

Excel 2016 Basics for Windows

Excel 2016 Basics for Windows Training Objective

To learn the tools and features to get started using Excel 2016 more efficiently and effectively.

What you can expect to learn from this class:

- How to approach the Excel interface
- How to use the tools available in Excel
- How to edit cells and move around
- How to use and customize Excel's toolbar
- Excel's many mouse-oriented tools
- How to use the right-mouse button
- How to create formulas
- How to cut, copy and paste
- Understand the difference between values and formulas in Excel
- How to use Excel's functions
- How to use some of Excel's helpful features: AutoFill, Notes, and Autoformat.
- How to format an Excel worksheet
- How to develop a page setup and printing

Who should take this class?

Any person who wants to learn how to use Excel 2016 to create dynamic worksheets, forms and spreadsheets.

Excel Tips and Shortcuts:

Always press Enter to close a cell

Control-Z to Undo.

Control-S to perform frequent **Quick Saves.**

Control-Home to go to the top of worksheet

Control-C to **Copy**

Control-X to **Cut**

Control-V to **Paste**

Control-A to **Select All**

Double-click to **Edit** a cell

Shift-click to select a range of cells

Control-click to select a non-consecutive range of cells

Right-click to access a **Quick Menu**

Getting Started

Before creating a worksheet consider how the worksheet will be used and how it will look.

1. Begin by creating a sample worksheet on paper.
2. Think through your objective.
3. Consider who will use it.
4. Consider what type of input is required.

Steps for developing an Excel Worksheet

1. Create Labels (column and row headings)
2. Add numbers
3. Add formulas
4. Format the worksheet

Getting Started-The New Look of Office 2016

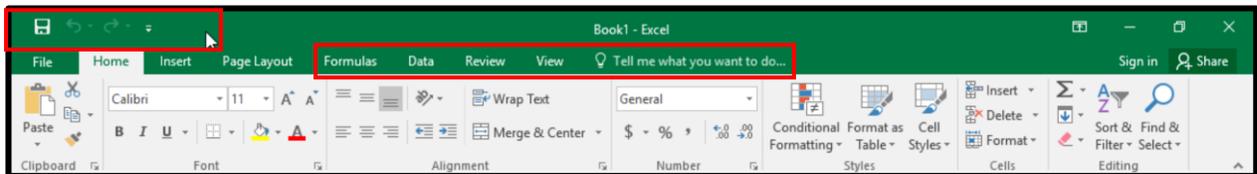
Before we begin looking at the functions we need to introduce the new interface of Excel 2016.

Where are the menus?

Excel 2016 presents a simplified interface with the **File Tab**, and the **Ribbon**. Commands and functions are organized into groups for ease of navigation.

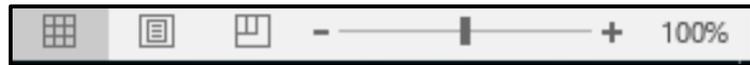
On **The Ribbon**, (pictured below) is the **Quick Access Toolbar**, organized by **Tab**.

The **Quick Access Toolbar** provides access to common commands via an icon toolbar such as **Save, Undo, Redo**, and **Customize Quick Access Toolbar**.



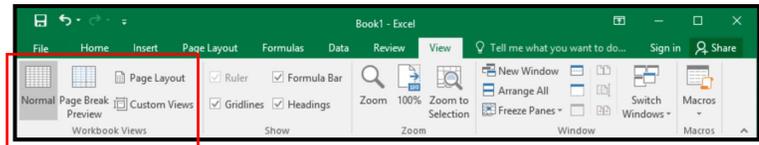
The **Ribbon** is composed of **Tabs** containing **Groups** where functions are organized to provide a visual palette of choices and an ease of use.

The 3 buttons in the bottom right corner of the document window allow you to change the way you view your document. Also in this area is the **Zoom** tool to allow you to enlarge the view of the document for a closer look.



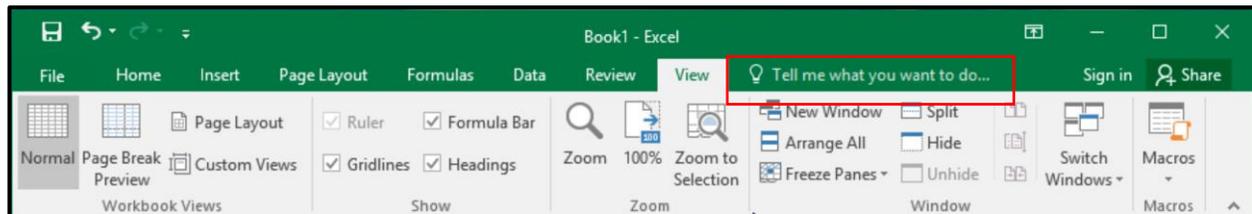
NOTE: you can also choose these options from the **View Tab** > from the **Workbook Views Group** on the **Ribbon**.

- **Normal View** is the default.
- **Page Layout View** can be used when you want to view the page as if it were in **Print Preview** mode. Use **Page Layout** to see where pages begin and end and to view any headers or footers on the page.
- **Page Break Preview** is used to view where pages will break when the document is printed and also to maximize the space available for reading or commenting on the document.



Online Help

Use the Microsoft Office Excel **Tell Me** dialog box for quick answers to Excel 2016 questions. Click twice in the upper right corner of the **View** Ribbon and type in a question.

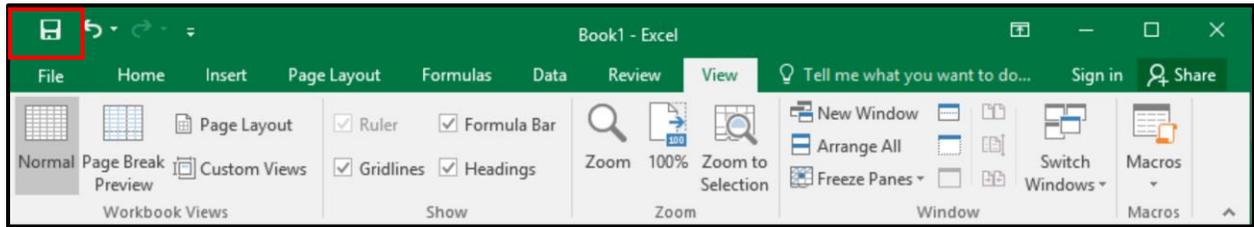


Saving

Save versus Save As: use **Save** to save a previously saved document; use **Save As** to save a new document or to save another copy of the document under a different name or format.

1. Select **Save As** from the **File** tab.
2. When the **Save As** dialog box appears, type in a name for the file in the **File Name** text boxes. If you need to change the format of a document for someone who isn't using Excel 2016, select Excel 97-2003 in the **Save as type** drop down menu to save the document in a previous version of Excel.
3. Choose a destination for the file to be saved.
4. Click **Save** to save the file.

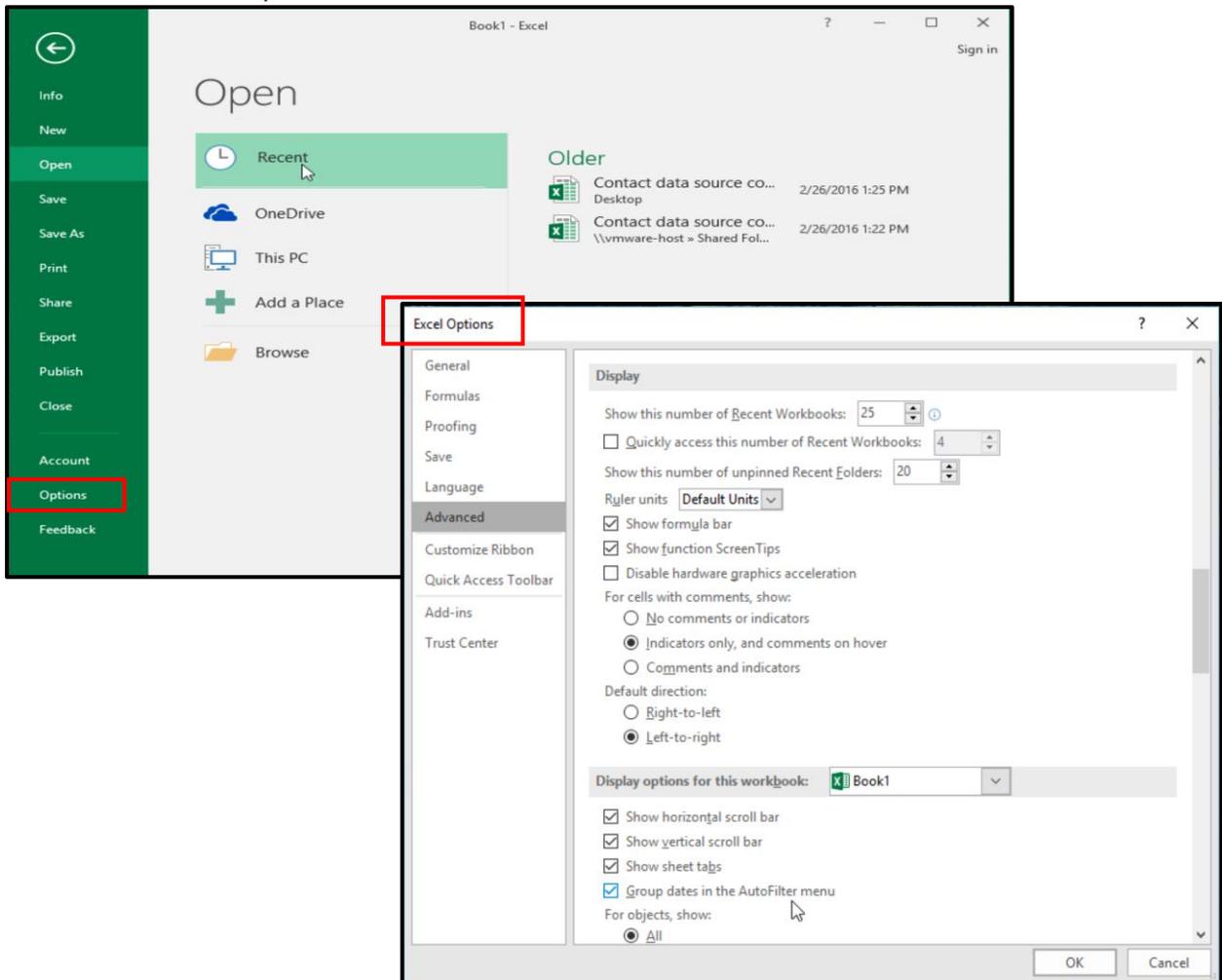
Save: Click once on the **Disk icon** (or **Control-S**) in the **Quick Access Toolbar** to perform a quick save.



The Open File Dialog

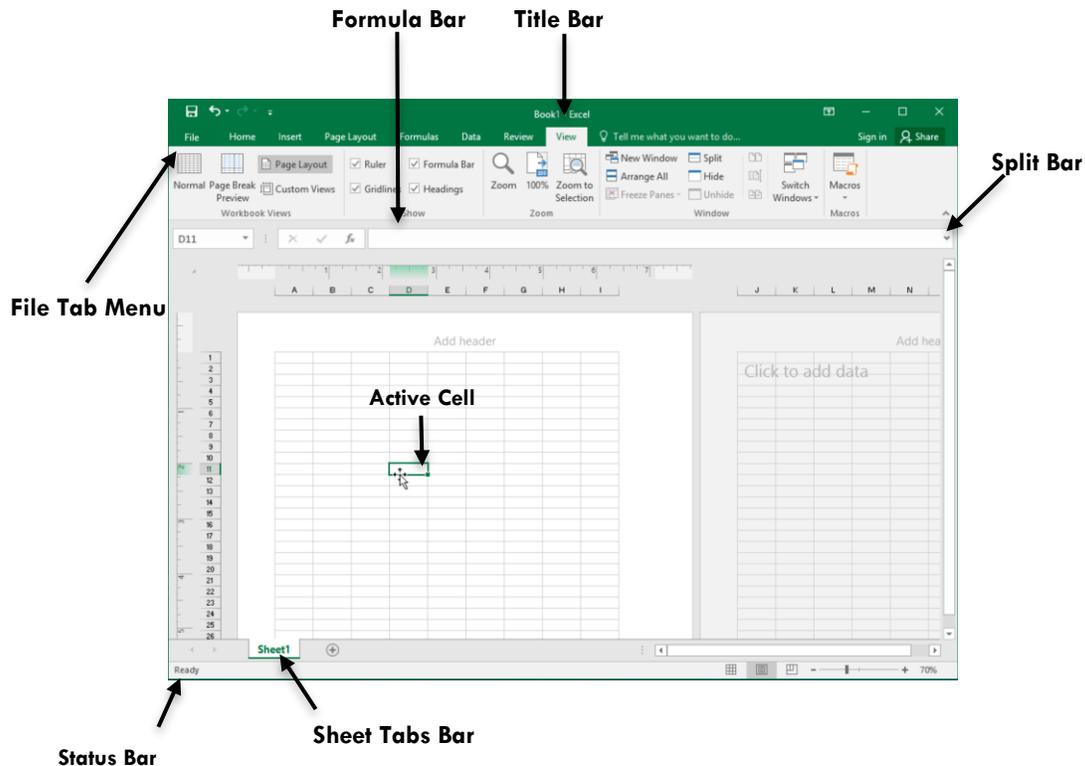
Quickly open any previous documents used by selecting them from the **Recent Documents** pane when you click on **File Tab** menu. You can also choose **Open** from the **File Tab**.

Tip: Change the **Recent Documents** setting from **Excel Options** in the **File Tab** menu. Select **Advanced**, and in the **Display** section, increase or decrease the number in **Show this number of Recent Documents** up to 50 documents.



The Excel Window

The Excel window consists of a series of bars, columns and rows, and their intersection: cells.



Excel's Bars

- **Title Bar** is the first bar in the worksheet and identifies the workbook name. The **Tool Bar** consists of icons which allow you easy access to
- The **Formula Bar** contains the active cell location to the left, and the cell contents to the right
- The **Sheet Tabs Bar** contains worksheets within a workbook. Double-click on a tab to rename it. **Tip:** right-click over a sheet and choose **Move or Copy Sheet** from the **Edit** menu to copy a finished sheet. Make sure you check the **Create a Copy** checkbox if you want to create a copy of a worksheet.
- The **Status Bar** displays the command functions and keyboard toggles.
- **Vertical and Horizontal scroll bars** are located on the edges of the worksheet. Use your mouse and the arrow keys to move through the worksheet.
- **Split bars** are used to separate windows into panes for locking titles. They are small gray rectangles located at the top of the vertical bar and to the far right of the horizontal bar.

Cells

The Excel worksheet is divided out into **cells**, separated by horizontal and vertical **gridlines**. Cells are the basic unit of a worksheet, used to store text, values, formulas and functions.

Misc.

The **Active Cell** is the cell surrounded by bold borders.

Column headings range from A through IV; **Row Headings** are labeled from 1 through 65,536. Select the **View tab** in the **Ribbon** and choose from the options in the **Window** group to view more than one worksheet at a time.

Setting Your Default Directory

To change the default directory, select **Excel Options** from the **File Tab**; then select from the **Save** category and change the **Default File Location** to the desired directory.

Moving around the Worksheet

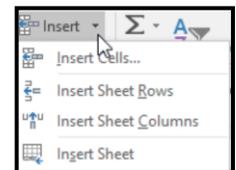
- Use the **arrow keys** to move around the worksheet cell to cell.
- **Tab**: moves right one cell; **Shift-Tab** reverses.
- **Control-Home**: to move to cell A1
- **Home key**: to move to the first cell in a row
- **Page-up/Page-down** to move through portions of the worksheet.
- Use the **Vertical and Horizontal bars** to scroll through the worksheet.

Selecting Cells

- **To select a range of cells**: click and drag over them.
- Use the **Shift** key and the arrow keys to select a range of cells.
- **Shift-Click** by clicking in one corner of a range and then -while holding down the **Shift** key- click on the opposite corner in the desired range.
- **To select a row or column**: click once on the row or column heading, i.e. A, B, etc.
- **To select a non-consecutive range of cells**: hold down the **Control** key and select cells.
- **To select the entire worksheet**: click on the gray corner button above row #1.

Editing

- **To undo the last change**: use **Control-Z** or the **Undo** tool (the left-curved arrow) located in the **Quick Access** toolbar.
- **To edit a cell**: **double-click** on it.
- **To clear cell contents and formatting**: from the **Home tab**, select the **Clear** options, from the **Editing** group.
- **To delete a cell's data or formula**: use the **Delete** key. This will clear only **data** and **formulas** but **not formatting**. To clear formatting, from the **Home tab**, select **Clear Format** from the **Editing** group.
- **To insert rows and columns**: click on the row or column heading, then select from the **Home tab**, **Insert Sheet Rows** or **Insert Sheet Columns** from the **Cells** group. **Rows will be inserted above; columns to the left.**
- **To delete rows and columns from the worksheet**: click in the row or column heading (1.2.3...or A, B, C, etc.) and select the **Home tab**, and choose **Delete Sheet Rows** or **Delete Sheet Columns** from the **Cells** group.



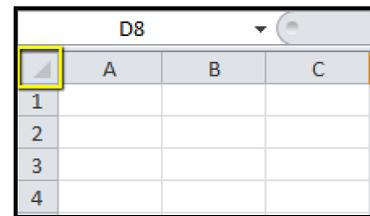
Inserting a column from the **Home Tab**

Column Width

To change column width: select the column heading then select from the **Home tab, Format Column Width** from the **Cells** group.

To modify the row height: same steps as column width but choose **Format Row Height**.

***Tip:** Double click on the line separating column headings to get the **Best Fit**. You can also select all cells by selecting the select all cells button at the top left corner of the spreadsheet and then dragging the separating column/row bar to apply spacing changes.



Copying and Moving

To Move cells: **cut** and **paste** or select the cell(s) then position the mouse pointer under the cell until you see a slanted white arrow, then click and drag the cells to a new position.

To Copy cells: **copy** and **paste** or use the same directions as moving but hold down the **Control** key after selecting the range. (You should see a "+" sign by the cell(s) selected).

Editing Alternative

Using the Right Mouse Button:

First select a cell or range of cells then right-click your mouse button while pointing the mouse on the selected cell(s).

- **Cut**
- **Copy**
- **Paste**
- **Insert**
- **Delete**
- **Clear Contents**

Choose from the formatting options available from the **Format Cells** option to change: **Number, Alignment, Font, Border, Fill or Protection**.

Templates

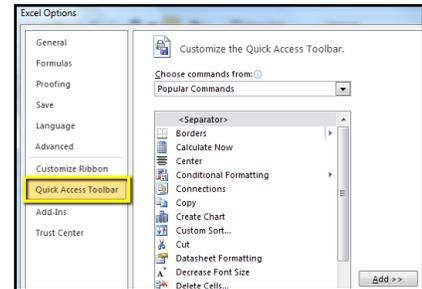
Create a template to improve the consistency and accuracy of a worksheet. Format a worksheet and save it as a template to protect the format/formulas from future changes.

1. Create the worksheet you want to save as a template.
2. Select **Save As** from the **File Tab**.
3. Choose **Excel Template** from the **Save As Type** pull-down menu. The **Save In** location changes to the **Templates** folder on your hard drive.
4. **Name** and **Save** the template file in the **Templates** folder.
5. To use the template, select **New** from the **File Tab**.
6. Select **My Templates** from the list.
7. Double click on a template to open it.
8. When you attempt to save the template file, you will be forced to save it under a new name. Protecting the original template.

Tip: To modify the original template file, choose **Open** from the **File Tab** and open the template file in the Templates folder. Close and **Save** the Template file after making changes.

Quick Access Toolbars

Customize the Quick Access Toolbar by accessing Excel Options from the File Tab. Choose Quick Access Toolbar and then Add or Remove Commands.



Entering Values

There are five basic value types: text, numbers, dates or times, and logical values.

Text: always left justified, can enter up to 255 characters in a cell. Text is anything that is not interpreted as a number, date, time, logical value or formula.

Numbers: always right justified. Pound signs will appear (###) if the number is too long for the column. There are three formats: Integer, Decimal fraction, and Scientific notation.

Dates: The default format for dates is d-mmm (date-month, i.e. 30-Oct). Change the format by selecting **Number** from the Format menu. Use "Cnt;" to enter the current date.

Time: The default format for time is h:mm:mm AM (hour-minutes-seconds, i.e. 10:00:00AM). Change the format by selecting Number from the Format menu. Use "Cnt;" to enter the current time.

Logical values: enter True or False.

Creating Formulas

Math Operators: **+** Addition
 - Subtraction
 / Division
 ***** Multiplication

A basic formula should look something like =E14+E15

Create a Relative formula using the keyboard or mouse:

Keyboard: type in the = sign in a cell (or click on the = symbol in the **Formula** bar), followed by cell references (i.e. A1,A2,etc.) separated by math operators + - * /. Press **Enter** when done.

Mouse: type in the = sign in a cell, then click on the cell to reference, include a math operator (addition is the default), and click on the next reference cell. Separate each additional cell by a math operator and close the formula with the enter key.

To copy a formula to a range of cells: click on the lower right corner of the cell containing the formula, so that you see a black cross, then drag the cell in the direction to copy.

Cell References

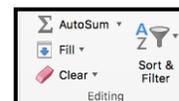
There are three types: **relative**, **absolute**, and **mixed**.

- **Relative formulas** are the default. Relative references change when you copy them, based on their new position. A relative reference appears as a basic formula =C12+C13
- **Absolute references** do not change when copied. The formula appears with, i.e., =\$B\$5
- **Mixed references** are a mixture of absolute and relative.

Functions

Excel's customized **functions** include logical, database, or statistical, to name a few.

A function is a built-in formula provided by Excel. An example of a function is the **Sum Function** =Sum (D9:D15). The **Argument** is the data enclosed in parentheses. Use the **AutoSum** tool, the **Sigma** icon located in the **Home tab** toolbar, **Editing** group.

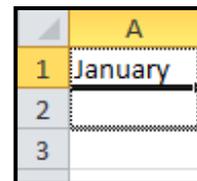


1. Select the cell where the total should appear.
2. Double-click on the **AutoSum** tool to create the function and total the column's cells above the active cell.

If you wish to total some other range of cells in the worksheet, **click once** on the **AutoSum** tool, then click and drag across the range to sum and press **Enter**.

AutoFill

Use the **AutoFill Handle** feature to create a numeric or logical series. Create the first entry in a cell, i.e. January or Monday, then position the mouse pointer in the bottom right corner of the cell -**so that you see a black cross**- then click and drag in any direction until the series is complete.



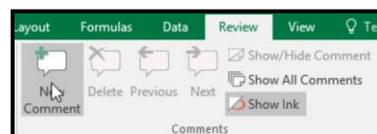
To create your own series: Fill at least two adjacent cells with a pattern, i.e. Budget 98, Budget 99 or 1,2, etc. Use the AutoFill handle to extend the series to the right of the selected cells.

Adding Comments

Add a Comment to a cell to add supplementary information about to the cell's value.

To Add a Comment:

1. Select **New Comment**, located under the **Review tab**.
2. Type your comment in the **Comment** text box.
3. Click away from the **Comment** text box to close it.
4. A red triangle appears in the top right corner of the cell. Position your mouse pointer on the cell to read the note.
5. Right click on the cell containing the **Comment** to **Edit** or **Delete** the comment.



Formatting

Formatting a cell or range of cells is easy in Excel. Format cells using any of the following formatting options.

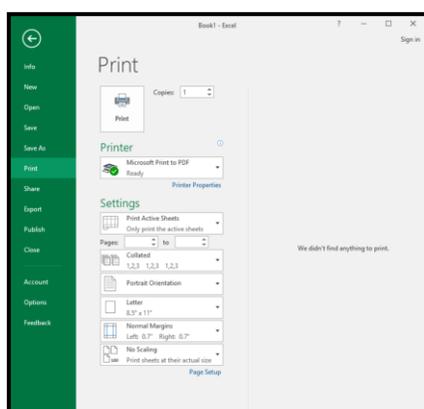
First select the cells you want to format, **right-click** on the selected cells and choose **Format Cells** from the contextual menu.

- **Number:** format numbers, text, dates and times.
- **Alignment:** align values in a cell.
- **Font:** change the font.
- **Border:** add borders.
- **Fill:** change the shading or color of cells.
- **Protection:** lock cells to protect them.

AutoFormat

The **AutoFormat** feature allows you to change the **color, font and display format** of a worksheet instantly. You can also create a format for a worksheet before entering the data. Begin by selecting the range to format by clicking and dragging your mouse over the area. From the **Home tab, Styles group**, choose a **Formatting Style**.

Previewing and Printing



Print Preview: from the **File Tab**, choose **Print** to view your worksheet before printing. **Print Preview** will preview your document on the right side of the dialogue box.

Printing: from the **File Tab**, choose **Print** to send one copy directly to the printer.

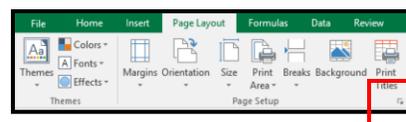
Set Print Area: select a range of cells to print, then from the **File Tab**, choose **Print**. From the **Print** dialog, click the printer icon (highlighted).

Page Setup

Select the **Page Layout tab** and choose from the **Page Setup group** any of the desired tools: **Margin, Orientation (landscape, portrait), Size, Print Area, Breaks, Background** and **Print Titles**. Choose **Scale to Fit, Scale to reduce <100%** or **enlarge >100%** the output.

Click on the **Page Setup icon** located to the right of **Page Setup group (highlighted)**.

Header/Footer: headers appear on the top of every page. A **Tab** (sheet #) code is automatically inserted. Use the **Custom Header** button to enter a **Header** dialog for creating a **TITLE** for your worksheet in the **center section**. Click and drag over the text and click on the **A** icon to bold, change the font or enlarge the type.



Footers appear on the bottom of each page. A **[Page]** number code is automatically inserted. Use the **Custom Footer** button to enter a **Footer** dialog. Create a footer in the **Right Section** window which identifies the name of the Excel file. Highlight the text, then click on the **A** icon and **shrink** the font size. It's also a good idea to include the **[date]** code in the footer of your worksheet.

Custom Header and Footer Icon Description (in the order in which they appear):



- **A** opens the **Font** dialog
- **&[Page]** inserts the current page number
- **&[Pages]** the total number of pages in a file
- **&[Date]** inserts the date
- **&[Time]** the time
- **&[Path]&[File]** inserts
- **&[File]** inserts the file name.
- **&[Tab]** inserts the worksheet's name

Sheet: select this tab to add **Print Titles** or add/remove **Gridlines** from printing.

Print Titles: Use **Print Titles** to set repeating columns or rows that you want to appear at the top (column headings) or left (row headings) area of your printed worksheet.

1. Under the **Page Layout** tab, click the **Print Titles** tool.
2. Click once in either **Rows to Repeat at Top** or **Columns to Repeat at Left**.
3. Click once in the worksheet's column or row heading where you want it to begin repeating. For instance, if you want the top row of a worksheet to repeat on subsequent printed pages then click in **Rows to Repeat at Top** then click in cell A1 of the worksheet. The following value should appear in the text box: **\$1:\$1**. **\$A:\$A** will appear if you choose the **Columns to Repeat at Left** option. Click **OK** to save.