

Excel 2003: Basics

Learning guide

Excel terminology

What is a spreadsheet? What's a workbook?

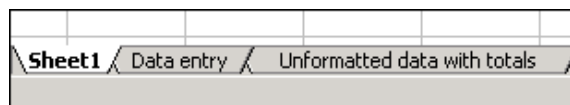
A **spreadsheet** is a grid of data divided into *numbered rows* and *lettered columns*. Each block in this grid is called a **cell**, and it can hold an individual piece of text or data. In Excel, a file/document is considered a spreadsheet, although it is commonly referred to as a **workbook**.

	A	B	C	D
1	Sales Comparison, in dollars			
2				
3	Agent	January	Febryary	March
4	Jack	1243	2241	2254
5	Alexis	3230	4000	3998.87
6	Max	2541.23	2456.66	2555.99
7	Samantha	4421.01	5000	5676.99
8				

What is a worksheet?

The **worksheet** is a *page* of data in your spreadsheet that is organized by the labeled tabs displayed at the bottom of the Excel window.

- Your spreadsheet can contain as many worksheets as you want. By default, however, all newly opened Excel spreadsheets have three worksheets.
- To view the contents of a worksheet, click on its tab.



Navigating around your spreadsheet

Finding the active cell

- Excel will place any new data in your spreadsheet's **active cell**.
- A thick dark border surrounds any active cell or range of cells.

	A	B	C
1			
2			
3			
4			

Changing the active cell

There are several ways to make a cell active.

- **Click** on a cell.
- Use the **tab key** to move the active cell over one cell to the right in that row.
- Press **Shift + Tab** to move the active cell left one cell in the current row.
- Press the **Enter** key to move the active cell down one cell in that column.
- Press **Shift + Enter** to move the active cell up one cell in the current column.
- Use the **arrow keys**.

Referring to a cell

Every cell is identified using a combination of a **letter** and a **number**. To name a cell:

- Name the **letter** of the cell's column
- Identify the **number** of the cell's row
 - *For example, in the image on this page, the active cell's reference is **B2** since the cell is in **column B** and **row 2**.*

Selecting multiple cells

To select multiple cells for use in a calculation, or to move the data in those cells to a new location, drag your mouse across those cells. *You'll have the most success if you drag your mouser from the top corner to the bottom corner of your block of cells.*

Creating a basic spreadsheet

Entering data

- Click and select the cell where you wish to enter in your data.
- Type the new data into the cell.

	A	B	C
1			
2		some day	
3			
4			

- Use the **tab** key (or another method – see p.2) to move the active cell to another part of your spreadsheet.

Editing existing data

- Click the cell you wish to edit and begin typing. *This will replace your old data with new data.*
- You can change existing data by double-clicking on the cell. *You will be able to edit this info as you would in a Word Document.*
 - To replace only part of the data, highlight the desired section and begin typing.
 - To delete only part of the data, highlight the appropriate section and hit either the *backspace* or *delete* keys.

	some dada	
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Cutting, copying, and pasting data.

- Select the cell or range of cells containing the data to be cut or copied. *The selected range will have a black border around it.*
 - **Cutting** your data will move it from its current cell to its new cell.
 - **Copying** the data will keep one copy in the current cell and another in its new location.

	A	B	C
1			
2		some data	
3		more data	
4		extra data	
5			

- To cut the data, click on the standard toolbar's **Cut** button at the top of the Excel Window.



- To copy the data, click on the standard toolbar's **Copy** button.



- Click in the destination cell for your data.
- Click on the standard toolbar's **Paste** button.



Tip: Cut, copy, and paste shortcuts

To simplify this process, use the following keyboard shortcuts.

- **Control-X:** Cut
- **Control-C:** Copy
- **Control-V:** Paste

*The cut, copy, and paste commands are also available from the **Edit** menu.*

*The **Enter** button on your keyboard can also be used to paste text.*

- Selected the text to be cut or copied.
- Hit the cut or copy buttons, or their shortcuts.
- Click in the destination cell.
- Type the **Enter** button on your keyboard.

Getting help in Excel

Excel's Help index is a good resource when you are trying to use an unfamiliar feature or starting a new project.

To seek help in Excel:

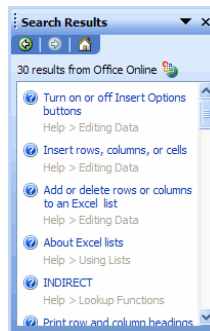
- In the upper right corner of the Excel window, locate the box labeled **Type a question for help**.



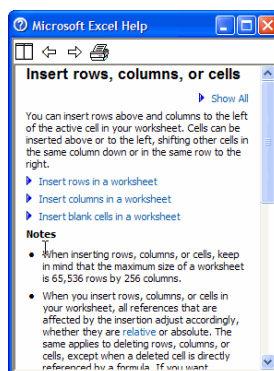
- In the box, enter a description of the task in Excel about which you'd like to learn.
- Press **enter** on your keyboard.



- Excel will search for Help topics that relate to the task you described. All relevant topics will be displayed in the task pane at the right side of the Excel window.



- Choose a topic that seems most relevant.
- Click on the name of the topic to display its contents.
- Excel will display a new window containing the text of the Help topic you selected.

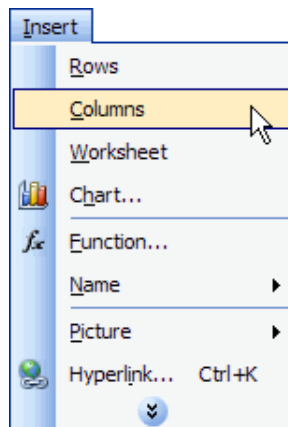


Formatting columns and rows

Sometimes you may think that your worksheet looks downright boring, or it doesn't cleanly display your data. In this situation, you can adjust your worksheet to make it look more presentable.

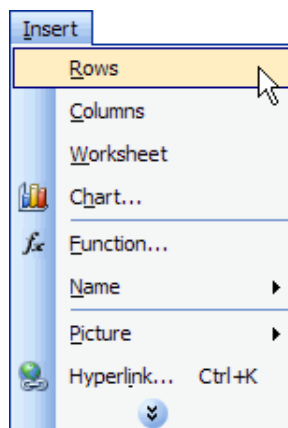
Inserting columns

- Click to select an active cell. *This active cell should be to the right of the location you wish to insert a new column.*
- From the **Insert** menu, select **Columns**.
- Excel will insert your new column to the **left of the active cell**.



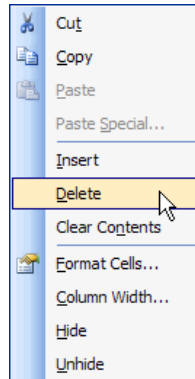
Inserting rows

- Click to select an active cell. *Be sure to select a cell below the location where you wish to insert the new row.*
- From the **Insert** menu, select **Rows**.
- Excel will insert your new row **above the active cell**.



Deleting columns and rows

- **Right-click** on the **letter at the top of the column** you wish to delete or on the **number at the left of the row** you want to delete.
- From the pop-up contextual menu, choose **Delete**.



- Excel will delete the column or row you selected and shift the rest of the data to fill the space that was formerly occupied.

Resizing columns

In many situations, a cell will be too wide or too narrow to properly display the data it contains. In these situations, you can resize the cell's column so that the data will be displayed correctly. To resize a column to a new width:

- Place your cursor on the **gridline** between the column to be resized and the column to the right of it.
*When the cursor is in position on the grid line you'll see a **special double-arrow** cursor indicating that you can now resize the column.*
- Drag the column gridline left or right to resize the column.
- Release the mouse when the column is at the width you want.

	C	D	
A			
B			
C			
	1		
	2		
	3		

Resizing rows

To resize a row to a new height:

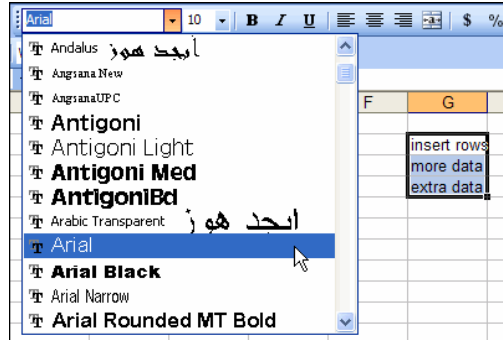
- Place your cursor on the **gridline** between the row to be resized and the one directly below it. *You will again see the special double arrow cursor indicating that you can resize the row.*
- Drag the gridline up or down to resize the row.
- Release the mouse when the row is the height you wish.

Formatting text inside cells

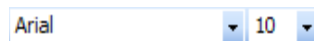
Excel provides many capabilities to format text and data within cells. These text formats allow you to transform a spreadsheet that is nearly unreadable to one that is attractive and persuasive.

Changing the font and size of your text

- Select the cell or range of cells you wish to reformat
- To change the font:
 - Click on the down-facing arrow next to the drop-down **font** list on the formatting toolbar.
 - Click on the **name** of the font you want to change your text to.



- To change the size of your text:
 - Click on the down-facing arrow next to the font size menu on the formatting toolbar.
 - Click the text size you want.



Adding bold, italic, and underlining formatting

- Select the cell or cell range you wish to format.
- Click on the formatting toolbar's **bold** or **italic** button to add text formatting.



bold



italic

Aligning text within a cell

- Select the cell or range of cells to receive the new text formatting.
- Click the formatting toolbar's **left**, **right**, or **center alignment** buttons to change the alignment of your text.



left alignment



center alignment

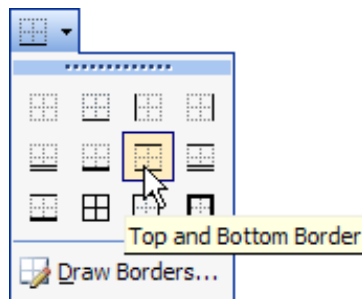


right alignment

Formatting borders and colors

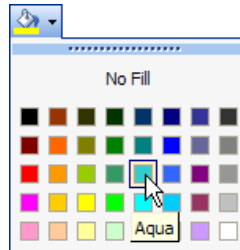
Applying borders

- Select the cell or range of cells to add a border to.
- Click on the down-facing arrow next to the formatting toolbar's **border** button.
- Select the border to add to the selected cell or cell range.



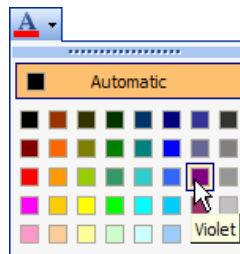
Applying a background color

- Select the cell or cell range you wish to add color to.
- Click on the down-facing arrow next to the formatting toolbar's **fill color** button.
- Select the background color you that you want.



Changing the color of your text

- Select the cell or range of cells to receive the new text color.
- Click on the down-facing arrow next to the formatting toolbar's **text color** button.
- Select the font color you want.



Tip: Applying an already selected border or color

- *On the border button, the border you last selected will be displayed next to the down facing arrow.*
- *On the text and background color buttons a colored bar at the bottom of the button will display the color you last selected.*



To apply an already-selected color or border:

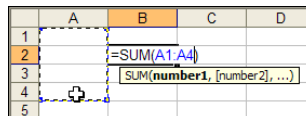
- *Select the cell or range or cells to receive the formatting.*
- *Click on the formatting toolbar button you want.*

Inserting a function

Calculating a sum

Sum, one of the most commonly used functions, will produce a sum of the values in the range of cells.

- Click on the cell into which you wish to enter your function.
- Type **=sum(**.
- Enter the reference to the range of cells you wish to sum, and then type **)**.
 - For example, if you want to find the sum of a range of cells beginning with cell **A1** and ending with cell **A4**:
 - Type **=sum(A1:A4)**.
 - The cells that you wish to sum will be enclosed in a colored border as you type your formula.



	A	B	C	D
1				
2		=SUM(A1:A4)		
3				
4				
5				

Tip: Sum function shortcut

- *Instead of typing the entire function in, type **=sum(**.*
- *Drag and select the range of cells you wish to sum. A blinking dashed border will be around the cell range.*
- *Type **)** to complete the function.*
- *Press the tab or return button to move to the next cell.*

Calculating a sum using the AutoSum tool

Excel's AutoSum tool allows you to quickly create sums without needing to type any function syntax. To calculate a sum:

- Click in the cell where you want to calculate your sum.
- Click on the standard toolbar's **AutoSum** button.



- Drag to select the range of cells to be summed.
- Press **return** to complete the calculation.

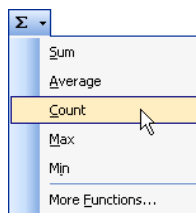
Calculating other results using the AutoSum tool

The AutoSum button also allows you to quickly calculate other kinds of results, using several common functions (each of which is a ready-to-insert mathematical formula). The table below summarizes the results you can create.

Function name	Result
Sum	The total value of a range of cells
Average	The average value of a range of cells
Count	Counts the number of cells in a range that contain a numeric value
Max	Finds the largest value in a range of cells
Min	Finds the smallest value in a cell range

To insert one of these functions:

- Click in the cell where you want to calculate your result.
- Click on the down-facing arrow to the right of the **AutoSum** button.
- From the drop-down menu that appears, select the name of the function you wish to insert.



- Drag to select the range of cells you wish to use in your calculation.
- Press **return** to calculate your result.

Constructing a formula

Guidelines for creating formulas

- All formulas begin with the = symbol.
- Excel uses the following symbols as mathematical operators.
 - * *multiplication*
 - / *division*
 - + *addition*
 - *subtraction*
- Excel calculates your formula:
 - from left to right.
 - starting with any *multiplication* and/or *division*,
 - followed by *addition* and/or *subtraction*.
- If you need to perform a calculation that doesn't follow this order, use parentheses to indicate which part of your formula should be calculated first.
 - For example, in the formula =(8-3)*4, Excel will perform the subtraction enclosed in parenthesis before the multiplication.*
- You can create formulas using numbers to produce a result that will not change.
 - The formula =3*8 produces the result 24*
- You can also create formulas using cell references so that the result that will change if the data in those cells changes.
 - The formula =A1+C1+B2 produces a result based upon the data in cells A1, C1, and B2.*

	A	B	C	D
1				
2				
3			=A1+C1+B2	
4				

A function example

- To calculate: $10x(5-2) - \frac{18}{9} =$
- Click in the cell into which you wish to enter your formula.
- Type =10*(5-2)-18/9.

	A	B	C
1			
2		=10*(5-2)-18/9	
3			
4			

- Press **return** or **tab** to complete the function.