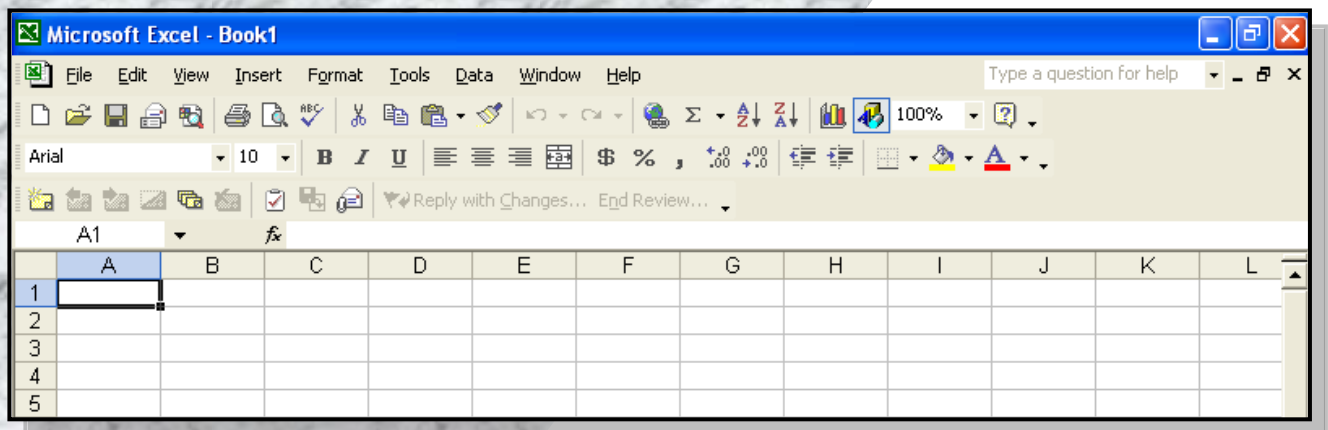


Beginning Spreadsheets with Microsoft **Excel Introduction**



Computer Training Center



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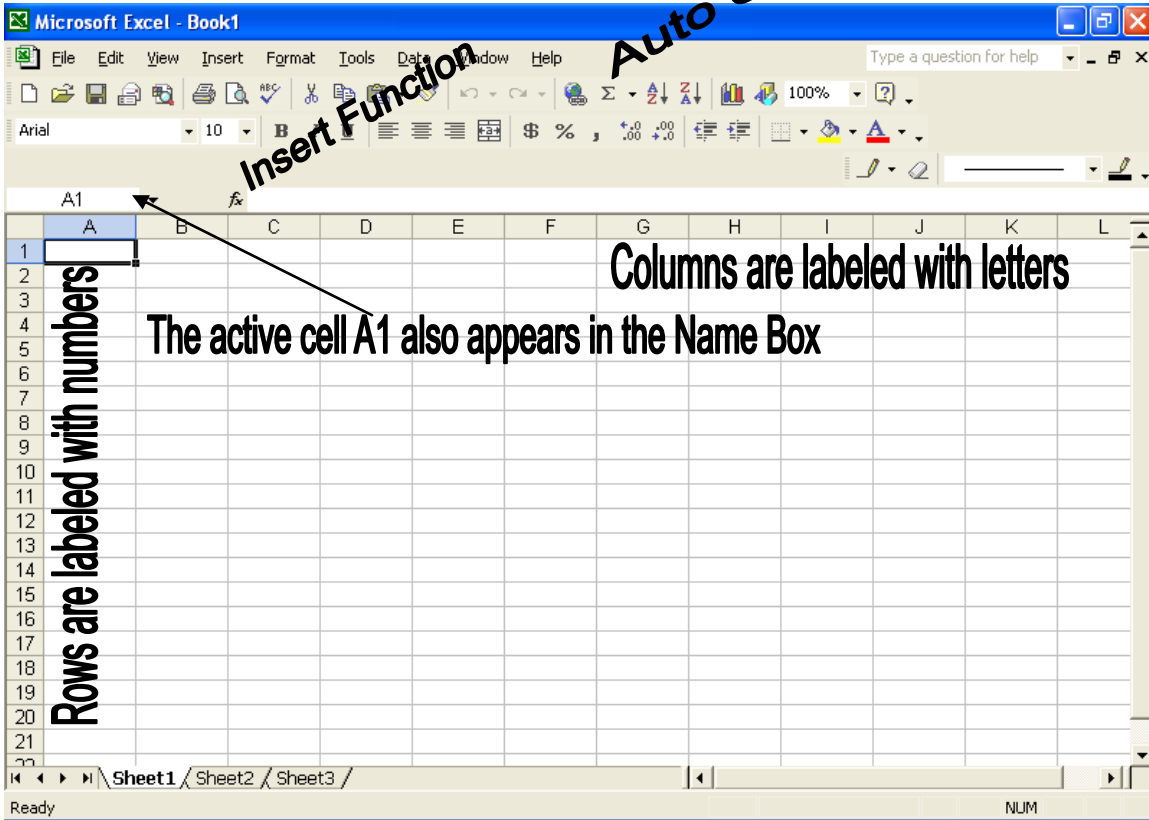
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Title Bar
Menu Bar
Standard Tool Bar
Format Bar
Border Tool Bar
Formula Bar

3 Worksheets
Status Bar

The primary purpose of a spreadsheet is to perform mathematical calculations. Although Excel can do many other things, its core strength is calculations.

Cells have names: Always *column letter* first, then, *row number*. For example the spreadsheet above starts at A1 and ends at L22.

The Formula Bar indicates the contents of the active cell.

Cells may contain numbers, text, or formulas. A formula always starts with an = .

The other formula symbols are: + addition - subtraction * multiplication / division ^ exponent

Simple addition looks like: =A1+B1 OR =SUM(A1:B1)
 A simple average looks like: =(A1+B1)/2 OR =AVERAGE(A1:B1)

Functions: The words SUM and AVERAGE are called functions. They are shortcuts to entering (or even knowing) the actual formula. To see a list of all the available functions, click on **Insert** in the Menu Bar. Click on **Function**. A **Paste Function** dialog box appears with all available functions or groups of functions. You can also click on the **fx** in the Formula Bar.

There is a mathematical order of precedence rule that requires us to calculate in the following order:

- ① Calculations in parentheses
- ② Exponents
- ③ Multiplication and Division
- ④ Addition and Subtraction

You can use a mnemonic to help you remember the order:

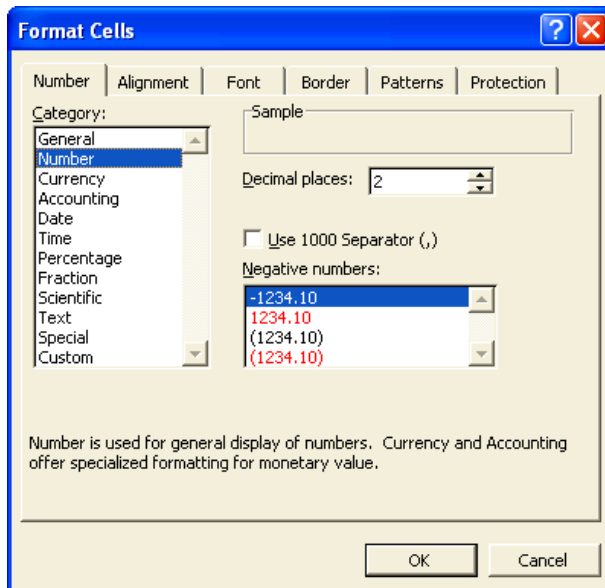
Please (*parentheses*) **excuse** (*exponents*) **my** (*multiplication*) **dear** (*division*) **Aunt** (*addition*) **Sally** (*subtraction*).

Example: **=3+4*5**. Is the answer 35 or 23

Since we have no parentheses and no exponents, we must multiply 4*5 first, then add 3. The answer is 23. Examples of formulas with answers:

=(3+4)*5	= 35	1+2+3/3	= 4
=3+(4*5)	= 23	(1+2+3)/3	= 2
=3+4*5	= 23		

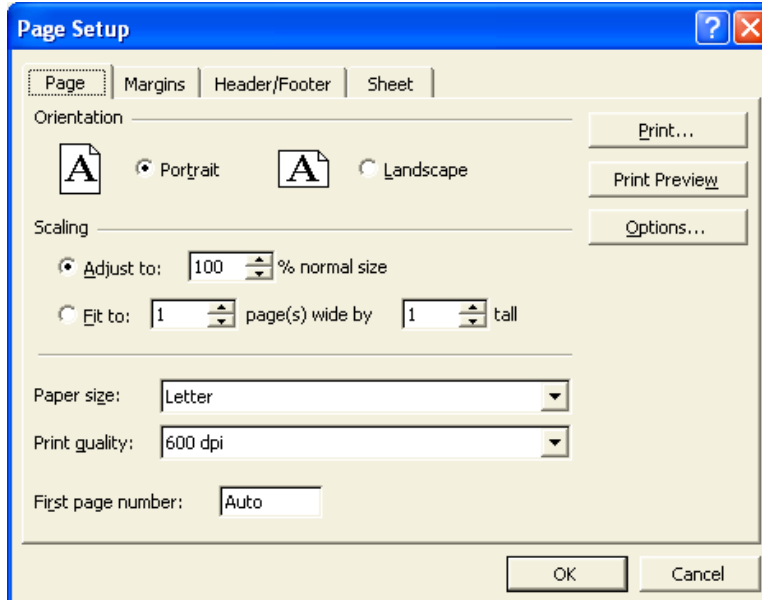
To make our numbers look appropriate, we need to format them. We can use the **Format Tool Bar** or, we can go to **Format** in the **Menu Bar**. **Click on Cells....**



The default **General** format under Number, aligns numbers on the right side of the cell and text on the left. In order to have decimal places or a 1000 separator, we need to choose the **Number** format and indicate how we want a number to display. To display currency, percentages, fractions, dates or time, choose the appropriate number format. If none of the pre-selected number formats are quite right, you can design your own under the **Custom** category.

Notice that there are many other cell format tabs across the top of the Format Cells dialog box. The most commonly used, other than Number, is **Border**.

To set up your page, Click on **File** in the **Menu Bar**. Click on **Page Setup**.

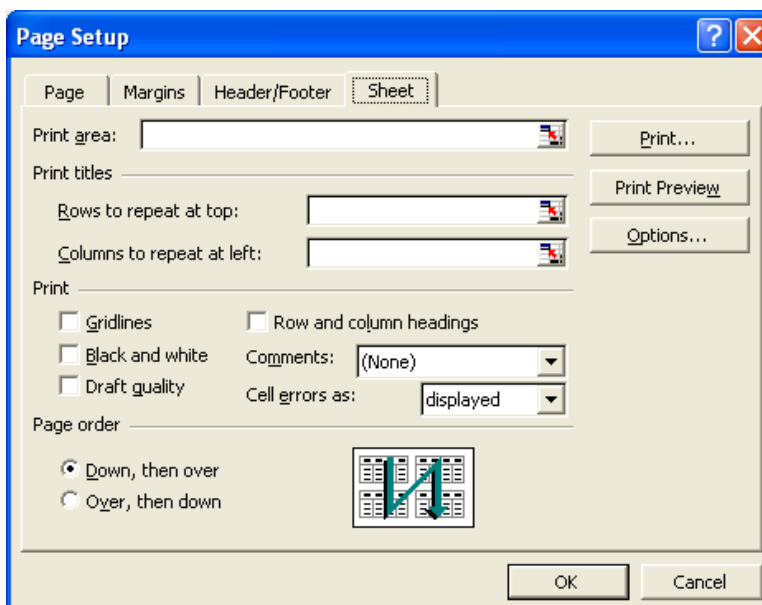


The **Page** tab allows you to change orientation and to “shrink to fit” the selected area of your spreadsheet.

The **Margin** tab allows you to change the margins. It also allows you to center the selected spreadsheet horizontally and/or vertically on the page.

The **Header/Footer** tab allows you to use standard headers or footers or design your own.

The **Sheet** tab has several useful functions. To get gridlines to print automatically, you must check mark the **Gridlines** option. If you like to view your spreadsheet in color, but you want to print in black and white, click on the **Black and White** check box.



Selecting areas of the spreadsheet allow you to make changes.

- To select a column, click on the column heading (e.g. **A**)
- To select a row, click on the row number (e.g. **1**)
- To select the entire spreadsheet, click on the plain gray square to the left of Column A and above Row 1.

Other ways to select cells include:

- Using shift + arrow keys.
- Using shift + mouse clicking or using control + mouse clicking.
- Dragging the mouse

Sample Excel worksheet with no formulas or formatting

	A	B	C	D	E
1		2004	2005	Difference	Average
2	January	140.23	150.7		
3	February	125.76	154.3		
4	March	100.98	125.75		
5	April	75.12	88.9		
6	May	50.1	60.22		
7	June	40.3	42.78		
8	July	48.98	125.45		
9	August	125.9	155.67		
10	September	56.7	110.4		
11	October	65.77	66.4		
12	November	85.6	86.3		
13	December	89	100		
14	Total				

1. Type *January* in cell **A2**. Use the **fill handle** to create the other months of the year. The fill handle looks like a small black square in the lower right corner of the active cell January. When you put the mouse pointer on the small black box, a **+** appears. Click and hold down the left mouse button and select the next 11 cells.
2. Enter the other row labels and column labels. Type some costs. All the other columns will be calculated with formulas.
3. **AutoSum** is a quick way to get totals. Click on the cell where you want the sum to appear like in **B14**. Then click on the AutoSum icon - Σ - in the standard toolbar. Adjust the dotted lines to include the cells you want in the sum or change the formula in the Formula Bar.
4. In the column labeled **Difference**, we want to subtract the 2001 Total from the 2002 Total. Type the formula in cell D2. The formula will look like **=C2-B2**. Copy this formula in all cells by using the fill handle.
5. In the column labeled **% Change**, we want to put in a formula to figure percent. The formula will look like **=D2/B2** in cell E2. To copy this formula in all cells, use the fill handle. The result will be a decimal. Select the E column and click on the **%** sign in the Format toolbar. Use the Increase / Decrease Decimal buttons in the Format toolbar to increase or decrease precision.
6. In cell F2, in the column labeled **Average**, click on the **fx** (Insert Function button) and choose Average. Modify the formula to look like **=AVERAGE(B2:C2)**. Copy this formula in all cells. Use the Increase / Decrease Decimal buttons on the Format toolbar to get the right level of precision.

Other ways to copy formulas include:

- Select the cells where you want a formula. Type or select the formula or function—it will appear in the first selected cell. Hold down the Ctrl key and press the Enter key.
- Click in the first cell where you want a formula. Type or select the formula or function. Press Enter. Click on the cell again. Click on Copy. Select the cells where you want the formula. Click on Paste.

Spreadsheet with formulas and formatting

Electricity Costs for My House

	<u>2001</u>	<u>2002</u>	<u>Difference</u>	<u>% Change</u>	<u>Average</u>
January	100.99	97.34	-3.65	-3.6%	99.17
February	122.88	115.43	-7.45	-6.1%	119.16
March	113.71	102.80	-10.91	-9.6%	108.26
April	98.90	99.00	0.10	0.1%	98.95
May	86.00	89.00	3.00	3.5%	87.50
June	83.40	76.50	-6.90	-8.3%	79.95
July	90.12	88.20	-1.92	-2.1%	89.16
August	100.75	90.00	-10.75	-10.7%	95.38
September	54.70	75.00	20.30	37.1%	64.85
October	60.80	71.50	10.70	17.6%	66.15
November	88.50	92.90	4.40	5.0%	90.70
December	110.35	99.64	-10.71	-9.7%	105.00
Total	\$1,111.10	\$1,097.31	-\$13.79	-1.2%	\$1,104.21