25 not become b26 or c26 or d35. You do this by writing it as $=c5/b$25$ and neither the row or column can change in a replication.

- **Entering scientific notation.** In Excel 2.45×10^{-6} is written **2.45E-6**
- **Formating Cells.** After highlighting the cells you want to change left click (LC) on Format in the top bar, LC on cells, and then pick what you want to change (Number, Alignment, Font, Border, Patterns, Protection).

----- Quick Tips on Graphing in Excel -----

- Display standard toolbars (“**View - Toolbars - Standard**”)
- Open “**Chart Wizard**” icon
- To plot paired data (x,y) choose “**XY (scatter)**”
- Click “**Next**” to step 2 and choose “**Series**” window to specify x- and y-values (can be highlighted with mouse)
- Follow steps to title the chart and axes and to place the chart on the spreadsheet of your choice.
- To graph the best-fit line and obtain its equation go to “**Chart**” on the main toolbar and select “**Add Trend line**”
- Choose “**Linear**” and open “**Options**” window.
- Highlight “**Display equation on Chart**” and “**Display r-squared value on Chart**”
- Hit “**OK**”