

## Excel Spreadsheet Basics

Excel is a spreadsheet application that provides a variety of analytical tools that allow you to perform both simple and complex calculations, manage and filter lists of data, create and maintain budgets, link to other spreadsheets, databases, or Word files, use built-in functions for data calculations and analysis and allow you to easily create graphs or charts that are linked to the workbook data.

### Opening an Excel Workbook

When you open Excel you will be in a new workbook file. Multiple files may be open at any given time in Excel.

**Worksheet:** is the area that is divided into columns and rows and is where you will create your spreadsheet. Each worksheet consists of 256 columns and 65,536 rows.

**Workbook:** a collection of individual sheets. Sheets can help organize your work. For example, one workbook may contain many related sheets. The default workbook opens with 3 sheets named Sheet 1 through Sheet 3. You may have up to 256 total sheets, if needed.

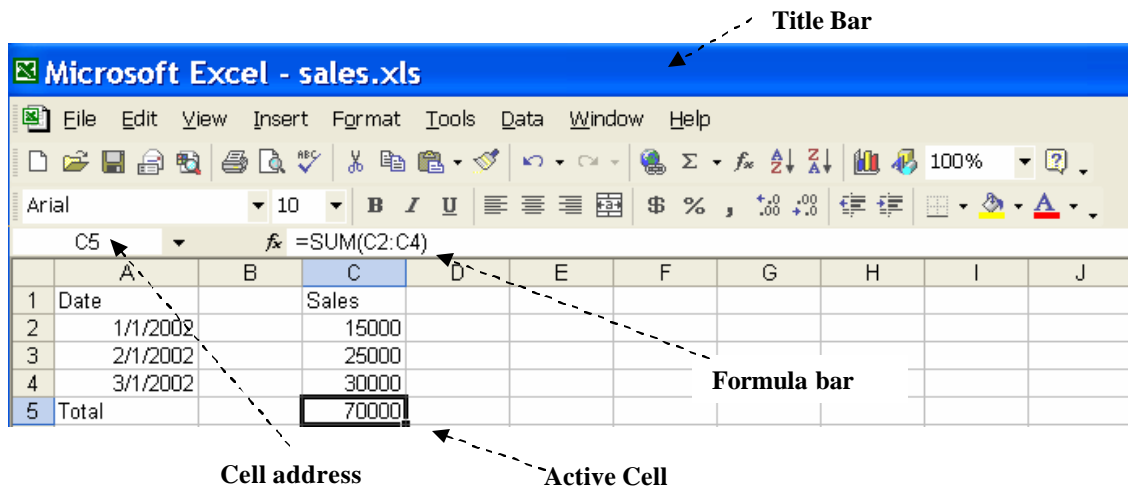
**Cell:** The rectangular area at the intersection of a row and column. Each cell may be formatted individually. A cell is referenced by its column letter followed by its row number (e.g. A3) and can hold data in the form of numbers, text, or formulas.

**Active Cell:** is the current cell and is marked by a heavy black box in the worksheet. Anything you type will be entered into the currently active cell. If a cell is selected, any formatting changes will be applied to that cell only.

**Range:** is a block of cells that are selected. Sometimes ranges are used in formulas such as AVERAGE(A3:A20). [This would find the average of all cells including and between A3 and A20.] Excel uses a colon to denote a range (example: A3:C10). The first cell listed is the top left corner of the block and the second cell is the lower right.

### Title Bar

The top horizontal bar that has the words "Microsoft Excel" in it and the name of the current workbook (file). You can have multiple workbooks open at once.



## Toolbars

Toolbars contain buttons and drop-down menus to allow quick access to common functions. Any Excel toolbar may be customized or you may create your own personalized toolbar from scratch. If you wish to see both the **Standard** and **Formatting** toolbars displayed in the entirety as separate bars, click on **View, Toolbars, Customize** and click on the **Options** tab.

**Formula Bar** E6 ✖ ✔ = =A1+B1

The **Formula Bar** is located directly below the toolbars and above the worksheet. This is where you can enter text, labels, numbers, and formulas. To the left of the formula bar is the **Name Box**. The **Name Box** displays the name of the active cell or selected range and can be used to name a cell or as a shortcut to access a named range.

**Data Entry:** ✖ ✔ fx

- **To enter data:** click once in cell. This makes that cell active and you can now enter data.
- **To edit a cell's contents:** Double click in a cell and edit the content's or click in the formula bar and edit from there.
- **Completing an edit or entry:** When entering or editing data, be sure to complete the entry by exiting the cell or clicking on the green check mark on the formula bar.
- **Canceling an edit or entry:** To cancel an edit or entry, press **Esc** on the keyboard or click the red X on the formula bar.
- **Deleting a Cell's Contents:** Click on the cell and press the **Del** key.

## Excel Icons

	A	B
1	\$ 134,234.00	\$ 234,234.00
2	\$ 57,892.00	\$ 12,112.00

A Hollow Plus sign indicates selection of a cell or range of cells.

	A	B
1	134234	\$ 234,234.00
2	\$ 57,892.00	\$ 12,112.00

A single flashing line indicates you are in editing mode. Any characters you type will be entered into the cell.

	A	B
1	\$ 134,234.00	\$ 234,234.00
2	\$ 57,892.00	\$ 12,112.00

A plus sign in the lower right hand corner indicates Autofill. Dragging this "+" sign downward or to the right, will "autofill" all adjacent cells. [An explanation of "Autofill" appears later in the handout.]

	A	B
1	\$ 134,234.00	\$ 234,234.00
2	\$ 57,892.00	\$ 12,112.00

A cross-hair indicates you will move the cell if you hold the left mouse button down.

	A	B
→	\$ 134,234.00	\$ 234,234.00
2	\$ 57,892.00	\$ 12,112.00

Clicking with a solid arrow in a row header selects the entire row.

	A ↓	B
1	\$ 134,234.00	\$ 234,234.00
2	\$ 57,892.00	\$ 12,112.00

Clicking with a solid arrow in a column header selects the entire column.

## Keyboard Navigation Tips:

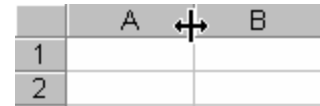
<b>Arrow</b>	Moves cursor one cell at a time in the direction of the arrow.
<b>Home</b>	Moves active cell to column A of the current row.
<b>Enter</b>	Complete a cell entry and select the cell below.
<b>Esc</b>	Cancel a cell edit or entry.
<b>Tab</b>	Complete a cell entry and select the next cell to the right.
<b>Shift-Tab</b>	Complete a cell entry and select the previous cell to the left.
<b>Ctrl-Home</b>	Moves active cell to the first cell in the worksheet.
<b>Ctrl-End</b>	Moves cursor to the last cell containing data in the sheet.
<b>PgUp; PgDn</b>	Moves the cursor up or down one screen.
<b>Ctrl-Arrow</b>	Moves the active cell in the direction of the arrow until the edge of a block of data is reached.
<b>Ctrl-G</b>	Goes directly to a cell in the current sheet, another sheet, or another open workbook. For example, [Part1.xls]Sheet2!A26 would place the active cell in a Cell A26, of Sheet 2, in an Excel file named Part1.
<b>Ctrl-F6</b>	Switches from one open workbook file to another.
<b>Ctrl-F</b>	Searches the sheet for a specific value, text entry, or item in a formula; also accessible from <b>Find</b> in the <b>Edit</b> menu. [Note: <b>Shift-F4</b> will continue the search even if the Find box is closed.]

## What can I enter into a cell??

- 1) **Text or Labels:** These are usually alphabetic characters. Any text entered into a cell will be left-aligned by default.
- 2) **Values:** A value would consist of numeric characters. By default, values are right-aligned in a cell. Values may be formatted to display commas, \$, & or other characters. These formatting characters should not be typed into the cell, but should be added by selecting the cell(s) and applying the desired format.
- 3) **Formulas:** A cell may contain a formula. A formula is an expression used to calculate data on a worksheet.

## Sizing Columns and Rows

To size a column or row, position the mouse pointer on the border between columns. When you get the double-headed arrow, drag the border of the cell to the desired position.



**Size to Fit:** You can also use the double-headed arrow to adjust a column automatically to the widest value by double-clicking on the separator between header columns or rows.

## Inserting/Deleting Row(s) or Column(s)

To insert a row or column, select the same number of rows or columns you wish to insert. Right-click on the selection and choose **Insert**. Columns are inserted to the left of the selection and rows are inserted above the selection.

To delete a row(s) or column(s), select the row/column to delete, right-click on the selection and choose **Delete**.

## Autocomplete and Pick from List

With Autocomplete you can type a few letters or digits of a cell entry and Excel will automatically scan other values in the columns for a similar entry. If it finds one, it will try to complete the entry for you. You can turn this feature off by choosing **Tools, Options, Edit** and click in the **Enable Autocomplete for Cell Values** checkbox.

**Pick from List** is similar. When you enter a value in a cell and want to see which values have already been entered, right-click on the cell and choose **Pick from List**.

### Creating Formulas

A formula is an equation that performs calculations using worksheet data. Formulas use cell addresses to perform calculations, rather than actual values. This is what enables a formula to automatically update whenever the data within a cell is changed.

To create a formula:

- 1) Select the cell in which you want to enter the formula.
- 2) Type an equal sign (=) to activate the formula bar.
- 3) Type the formula which may include cell addresses, arithmetic operators and numeric values.
- 4) Press Enter when finished.

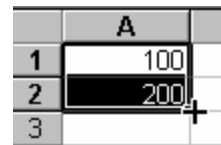
Examples: =g13\*.05      =sum(b1:b24)      =A3-B7      =(a1+b1)/c3      =436+1231+333+a2

Valid arithmetic operators for use in a formula are + - / \* % ^

### AutoFill

Autofill is a tool that will fill in a series of data based on one or more cells.

- 1) To use Autofill, enter a date, day of the week, formula, etc. into a cell.
- 2) Locate the Autofill symbol at the lower right corner of the cell and drag through columns or rows to fill in data.
- 3) If you are using numbers, you will need to complete 2 cells before using Autofill so that Excel can detect the numeric sequence you wish to use.



	A
1	100
2	200
3	

### Saving a File



To save a file, click on the Save button. If this is the first time you have saved a file, you will be prompted to provide a location and name under which to store the file. Excel will automatically add a .XLS extension to any file you save. All worksheets in a workbook are saved in the same file.

After the initial save, you can quickly save a file by clicking on the Save button. This will replace the previously saved file with a new copy.

### Saving a Workspace

You can open a group of workbooks in one step if you first save them as a workspace file (\*.xlw). Workspace files save the open workbooks, including their locations, window sizes, arrangement, and position on the screen. The size and position of the application window is saved every time you quit Microsoft Excel.

Once you have saved a workspace file, you can open the workspace and all of your workbooks will be displayed in the position you had them.