

Introduction to Excel 2002

	A	B	C
1	Score 1	Score 2	Total
2	57	98	155
3			

	A	B	C
1	Score 1	Score 2	Total
2	57	98	=A2+B2
3			

	A	B	C
1	Score 1	Score 2	Total
2	57	98	=SUM(A2:B2)
3			



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Introduction

Excel is a spreadsheet application program. A spreadsheet is the computer equivalent of a paper ledger sheet. Like a ledger sheet, a spreadsheet consists of a grid made from columns and rows. But, a spreadsheet can be much larger than a ledger sheet – a spreadsheet can have up to 65,536 rows and 256 columns.

Microsoft uses the term worksheet to refer to a spreadsheet. A workbook is one or more spreadsheets.

When you start a new workbook, the workbook has three worksheets. Tabs at the bottom indicate the worksheets available. The tab in white is the worksheet currently being worked on.



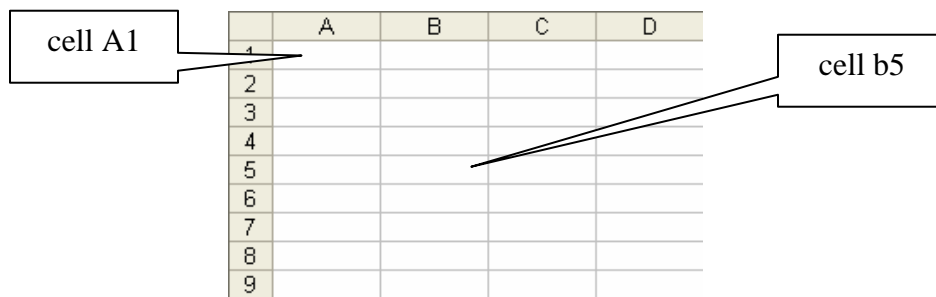
You can add, delete and rename worksheets. This workshop will only use one worksheet.


Worksheet

The work area of a worksheet is divided into rows and columns like a ledger sheet.

A **row** is referred to by a number, i.e. row 1, row 2, etc. A **column** is referred to by a letter, i.e. column a, column b, etc. You can use capital letters or small letters to refer to columns.

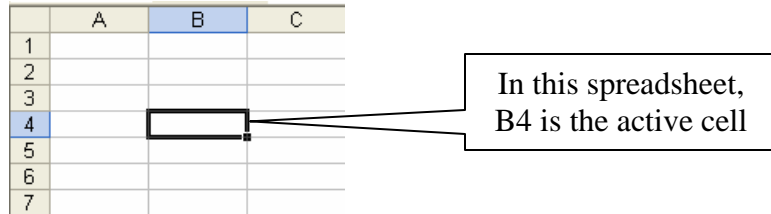
The intersection of a column and row is called a **cell**. Each cell is referred to by the column and row it's in.




Notice that when the mouse is placed in a cell, the mouse pointer looks like  .

Active Cell

You can only put information into an active cell. An active cell has a black box around it.




Note that the row label and column label are highlighted to make it easy for you to identify the cell that is active. When Excel starts, cell A1 is active. You can move the active cell indicator to another cell by:

Clicking in the cell you want	Move the mouse pointer  to the cell you want and click
ENTER key	Down one cell or to the start of the next row
TAB key	Right one cell
SHIFT + TAB keys	Left one cell
HOME key	First cell in current row
CTRL + HOME keys	Cell A1
CTRL + END keys	Cell at intersection of last row with data <u>and</u> last column with data
4 Arrow keys	One cell in the direction indicated by the arrow

NOTE: When you point to an active cell, the mouse pointer may also be:

A black cross when pointing to the lower right corner of the active cell

A 4 arrowed black cross when pointing to the edges of the active cell

These mouse pointers allow you to do other processing, but, at this point, be sure the mouse pointer is  .

Each cell can contain one of the following types of data:

- Text
the text can contain numbers – for example: “account 8721” is considered text
- Numbers
- Date or time
- Formulas - must begin with an equal sign (=)
formulas are equations that perform calculations on values in your worksheet –
for example to add 8 and 3: “= 8 + 3”

+	Addition
-	Subtraction
*	Multiplication
/	Division
^	Exponential

If your formula has a variety of operations, Excel performs them in the following order:

()	Expressions in parentheses
^	Exponential
* or /	Multiplication or Division
+ or -	Addition or Subtraction

To ensure that calculations are performed in the order you want, put them in parentheses. For example: if you want to add 1 and 4 and multiply by 5 to get 25

= 1 + 4 * 5 will result in 21
because Excel does multiplication before addition and multiplies 4 and 5
and then adds 1

= (1 + 4) * 5 will give you the correct result - 25
because Excel first does the calculation in parentheses and adds 1 and 4 to
get 5 and then multiplies by 5

NOTE: When entering formulas in Excel, it is best to refer to cells rather than entering a number in the formula. This is the power of Excel because as numbers change over the course of time, you won't have to modify the formulas!

Selection

You can select more than one cell at a time. Click in the first cell and drag. In the sample, cells a1 through c6 have been selected. This is referred to as a **range**. To refer to a range, use a semicolon between the 1st cell and the last cell. For example, a1:c6, e9:e15.

	A	B	C	D
1				
2				
3				
4				
5				
6				
7				
8				

Range A1:C6 is selected

You can also select non-adjacent cells by holding down the CTRL key as you click.

	A	B	C	D	E
1					
2					
3					
4					
5					
6					
7					

In this sample, cells A1, B3, C1, D2, and A5 are selected

Editing

- Make the cell active, type the appropriate information and press the ENTER key.
- If you've starting typing and want to return to the original cell contents, press the ESC key.
- If you just want to clear the cell contents, press the DELETE key.
- If the cell contents just need a small change, double click in the cell and you'll see an insertion point just like you have in Word. Edit like you do in Word - use the 4 Arrow keys to move the insertion point, use the BACKSPACE and DELETE keys to remove characters.

Formulas

1. Type the = sign.
2. type the formula

Notice that when you type a cell reference, the cell name is changed to a color

and the box around the cell is the same color.

Instead of typing a cell number, you can click in the appropriate cell and then add the operation sign.

After typing a formula, if the cell displays `#VALUE!` then there is an error in the formula. Double click in the cell and correct the formula.

NOTE: If you make active a cell that has a formula, the results of the formula are displayed in the cell. You see the actual formula:

- double-click in the cell
or
- look at the formula bar:



The contents of the active cell are displayed in the formula bar on the right side.

NOTE: If you want to display all of the formulas in the cells, press CTRL+` - this acts like a toggle switch – press CTRL+` again and the formula results are displayed in the cells. You may want to do this to print the worksheet with the formulas.

Functions

Functions are predefined formulas. A commonly used procedure is called AutoSum that uses the SUM function to add all numbers in a series of rows or columns.

For example, there are numbers in cells A1 through A8. If you want to add these numbers and put the result in cell A9:

- Click in cell A9
- Click the AutoSum button Σ on the standard toolbar
- A marquee line will be displayed around the cells that Excel assumes you want to add
- If the correct cell are selected, press the ENTER key
- If the incorrect cells are selected, modify the cells in the function

	A	B	C
1	1		
2	2		
3	3		
4	4		
5	5		
6	6		
7	7		
8	8		
9	=SUM(A1:A8)		
10	SUM(number1, [number2], ...)		
11			

Insert New Rows and Columns

1. **Insert a single row** - Click a cell in the row immediately below where you want the new row. For example, to insert a new row above row 5, click a cell in row 5.

Insert multiple rows - Select rows immediately below where you want the new rows. Select the same number of rows as you want to insert.

Insert a single column - Click a cell in the column immediately to the right of where you want to insert the new column. For example, to insert a new column to the left of column B, click a cell in column B.

Insert multiple columns - Select columns immediately to the right of where you want to insert the new columns. Select the same number of columns as you want to insert.

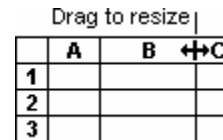
2. Click INSERT > ROWS or INSERT > COLUMNS on the menubar.

Sizing Rows and Columns

COLUMNS:

If you see ##### in a cell, it indicates that there is not enough room in the cell to display the actual data. Adjust the size of the column the cell is in.

- Drag the boundary on the right side of the column heading until the column is the width you want.

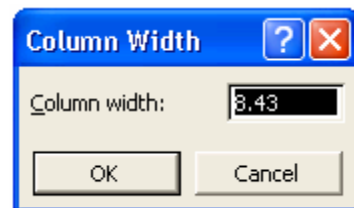


- Double-click the boundary to the right of the column heading to automatically fit to the contents of the cells in the column

- To automatically fit all the columns on the worksheet, click the **Select All** button, and then double-click a boundary to the right of one of the column headings.



- To specify a width, click in the column, click
FORMAT > COLUMN > WIDTH and enter a number.



ROWS:

You can adjust the size of rows like you adjust column sizes. But, when you click on the row boundary, click on the bottom of the row heading.

Formatting

Similar to Word, the following are on the formatting toolbar:

font

font size

bold,

italic

underline

alignment - -left, center and right

left indent

right indent

borders

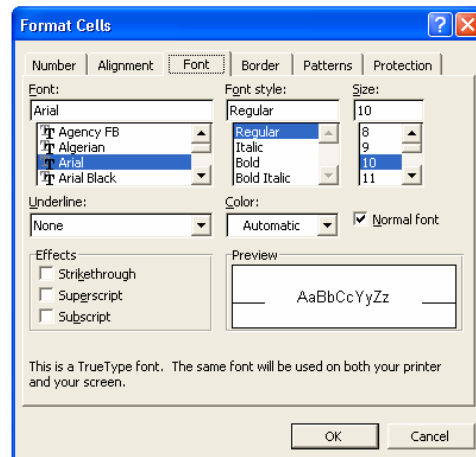
fill colors (Similar to highlighting, fill color will paint the cell background)

font color



Select the appropriate cell(s), and click the formatting toolbar.

There is also a dialog box, similar to Word. Click **FORMAT > CELLS > FONT** on the menubar to display this dialog box:

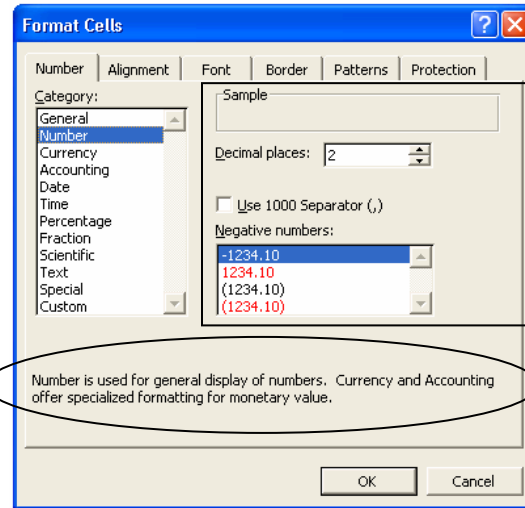


But, in EXCEL, there are additional formatting options.

Type of Data




You can define the type of data in a cell. Click **FORMAT > CELLS > NUMBER** on the menubar to display this dialog box:

Click on a category. There will be a brief description of this category on the bottom of the dialog box.





Each category will also display options unique to that category. The sample box will display the application of the chosen options if the active cell contains data.

The Accounting and Percentage categories are also available on the formatting toolbar:

-  Accounting with 2 decimal places and the \$ sign
-  Percentage with 0 decimal places
-  Accounting with 2 decimal places but no sign


If the cell has a number, you can also increase or decrease decimal places using the following on the formatting toolbar:

-  increase the number of decimal places
-  decrease the number of decimal places

Merge and Center

To place a heading in a row, you may want to center the words over many cells. You can do this by merging multiple cells into one cell and centering the heading in the large, merged field.

To do this, select the cells you want to merge and click the 'Merge and Center' button

 on the formatting toolbar. To undo this, click in this button again.

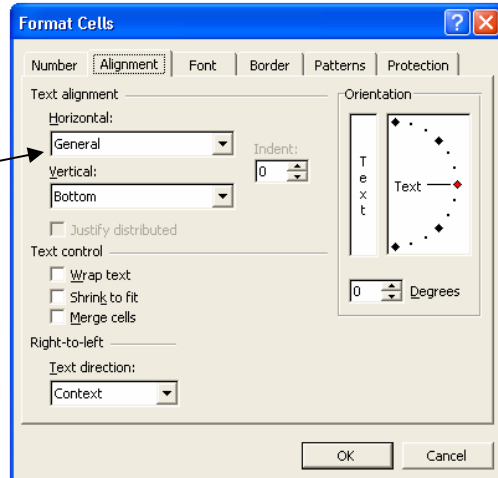
Alignment

You can set the alignment within the active cell. Click **FORMAT > CELLS > ALIGNMENT** on the menubar to display this dialog box:

Horizontal (Left to Right):

By default, Excel aligns text to the left and numbers to the right. The drop-down list will display the following options:

- general
- left (indent) – you can add an indent
- center
- right (indent) – you can add an indent
- fill – duplicate the contents of the cell to fit the cell width – does not alter actual contents, only view
- justify
- center across selection – center across selected cells – does not merge cells
- distributed (indent) – words arranged equal distances from each other – you can add indent



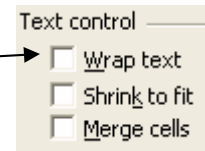
Vertical (Top to Bottom):

The drop-down list will display the following options:

- top
- center
- bottom
- justify
- distributed

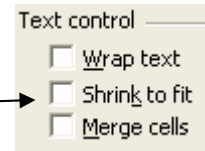
Wrap Text

Wraps text into multiple lines in a cell. The number of wrapped lines is dependent on the width of the column and the length of the cell contents.



Shrink To Fit

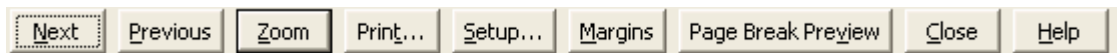
Reduces the apparent size of font characters so that all data in a selected cell fits within the column. The character size is adjusted automatically if you change the column width. The applied size is not changed.

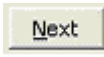

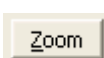
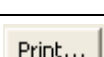
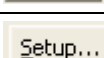
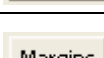
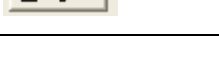
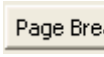




Print Preview

You may find that you use print preview frequently in Excel to verify that your columns fit on one page. Often, you will decide to change the page orientation from portrait to landscape.

Print Preview has the following toolbar:



	Displays the next page to be printed.
	Displays the previous page to be printed.
	Switches between a full-page view of a sheet and a magnified view. The Zoom feature does not affect printing size.
	Same as File > Print.
	Same as File > Page Setup.
	Displays or hides margin handles that you can drag to adjust page margins, header and footer margins, and column widths.
	Switches to page break preview, in which you can adjust the page breaks on the active worksheet. You can also resize the print area and edit the worksheet.
	Closes the print preview window and returns to the previous view of the active worksheet.
	Opens the Microsoft Excel Help window.

If your columns exceed one page, you can click on  to go to File > Page Setup and change the orientation to Landscape.

When you return to the normal view of your worksheet after print preview, you'll notice black dashed lines that indicate the edges of a print page.