

QUANTITATIVE METHODS



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Winter 2005

LAB 1 – Introduction to Excel


Part 1 – The Basics

Open the computer and go to Excel.


In the cell A1, write “Quantitative Methods” and press ↵ .

Click on the cell A1 and increase the size of the letters to 16, using the  button. In the same way, darken the letters with the bold button  .

Move to the cell A4. Write “Statistics is Fun”.

The words are too big for the cell. Place the cursor at the top of the column, between A and B, until you see a  and enlarge the column by moving the mouse. Adjust the column so that the width is the same size as the words.


Generating Lists

Place your mouse at the bottom right corner of cell A4 until you see a  . Click on the mouse, move down to cell A10, and release the mouse.

This procedure also works with numbers. Move to cell B4 and write 1. Write 2 on cell B5. Select the cells B4 and B5 with your mouse, then move down to the bottom right corner of the darkened box. Press on the mouse, move to B10 and release it.

Repeat the last procedure with 5 on C4 and 10 on C5.

Moving Information

Suppose we want to bring down what we did so far. There are two things we can do. First, we can insert a line. Click on row 4. The whole row should now be shaded. Then go to INSERT – ROW. A new line will appear. The second method consists of moving the cells. Select the block of cells A5:C11 (click on A5 with your mouse, and holding the button down, go to C11, then release the button). Next, go on the edges of the black border until you see a  . Click on the mouse and move the block down two rows and to the right one column. Your block should now be occupying the cells B7:D13. Repeat this to bring it back to cells A4:C10.


Other Sheets

Click on Sheet 2. This is a new sheet. Write “Math is Fun” in cell B3. Click on Sheet 1 to return to what you previously did. Note that all the work you previously did is still there. In this way, we can work on more than one sheet at a time.

We can name the sheets we are using. Go to FORMAT - SHEET - RENAME and write your name then press ↵. Sheet 1 is now replaced by your name. This can also be done by double-clicking with your mouse on Sheet 1.

Saving

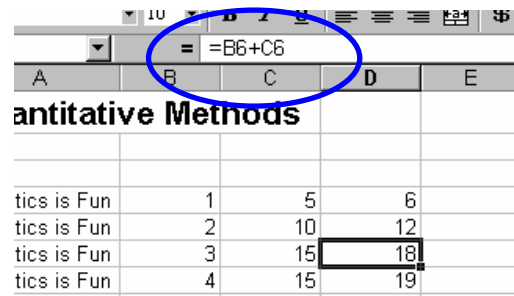
Let us save our work. Go to FILE - SAVE AS. This will enable you to save your two sheets. You have to give a name to your work. Write “Lab 1” in FILE NAME and click on SAVE. Your work is now saved on your student folder. If you want to save on a diskette, you have to change, in SAVE IN the destination. Go to Diskette 3 ½. Then, if you have given the file a name, you can click on SAVE.

From now on, you should periodically save your work, so that if something happens, you don’t lose all your work. Having saved the work once, all you have to do now is press the  button.


USING FORMULAS

In cell D4, write “=B4+C4” then press ↵. What is the value? Why? Note: formulas always start with the equal sign. Also, when entering the address of a cell, for example B4, you can simply click on the cell B4 with your mouse. (Try it!)

We can repeat this to the lines 4 to 10 by copying our work. This is done in the same way we did with Statistics is Fun in column A. Note that the formula is copied. Click on the cell D6. What is the difference between the formula there and the formula you originally wrote in cell D4? The formula for the cell you are in can be seen at the top of the worksheet as shown on the right.



Sometimes, when copying, we don’t want a certain cell to change. For example, in cell C13, write 3.3. In cell E4, write “=D4/\$C\$13”. Here the « \$ » means that as we copy, the C and the 13 will remain fix. Copy this to the rest of the column, that is, E5 to E10.

Notice that Excel shows a lot of decimals. To adjust this, select the cells E4 to E10. Go to FORMAT - CELL - NUMBER and write 3 in decimals. Equivalently, you can use the buttons .

Sheet 1 should look like this:

	A	B	C	D	E	F
1	Quantitative Methods					
2						
3						
4	Statistics is Fun	1	5	6	1.818	
5	Statistics is Fun	2	10	12	3.636	
6	Statistics is Fun	3	15	18	5.455	
7	Statistics is Fun	4	20	24	7.273	
8	Statistics is Fun	5	25	30	9.091	
9	Statistics is Fun	6	30	36	10.909	
10	Statistics is Fun	7	35	42	12.727	
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
Part 2 – Importing Data and Making Tables

Got to Sheet 2. Erase the content of the cell B3. Write, in cell A1, “Population (in millions) of the world by Continents” in bold, font size 14. Name Sheet 2 “World Population”.

In cells A4:A11, enter the following.

Continent
Africa
Asia
Latin America and Caribbean
Europe
Northern America
Oceania
<i>Total</i>

Note: “Continent” is in bold and “Total” is in italics, centered in the cell.

Select the cells B3:C3. Click on the button  to merge and center the two cells. In Bold, write “Year”. In cell B4 write 1950 and in cell C4 2000. Both years should be in italics and centered. Also, in cell A13, write “Population in millions” in italics.

Importing Data



Open the document “Data – World Population” on my web site (<http://www.slc.qc.ca/mh/>). Select the cells B4:C9, COPY and PASTE in your document in the cells B5:C10.

Using Formulas

First, let us find the world population for the two given years by adding the columns. Go to cell B11. Click on the button Σ . Make sure that the range of cells is B5:B10. If not, write it, or select the cells you wish to add. Click OK. Excel will calculate the sum of the block of cells. Copy this formula to C11.

Next, let’s calculate the increase in population. In cell D4 write « Increase ». In cell D5, write a formula that will calculate the difference in population from 1950 to 2000. Do not calculate by hand, but, rather, let Excel do it. In column E, calculate the percentage increase. This is done by taking the difference just calculated and dividing by the population in 1950. To convert to a percentage, select the cell you wish to convert to a percentage and click on the % button.

Finishing the Table

Make appropriate lines using the  button, along with appropriate modifications so that your table looks like this. You can do a PRINT PREVIEW  to see if it looks exactly as shown.

Continent	Years		Increase	% Increase
	1950	2000		
Africa	221	794	573	259%
Asia	1399	3672	2273	162%
Latin America and Caribbean	167	519	352	211%
Europe	548	727	179	33%
Northern America	172	314	142	83%
Oceania	13	31	18	138%
<i>Total</i>	2520	6057	3537	140%