

MICROSOFT EXCEL, PART I

The Basics of Creating a Spreadsheet

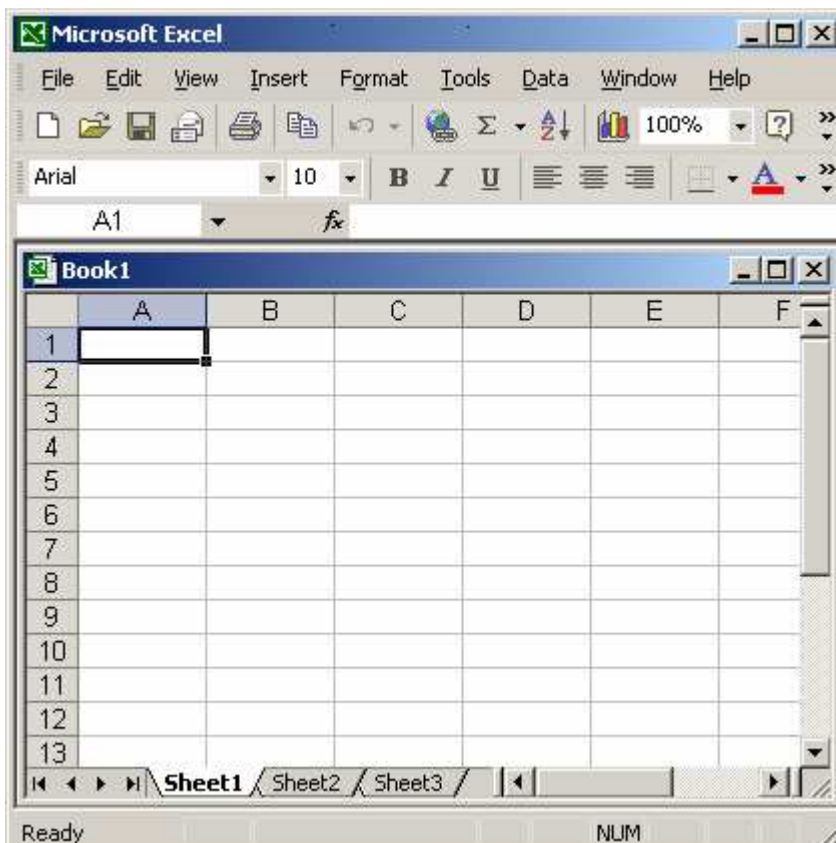
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INTRODUCTION

How to Run Excel

Excel can be used for many purposes ranging from data management to advanced mathematical calculations. The program can contain a wide spectrum of information on both a small or large scale. To begin the Excel program go to **Start > Programs > Microsoft Office > Microsoft Office Excel**. The program will open a blank workbook with three worksheets. To open an existing document, go to **File > Open** or use the folder icon on the toolbar. To develop your new worksheet, start entering data into the appropriate cells



NAVIGATION TERMS

Menu Bar
Standard Toolbar
Formatting Toolbar
Formula Bar

A: Column Heading
1: Row Heading
A1: Cell
Gridlines

Scroll Bar

Navigation Buttons
Worksheets
Status Bar

ENTERING DATA

How to Enter Information

There are several ways to enter data:







1. Point cursor into a cell and type.
2. Point cursor into the formula bar and type.
3. Use AutoFill and text recognition features.
4. Use form controls (i.e. check box, pull down menu).

Excel recognizes text, numbers and dates as well as formulas and functions.

- *Text*
Any entry containing non-numeric characters, such as names, addresses, etc will be aligned to the left within the cell. Place quotation marks around text if used within a formula or function.
- *Numbers and Dates*
Dates receive a default format of Month-00, aligned to the right. (Ctrl-; puts in current date...Ctrl-Shift-; inserts current time.)
- *Formulas*
Formulas and functions begin with an = sign. The value of the formula is computed and displayed within the selected cell. Default alignment depends upon the formula.

Copying Series Content with AutoFill

Copy series of text by using the AutoFill feature. Place the cursor in the right bottom corner of the cell until the fill handle appears (see table below), then click and drag the information into the chosen cells. Excel also recognizes repeated text. If you have already entered something, Excel should automatically fill in the remaining letters and/or numbers.

 Arrow	 Horizontal Bar	 Width/Height	 Selection	 Split Window	 Fill Handle
Appears in Menu Bar, Scroll Bar, Title Bar, Size Box, Cell Border & Background	Appears in the Formula Bar and in Text Boxes	Appears in the Column & Row Headings Directly on Divisions	Appears in the Worksheet, Row & Column Headings	Appears on the Vertical and Horizontal Split Bars	Appears in the bottom right corner of cell when filling or range or creating a series

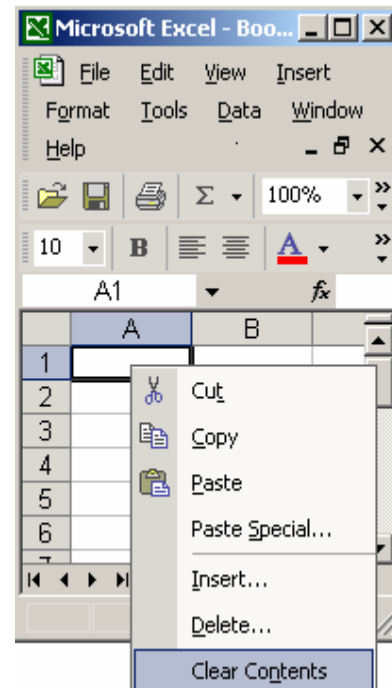
Form Controls

Point to **View > Toolbars > Forms**. The form toolbar appears. Click on a control (like check box) and click where it should be located. To edit text, right click and choose **Edit Text**.

Editing Cell Content

Editing occurs in the formula bar or the cell itself.

- *Clearing Content*
If you need to clear the cell, go to **Edit > Clear > Contents** or right click on your mouse and choose Clear Contents.
- *Moving Content*
If you need to move the cell contents choose **Edit > Cut** or **Edit > Copy** and then select the cell where the information should appear and choose **Edit > Paste**. Use the **Edit > Delete** function to permanently remove the cell.
- *Transposing*
To move data you have in column format to row format or vice versa use copy and paste special. Highlight the data to be transposed, go to **Edit > Copy** (Edit > Cut does not work in this situation), select desired destination and choose **Edit > Paste Special**. Click **Transpose**. Click **OK**.

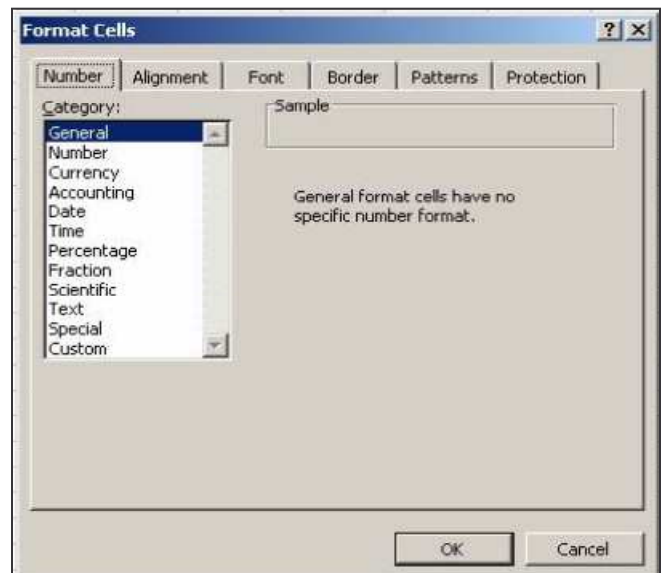


FORMATTING WORKSHEETS

Cell Format

The Format Cell menu has several options for altering the content and style of the worksheet. Use this menu to change border shading, align text and format number sequence. The menu also offers options of pattern/color selection and worksheet protection.

You can change the date format by going to **Format > Cells > Number > Date**. To make your choice become the default, highlight the entire worksheet by clicking on the gray intersection of A1. Go to Format Cells and then select one of the formats with an asterisk (*)—these are the only ones which can be applied as the default.



Row and Column Format

To quickly adjust the size of rows and columns, you can go to **Format > Row** or **Format > Column** and choose **AutoFit**.

- You can also change the width/height by using your mouse. To adjust a column, place the mouse on the title bar at the right side of the particular cell. Once the two arrows appear, click on the left mouse button and move the column to the desirable width (see figure 1). The same procedure applies for row adjustment.
- To apply the default width, choose Standard Width from the same menu. You can also hide rows and columns by following the same procedure, just choose Hide or Unhide.

Conditional Format

Use **Format > Conditional Formatting** to input a condition that should be maintained within the chosen cell depending on its content.

Macros

Use macros to record a series of repeated or complex steps within a worksheet. If you repeatedly enter strings of text such as day, month, year or use the same function to calculate the same cells or columns then macros will ease the burden of woeful, repetitious data entry. It's essential to start recording in a fresh, new workbook, so even if you have the information already entered, you're going to have to do it one more time.

Select the cell where you want the macro to take place (or where you want it to begin recording) Go to **Tools > Macro > Record New Macro**. Assign it a name: something specific without spaces, use an underscore instead. Give the macro a shortcut key, if desired.

Next, choose the storage place:

- 'This Workbook' places the macro in the active worksheet.
- 'New Workbook' creates a new one where the macro will be stored.
- 'Personal Macro Workbook' serves as a common storage location for macros to be used with other workbooks. It loads as a hidden workbook whenever Excel is run.

Begin typing text, dates, functions, etc. When finished, go to **Tools > Macro > Stop Recording**. When you want to run the macro, open your worksheet, select the beginning cell, then use the shortcut key you created or go to your Macro list (Tools > Macro)

FORMULAS AND FUNCTIONS

Calculating Data with Formulas

Formulas must begin with an equal sign followed by a sequence of values, cell references, names, and mathematical or text operators that form the proper expression.

ARITHMETIC OPERATIONS

- Addition +
- Subtraction -
- Multiplication *
- Division /

- *Entering Formulas*

- Select the cell where you want to enter a formula.
- Type an equal sign to activate the formula
- Type or select the first cell or cell range to be included
- Type in the operation to be used
- Select the second cell or cell range
- Press the RETURN key to complete the process

- *Relative and Absolute Cell References*

When you cut, copy and then paste cells containing formulas, Excel automatically adjusts all relative cell references. In order to make the formula continually apply to the cells you initially entered, make the formula absolute by placing a dollar sign in front of both the cell and row reference.

Relative Formula
=C1 + C2

Absolute Formula
=\$C\$1 + \$C\$2

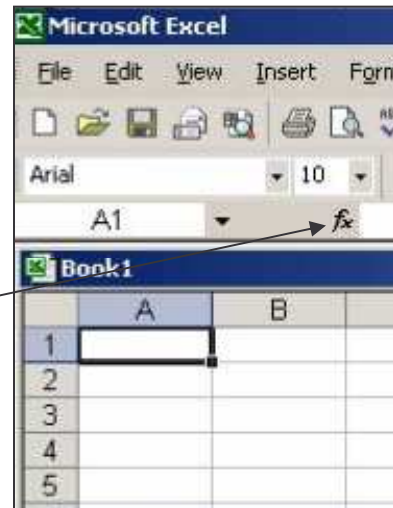
Calculating Data with Functions

Functions are pre-defined, structured formulas that calculate a specific result: a sum, an average, the amount of a monthly loan payment, or the geometric mean of a group of numbers.

Each function has a specific order, or syntax, that must be used for the function to work properly. Excel has a function wizard with a button on the formula bar which assists you in using the built-in functions.

- *Finding Functions*

By clicking on the fx button you can retrieve a function one of three ways: type in a description of what you need to do, select a category from the pull down menu or select the particular function from the alphabetical list.



- *Entering Functions*

- Select the cell where you want to enter the function.
- Go the fx button and select the function OR type it in beginning with the equal sign. There is also a quick list of functions under the AutoSum button.
- Type or select with your mouse the cell range to be included.
- Press the RETURN key to complete the process

SAVING AND PRINTING WORKSHEETS

Saving

To save a workbook, use the Save icon on the toolbar or go to **File > Save As** and give the document a name.

- *Saving as a Webpage*
You can save the workbook as a web page for easy public viewing under **File > Save as webpage**.
- *Protecting Worksheet and Workspace*
If several people work on a worksheet or workbook, you can protect the structure to avoid changes that may significantly alter your data. Go to **Tools > Protection**.

Printing

If you are ready to print, go to **File > Print** or use the printer icon on the standard toolbar.

- *Print Preview*
You can view the worksheet by going to **File > Print Preview**. Within the preview setting, you can change the page breaks, setup (landscape v. portrait), as well as margins. You can either print the document from there by pressing the print button or return to the editing screen by pressing 'close.'
- *Printing Gridlines, Column/Row Headings and Column/Row Labels*
To show the worksheet's gridlines as well as the row and column headings, go to **File > Page Setup > Sheet** and select the preferred option. To print your column labels, copy and paste the range into the 'Rows to repeat at top' box.