

Excel 2016

Exploring Excel

Microsoft Excel is an electronic worksheet program that allows you to work with numbers and data much more efficiently than the pen and paper method. Excel is used in virtually all industries and many households for a variety of tasks such as:

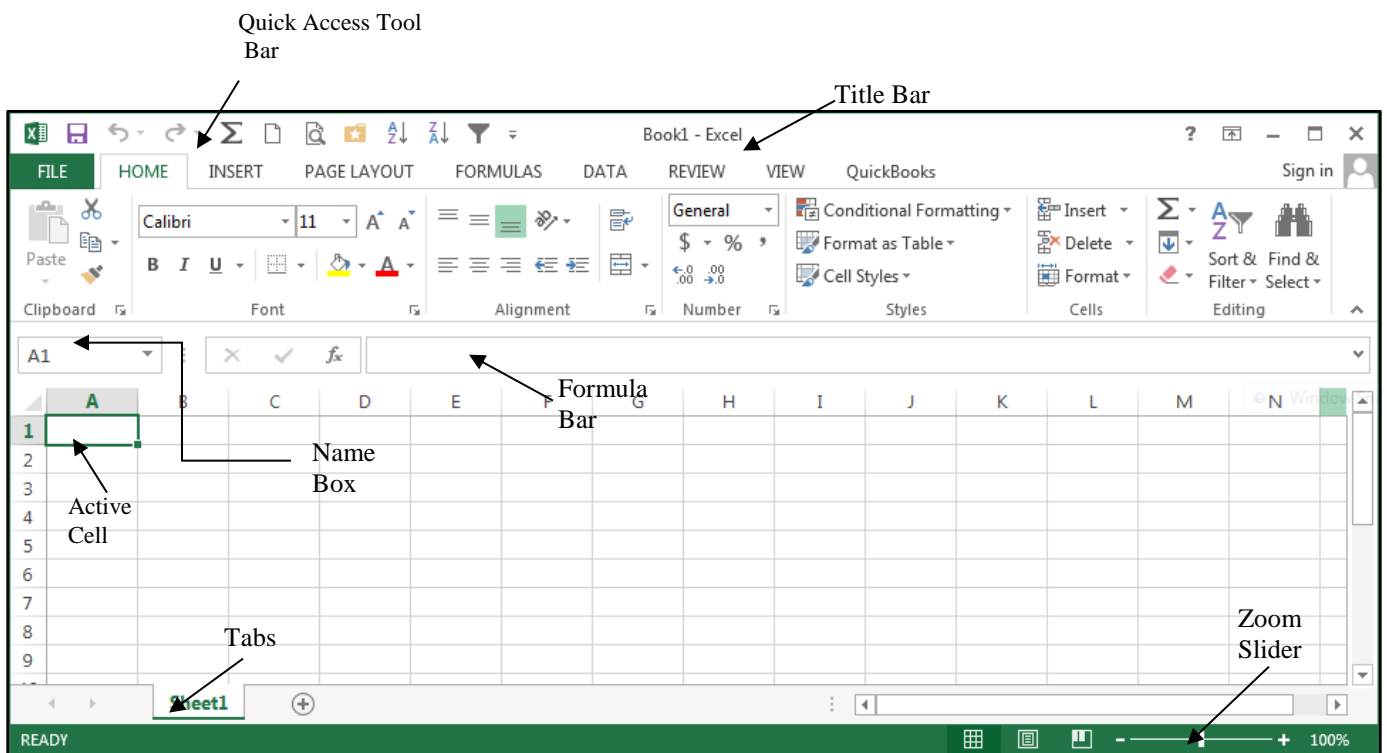
- Creating and maintaining detailed budgets.
- Performing "What If" Scenarios & break even analysis.
- Producing detailed charts to graphically display information.
- Creating invoices or purchase orders.
- Working with reports exported from small business accounting software programs.

Excel is a powerful program that is used not only to work with numbers but also to maintain databases. In fact, if you have started a database in Excel, you can even import it into Microsoft Access (the Microsoft Office Suite database program).

An Excel worksheet has a grid structure with 1,048,576 horizontal rows and 16,384

vertical columns. An intersection where the rows meet the columns is called a cell. A cell reference is the column letter and the row number. Example ... A1.

As you learn in this beginning Excel course the mouse plays a big part in Excel commands. Practicing and learning these commands is crucial for Excel efficiency.



What makes up a worksheet?

Columns:

- run vertically across the window
- labeled by letters
- a worksheet contains 16,384 columns

Rows:

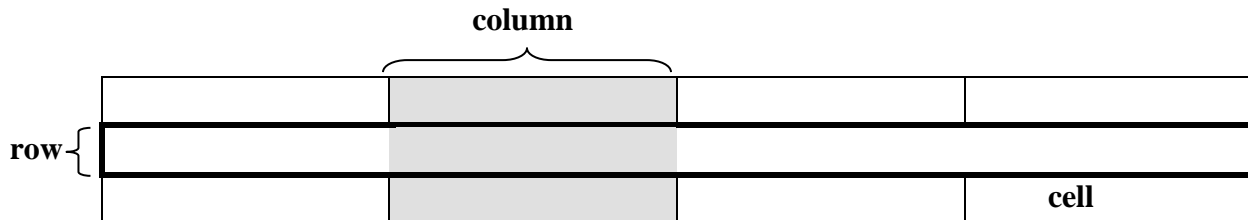
- run horizontally across the window
- labeled by numbers
- a worksheet contains 1,048,576 rows

Cells:

- a single box on the window where a column and a row intersect

Cell Reference:

- Name of a cell listing the column letter then the row number (A1)



Three types of data can be typed into a cell.

1. **Labels:** text or text with numbers
2. **Values:** numbers that can be calculated or dates and times
3. **Formulas:** math calculations

Moving the cell pointer with the keyboard:

[Down Arrow]	Down one cell
[Up Arrow]	Up one cell
[Right Arrow] or [Tab]	Right one cell
[Left Arrow] or [Shift] + [Tab]	Left one cell
[Home]	To the beginning of the current row
[CTRL] + [Home]	To the first cell in the worksheet (A1)
[Page Down]	Down one screen
[Page Up]	Up one screen

[ALT] + [Page Down]	Right one screen
[ALT] + [Page Up]	Left one screen
[CTRL] + [Page Down]	Right one worksheet
[CTRL] + [Page Up]	Left one worksheet

Creating a new Excel file

- Click on the **File Tab**
- Click on **New**
- Click on **Blank Workbook**
- Click on the **Create** button at the bottom of the dialog box



Saving an Excel file

- Click on the **Save** button on the Quick Access Toolbar
 - *OPTIONAL:* to make your file available to people using earlier versions of Excel do the following steps
 - Click on the File Tab
 - Point to Save As
 - Click on Excel 97-2003 Workbook
- Click on My Documents at the left side of the dialog box
- Click in the Filename box and type the file name
- Click on the Save button

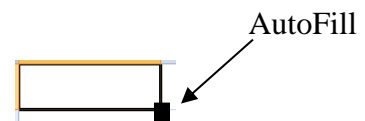
Opening an Excel file

- Click on the **File Tab**
- Click on **Open**
- Click on **My Documents**
- Click on the Filename
- Click on the **Open** button

AutoFill

AutoFill is a shortcut that can be used to...

- copy contents of a cell
- fill in the name of months or days
- increment a date value



by pointing to the bottom right corner of the cell pointer and then dragging to the right (or any direction).

Entering Formulas: Always type an equal sign (=) first then type the formula using cell references.

Examples of Formulas

Addition =A4+A5

Subtraction =A4-A5

Multiplication =A4*A5

Division =A4/A5

Adding a column of numbers =SUM(A4:A10)



AutoSum toolbar button--adds up a column or row of numbers quickly. It is on the HOME tab in the Editing group

To use the AutoSum button

- Select the cell where you want the answer
- Click on the AutoSum button on the HOME tab
- Verify the cell range Excel has selected, if OK
- Click on the AutoSum button again OR hit the ENTER key

The AutoSum button can be used to do other functions. It can average a range of cells, search for the lowest value in a range of cells, search for the highest value in a range of cells or count how many values there are in a range of cells.

To use the AutoSum button for other functions

- Select the cell where you want the answer
- Click on the drop down arrow next to the AutoSum button
- Click on the function name
- Verify the cell range Excel has selected, if OK
- Click on the AutoSum button again OR hit the ENTER key

Functions are predefined formulas that perform simple or complex calculations. Below is the structure of a function.

=FUNCTION NAME(beginning cell : ending cell)

Commonly used Functions:

AVERAGE — this will average the values in a range of cells

=AVERAGE(A4:A7)

MAX — this will get the largest value in a range of cells

=MAX(A4:A7)

MIN — this will get the smallest value in a range of cells

=MIN(A4:A7)

COUNT — this will count how many cells in a range contain numbers

=COUNT(A4:A7)

Editing A Cell (choose one of the three ways)

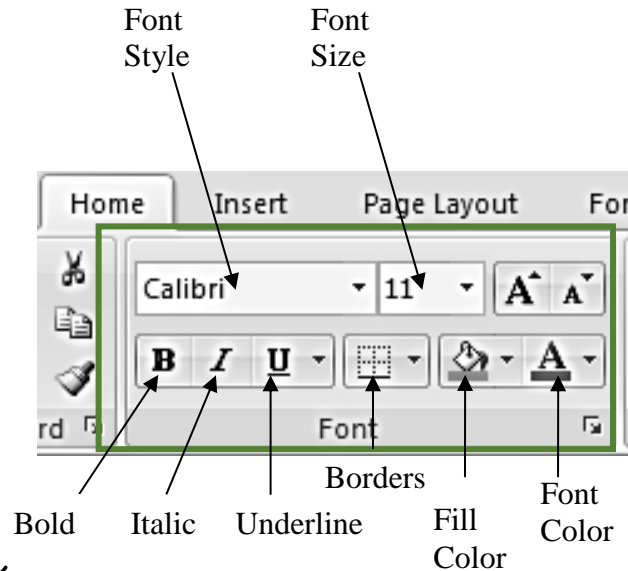
1. Click once in the formula bar and make the changes
2. Double-click in the cell and make the changes
3. Hit the F2 button on the keyboard and make changes in the cell

When you are in editing mode an X and a checkmark will appear in the formula bar. If you click on the X what you typed in the cell will disappear. It is the same as tapping ESC on the keyboard. If you click on the checkmark what you typed in the cell will be accepted. It is the same as tapping ENTER on the keyboard.

Formatting Text

Using the Font Group

- Click on the Home tab
- The Font group is the second group from the left



Using the Font Dialog box

Changing the Font appearance

- Click on the Home tab
- In the Font group, click on the dialog box launcher
- Click on the Font tab
- To change the font style click on a font name under the Font: area
- To add bold or italic click on a choice under the Font Style: area
- To change the font size click on a number under the Size: area
- To add underlining click on the drop down arrow under the Underline: area and select a underline style
- To change the font color click on the drop down arrow under the Color: area and select a color
- To show negative numbers in parenthesis or in red click on the style shown under the Negative Numbers area
- Click on the OK button to apply the new formatting

Changing the text direction and alignment

- Click on the Home tab
- In the Font group, click on the dialog box launcher
- Click on the Alignment tab

Horizontally aligns text within a cell.

Vertically aligns text within a cell.

Keeps text within a cell instead of flowing over other cells

Merges several cells into one cell

Select this option to have letters appear one on top of the other.

Click on a diamond or circle to have text angle.

ALT and ENTER:
To type two lines of text in one cell: after typing the first line, hold down the ALT key and tap the ENTER key then type the second line of text.

Using the Alignment Group

- Click on the Home tab
- The Alignment group is the third group from the left

Top Align

Middle Align

Bottom Align

Orientation

Wrap Text

Align Left

Center

Align Right

Increase Indent

Decrease Indent

Merge & Center

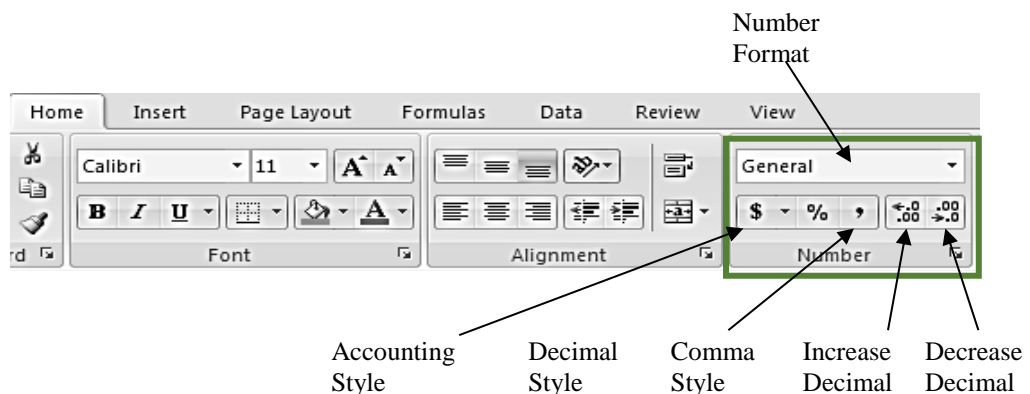
Formatting Numbers

Using the Format Dialog box

- Click on the Home tab
- In the Font group, click on the dialog box launcher
- Click on the Number tab if it isn't already selected
- Under the Category area, select a style to be applied
- To see what the number will look like check the value in the Sample area
- To add a dollar sign click on the drop down arrow to the right of the Symbol box and click on the dollar sign
- To show negative numbers in parenthesis or in red click on the style shown under the Negative Numbers area
- Click on the OK button to apply the new formatting

Using the Number Group

- Click on the Home tab
- The Number group is the fourth group from the left



Conditional Formatting

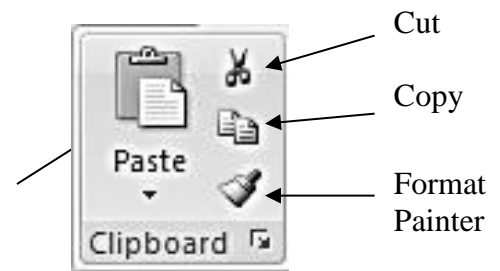
- Select the range of cells to be formatted
- Click on the **Conditional Formatting** button on the Home tab of the Ribbon
- Click on **New Rule...** in the menu
- Click on **Format only cells that contain** option in the top box
- In the bottom box, click on the drop-down arrow next to between and choose an option of your choice
- Type any values needed in the box or boxes to the right and click Format

Copying cells

- Select the cell or cells you want to copy
- Click on the copy toolbar button
- Move the cell pointer to the new location
- Click on the paste toolbar button

Moving cells

- Select the cell or cells you want to copy
- Click on the cut toolbar button
- Move the cell pointer to the new location
- Click on the paste toolbar button



Drag to Move:

Point to the left corner of the cell you want to move. When the mouse is a big white arrow, **DRAG** to the new location.

Hiding Rows or Columns

- Select the row or column you want to hide
- Click on the Home tab
- In the Cells group, click on the Format button
- Point to the Hide & Unhide command
- Click on Hide Rows or Hide Columns

OR

- Right-click on the row or column heading
- Click on Hide

Unhiding Rows or Columns

- Select the rows (or columns) before and after the row (or column) you want to unhide
- Click on the Home tab
- In the Cells group, click on the Format button
- Point to the Hide & Unhide command
- Click on Unhide Rows or Unhide Columns

OR

- Select the rows (or columns) before and after the row (or column) you want to unhide
- Right-click on the row or column headings
- Click on Unhide

Inserting Rows or Columns

- Select the number of rows or columns you want insert
- Click on the Home tab
- In the Cells group, click on the Insert button

OR

- Right-click on the row or column heading
- Click on Insert

Deleting Rows or Columns

- Select the rows or columns you want delete
- Click on the Home tab
- In the Cells group, click on the Delete button

OR

- Right-click on the row or column heading
- Click on Delete

To change the column width

- Click on the Home tab
- In the Cells group, click on the Format button
- Click on Column width...
- Type the width size and click OK

OR

- Move the mouse pointer up to the right of the column heading
- When it changes to a black double-headed arrow
- Click and drag the mouse to the right to make the column larger or to the left to make the column smaller

To change the row height

- Click on the Home tab
- In the Cells group, click on the Format button
- Click on Row height...
- Type the row height and click OK

OR

- Move the mouse pointer to the bottom of the row heading just below the row number
- When it changes to a black double-headed arrow
- Click and drag the mouse down to make the row larger or up to make the row smaller

Print Options

Printing a worksheet

- Click on the **File Tab**
- Click on **Print**
- Click on the Print button at the top

To print a worksheet on one page

- Click on the **File Tab**
- Click on **Print**
- Click on the **Page Setup** link
- Click on the Page tab
- Click on the option button next to Fit to One Page
- Click on the OK button
- Click on the **Print** button

Printing Landscape

- Click on the **File Tab**
- Click on **Print**
- Click on the **Page Setup** link
- Click on the Page tab
- Click on the option button next to Landscape
- Click the OK button

To Print only a portion of the worksheet

- Select the cell range to print
- Click on the **Page Layout** tab
- Click on the **Print Area** button
- Click on **Set Print Area**

Relative References: When a formula is copied or moved the cell references are updated. For example, if you copy the formula below in column A to the right the column letters in the formula will change.

A	B	C
=SUM(A4:A10)	=SUM(B4:B10)	=SUM(C4:C10)

Absolute References: When a formula is copied or moved the cell reference will not change.

	A	B
1	Interest Rate:	10%
2		
3	Purchases	Interest
4	100	=\$B\$1*A4
5	200	=\$B\$1*A5

An absolute cell reference in a formula, such as \$B\$1, always refers to a cell in a specific location. If you copy the formula across or down, the absolute reference does not adjust. By default, new formulas use relative references, and you need to switch them to absolute references. For example, if you copy an absolute reference in cell B4 to cell B5 it stays the same in both cells = \$B\$1.

Samples of a cell reference with Absolute Reference:

\$B1	The column letter will not change
B\$1	The row number will not change
\$B\$1	Both the column and row will not change

You can type in the \$ (dollar sign) in the formula OR you can hit the **F4** key to toggle between the above choices.

To create an absolute reference:

1. Type the formula
2. With the cell pointer next to the cell reference, Hit the F4 button until it shows the dollar signs where you want them