Microsoft Excel 2007 Tutorial

References:
Microsoft Office Excel Help
"Excel 2007 Tutorial" from www.fgcu.edu

TABLE OF CONTENTS

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This tutorial is for training purposes only and not for sale.

Chapter 1: Getting Started

THE EXCEL ENVIRONMENT

Tabbed Ribbon menu system is how you navigate through Excel and access the various Excel commands which replaces the traditional menus. **Microsoft Office Button** is located at the upper left corner of the screen in which you can access important options such as New, Save, Save As, and Print.

Quick Access Toolbar is pinned next to the Microsoft Office Button, and includes commands such as Undo and Redo and gives access to commands you frequently use.

Worksheet Tab is located at the bottom left area of the spreadsheet and by default, **three worksheet tabs** appear each time you create a new workbook.

Page View commands located at the lower right portion of the screen in which you can view the worksheet options (Normal, Page Layout and Page Break)**.**

Zoom tool, and the horizontal scrolling bar also located at the bottom right area of the spreadsheet.

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To Zoom In and Out:
- Locate the **zoom bar** in the bottom, right corner.
- Left-click the **slider** and **drag** it to the left to zoom in and to the right to zoom out.
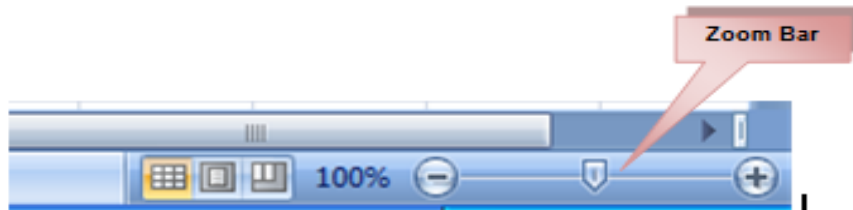
To Scroll Horizontally in a Worksheet:
- Locate the **horizontal scroll bar** in the bottom, right corner.
- Left-click the bar and move it from left to right.
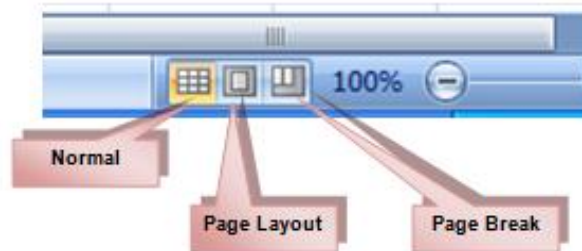
To Change Page Views:
- Locate the **Page View options** in the bottom, right corner. The Page View options are Normal, Page Layout, and Page Break.
- Left-click an option to select it.
- The default is **Normal View**.

To Minimize and Maximize the Ribbon:
- Click the **drop-down arrow** next to the Quick Access toolbar.
- Select **Minimize Ribbon** from the list. The Ribbon disappears.
- To maximize the ribbon, click the arrow again and select **Minimize the Ribbon** to toggle the feature off.
- **Keyboard shortcut**: press **CTRL+F1**

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THE MICROSOFT OFFICE BUTTON

The Microsoft Office Button appears at the top of the Excel window. When you left click the button, a menu appears. From the menu, you can create a new worksheet, open existing files, save files in a variety of ways and print. You can also add security features, send, publish and close files.
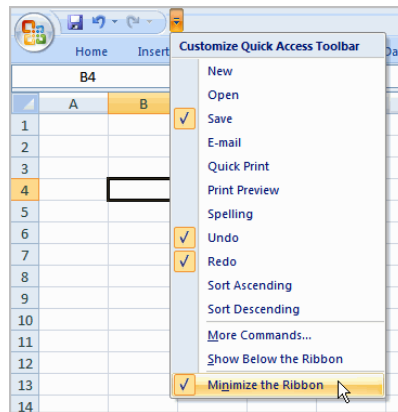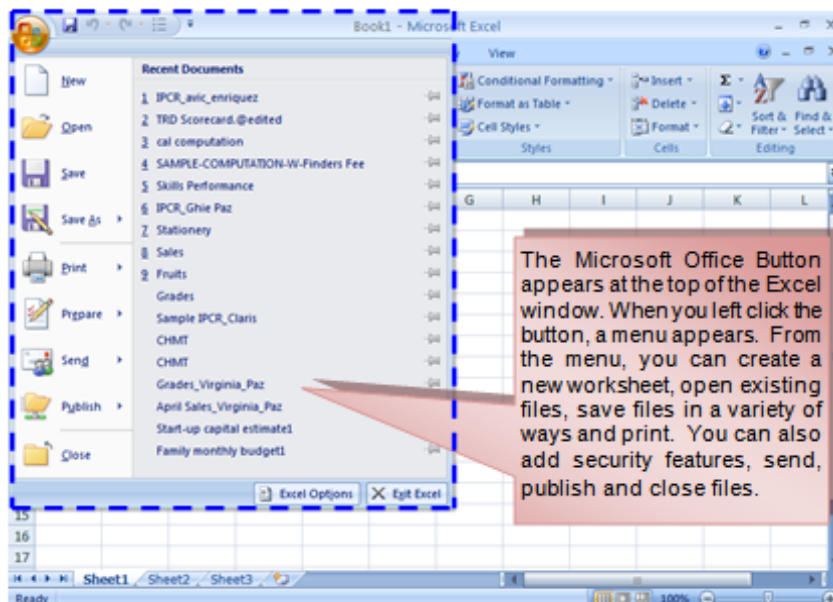
To Change the Default Excel Options:
- Click the **Excel Options** button. A dialog box will appear.
- Select a **category** on the left to access different Excel options.
- Modify any of the default settings.
- Click OK.
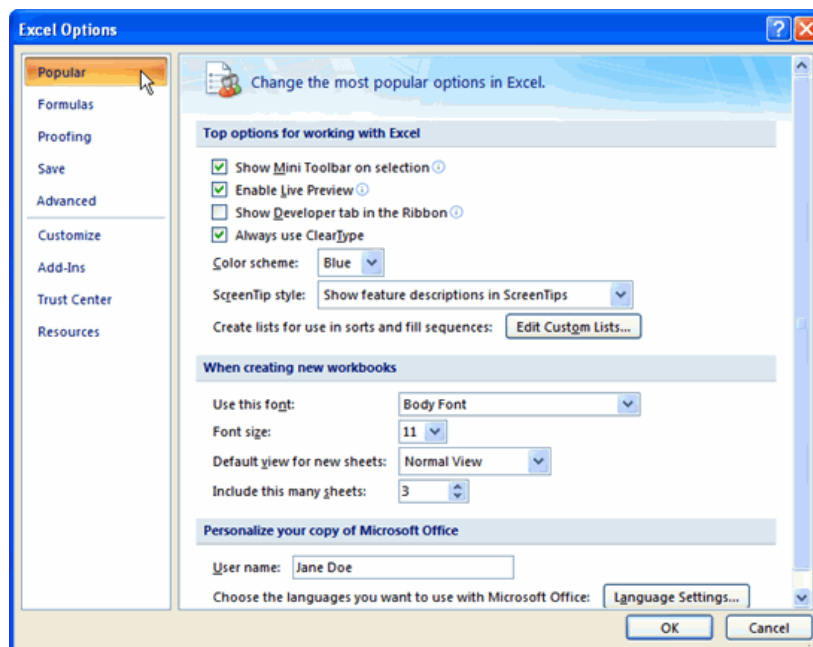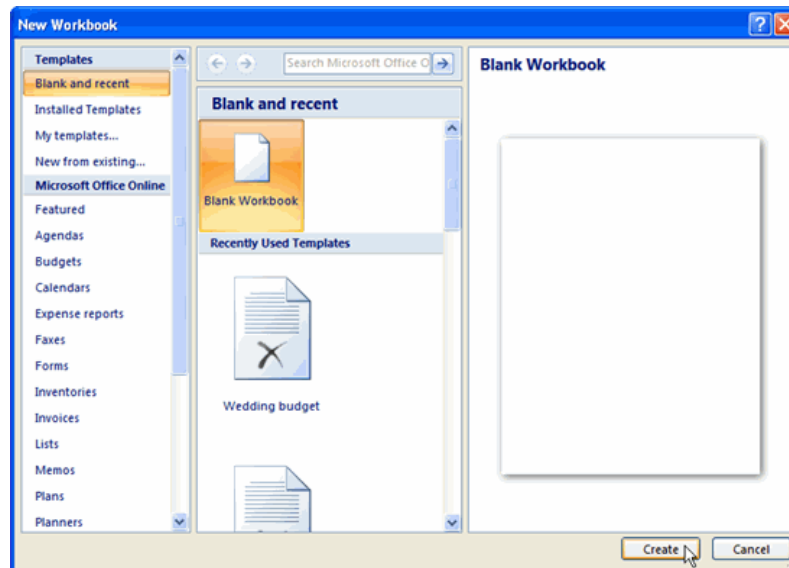
Note: As a beginner, it is best to leave the default settings.

Chapter 2: Starting a Workbook

A blank workbook opens when you open Microsoft Excel. Each workbook contains three (3) worksheets. A worksheet is a grid of cells consisting of **16,384 columns** (XFD) and **1,048,576 rows**.

To Create a New, Blank Workbook:

- Click the **Microsoft Office Button**.
- Select **New**. The New Workbook dialog box opens and Blank Workbook is highlighted by default.
- Click **Create**. A new, blank workbook appears in the window.
- **Keyboard Shortcut:** press **CTRL+N**
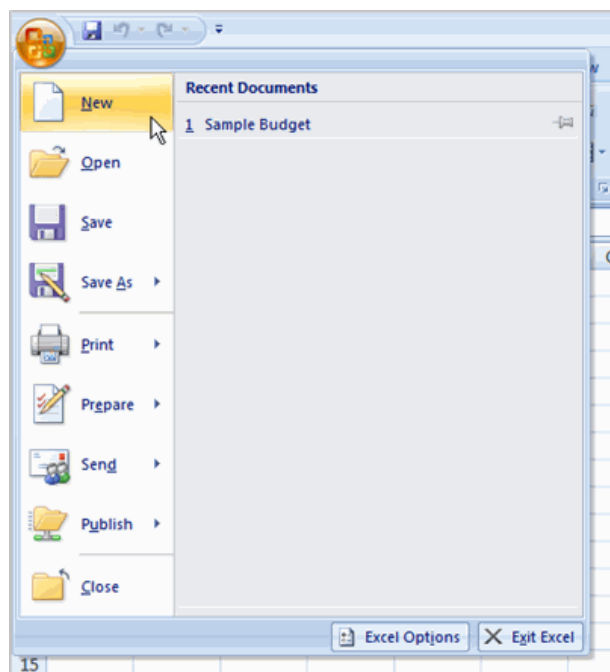
To Insert Text:

- Left-click a **cell** to select it. Each **rectangle** in the worksheet is called a **cell**. As you select a cell, the **cell address** appears in the **Name Box**.
- Enter **text** into the **cell** using your keyboard. The text appears in the cell and in the **formula bar**.
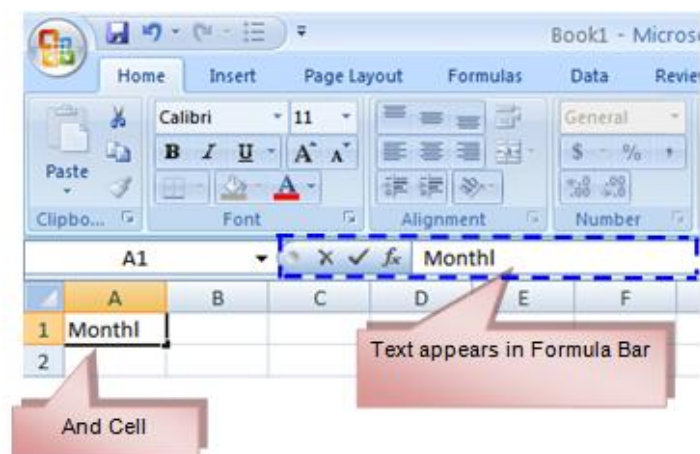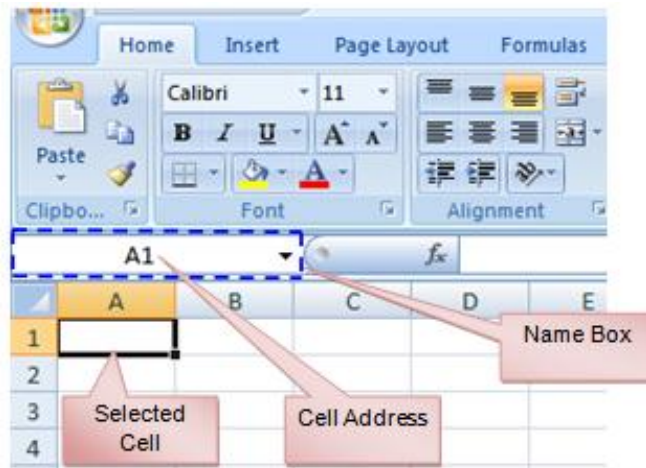
Naming of all address – it is where a column and a row intersects. For example, this cell is C3 since it is where column C and row 3 intersect.
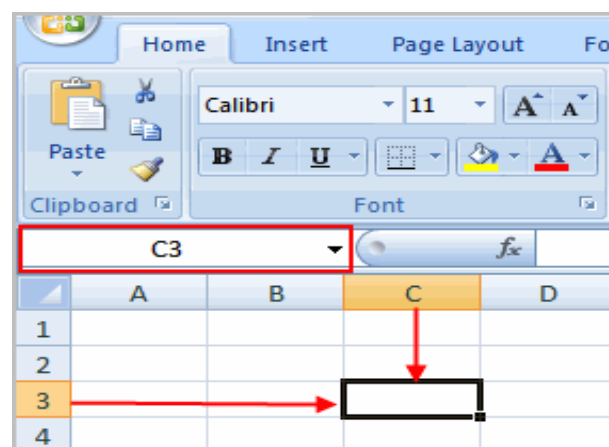
To Edit or Delete Text:
- Select the cell.
- Press the **Backspace** key on your keyboard to delete text and make a correction.
- Press the **Delete** key to delete the entire contents of a cell. **Or**
- Press F2 in the formula bar.

To Move Through a Worksheet Using the Keyboard:
- Press the **Tab** key to move to the **right** of the selected cell.
- Press the **Shift** key and then the **Tab** key to move to the **left** of the selected cell.
- Use the **Page Up** and **Page Down** keys to navigate the worksheet.
- Use the arrow keys.

To Save the Workbook:
- Left-click the **Microsoft Office Button**.
- Select **Save** or **Save As**.

You can save a workbook in many ways, but the two most common are Save as an Excel Workbook, which saves it with a 2007 file extension (.xlsx), and as an Excel 97-2003 Workbook, which saves the file in a compatible format (.xls) so people who have an earlier version of Excel can open the file.

- **Save As** allows you to name the file and choose a location to save the spreadsheet. Choose **Save As** if you'd like to save the file for the **first** time or if you'd like to save the file as a different name.
- Select **Save** if the file has already been named.

Chapter 3: Modifying Columns, Rows, and Cells

The cells, columns, and rows are set to a **default size** when you open a new blank workbook.
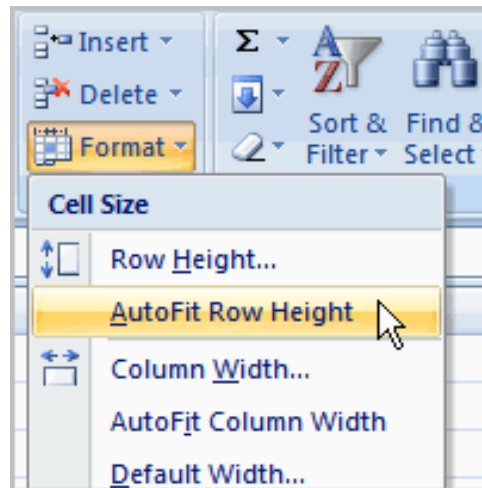
To Modify Column Width:
- Position the **cursor** over the **column line** in the column heading and a **double arrow** will appear.
- Left-click the mouse and **drag** the cursor to the **right** to **increase** the column width or to the **left** to **decrease** the column width.
- **Release** the mouse button. **or**
- Left-click the **column heading** of a column you'd like to modify. The entire column will appear **highlighted**.

or
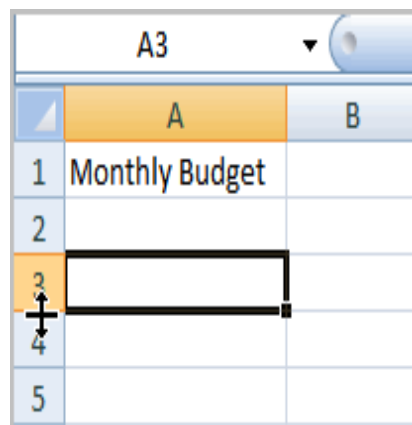
- Click the **Format** command in the Cells group on the **Home** tab. A pull-down menu will appear.
- Select **Column Width** and a dialog box will appear. Enter a **specific** column **measurement** at the blank tab.
- Select **AutoFit Column Width** to adjust the column so all the text will fit.

To Modify the Row Height:

- Position the **cursor** over the **row line** you want to modify and a **double arrow** will appear.
- Left-click the mouse and **drag** the cursor **upward** to **decrease** the row height or **downward** to **increase** the row height.
  Release the mouse button.

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or

- Click the **Format** command in the Cells group on the **Home** tab. A pull-down menu will appear.
- Select **Row Height** and a dialog box will appear. Enter a **specific** row **measurement** at the blank tab.
- Select **AutoFit Row Height** to adjust the row so all the text will fit.

To Insert Rows:

- Select the row **below** where you want the new row to appear.
- Click the **Insert** command in the Cells group on the Home tab. Select **Insert Sheet Rows.** The row will appear.
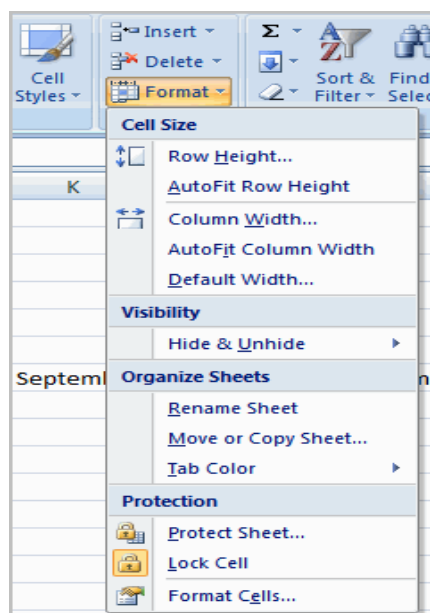
References:
Microsoft Office Excel Help
"Excel 2007 Tutorial" from www.fgcu.edu

Note:
- The new row always appears above the selected row.

- Make sure that you select the **entire row** below where you want the new row to appear and **not** just the **cell**. If you select just the cell and then click Insert, only a new cell will appear.

To Insert Columns:
- Select the column to the right of where you want the column to appear.
- Click the **Insert** command in the Cells group on the Home tab. Select **Insert Sheet Columns**. The column will appear.
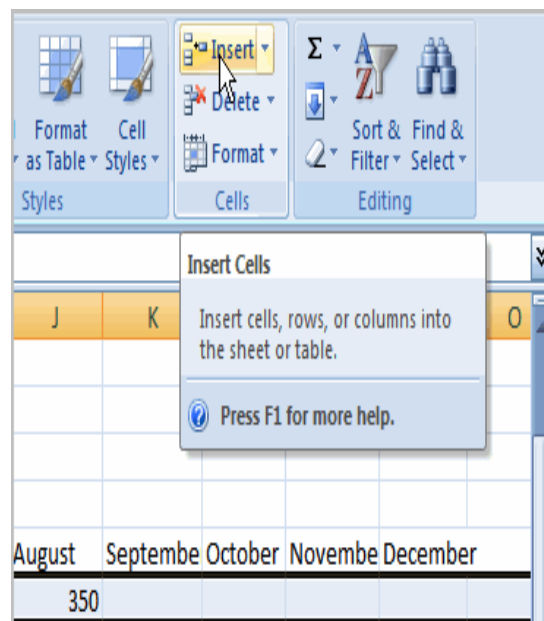
Note:
- The new column always appears to the left of the selected column. For example, if you want to insert a column between September and October, select the October column and click the Insert command.

- Make sure that you select the **entire column** to the right of where you want the new column to appear and **not** just the **cell**. If you select just the cell and then click Insert, only a new cell will appear.

To Delete Rows and Columns:
- Select the row or column you'd like to delete.
- Click the Delete command in the Cells group on the Home tab.
- Select **Delete Sheet Rows or Delete Sheet Columns**.
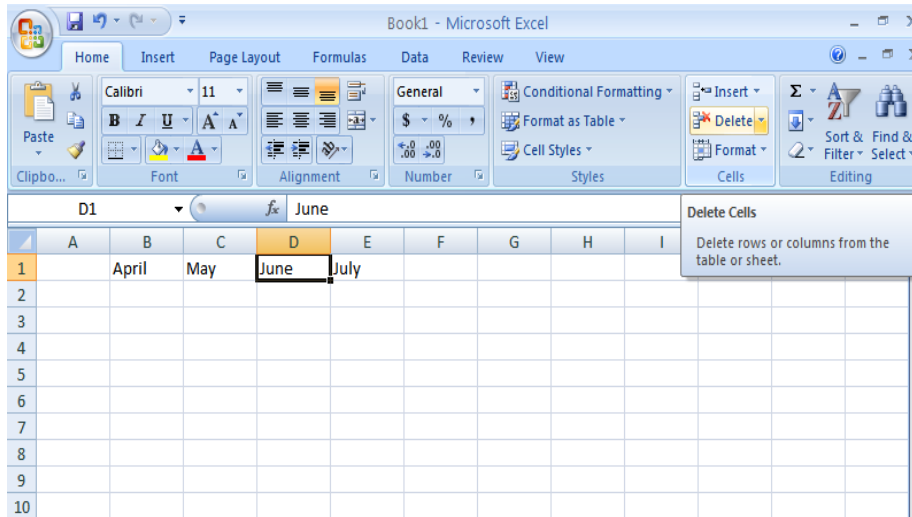
Chapter 4: Formatting Text

FORMATTING CELLS

To Format Text in Bold or Italics:
- Left-click a **cell** to select it or drag your cursor over the text in the formula bar to select it.
- Click the **Bold** or **Italics** command.
- **Keyboard Shortcut**: press **CTRL+B**
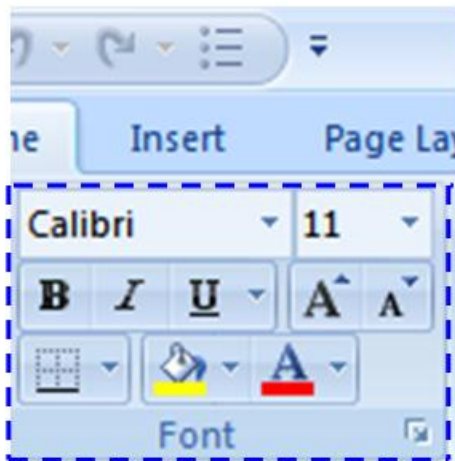
Once you have entered information into a spreadsheet, you will need to be able to **format** it. In this lesson, you will learn how to use the bold, italic and underline commands; modify the font style, size and color; and apply borders and fill colors.
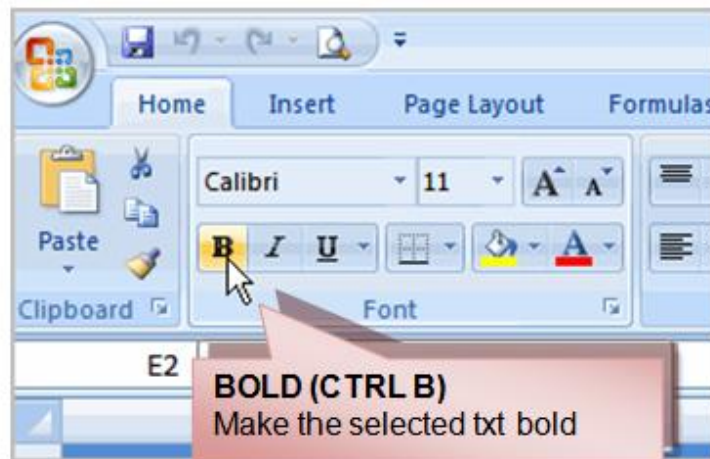
To select the entire column:
- Left-click the column heading, the entire column will be selected.

To select specific cells:
- Left-click a cell.
- Drag your mouse to select the other cells.
- Release the mouse button.

To Format Text as Underlined:
- Select the cell or cells you want to format.
- Click the drop-down arrow next to the Underline command.
- Select the **Single Underline** or **Double Underline** option. **or**
- **Keyboard shortcut**: press **CTRL+U**

To Change the Font Style
- Select the cell or cells you want to format.
- Left-click the **drop-down arrow** next to the **Font Style** box on the Home tab.
- Select a **font style** from the list.

As you move over the font list, the Live Preview feature previews the font for you in the spreadsheet.

To Change the Font Size:

Select the cell or cells you want to format.
Left-click the drop-down arrow next to the Font Size box on the Home tab.
Select a font size from the list.

To Change the Text Color:

- Select the cell or cells you want to format.
- Left-click the **drop-down arrow** next to the **Text Color** command. A color palette will appear.
- Select a color from the palette. **or**

Select **More Colors**. A dialog box appears.
Select a color.
Click **OK**.

To Add a Border:

- Select the cell or cells you want to format.
- Click the **drop-down arrow** next to the **Borders** command on the Home tab. A menu will appear with border options.
- Left-click an option from the list to select it.

You can change the **line style** and **color** of the border.

To add a Fill Color:
- Select the cell or cells you want to format.
- Click the **Fill command**. A color palette will appear.
- Select a color.

    or
- Select **More Colors**. A dialog box will appear.
- Select a color.
- Click **OK**.

You can use the **fill color** feature to format columns and rows, and format a worksheet so that it is easier to read.

To Format Numbers and Dates:
- Select the cell or cells you want to format.
- Left-click the **drop-down arrow** next to the **Number Format** box.
- Select one of the options for formatting numbers.
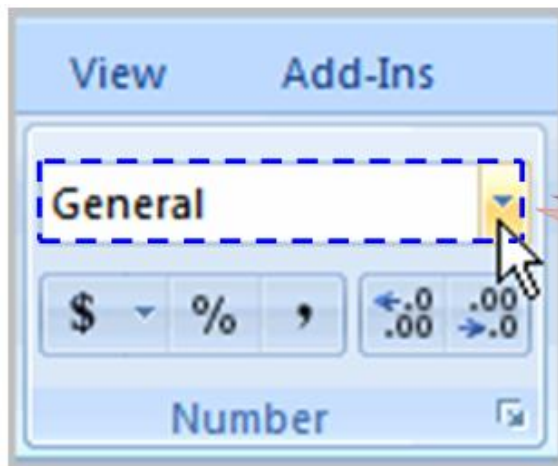
By default, the numbers appear n the **General** category, which means there is no special formatting.

Note:
- In the Number group, you can change the U.S. dollar sign to another currency format, numbers to percents, add commas, and change the decimal location.

Chapter 5: Creating Simple Formulas

Excel can be used to **calculate** and **analyze** numerical information; however, you will need to know how to write **formulas** to maximize Excel's capabilities. In this lesson you will learn how to **create simple formulas** using mathematical operators such as the addition, subtraction, multiplication, and division signs.

A **formula** is an equation that performs a calculation using values in the worksheet.
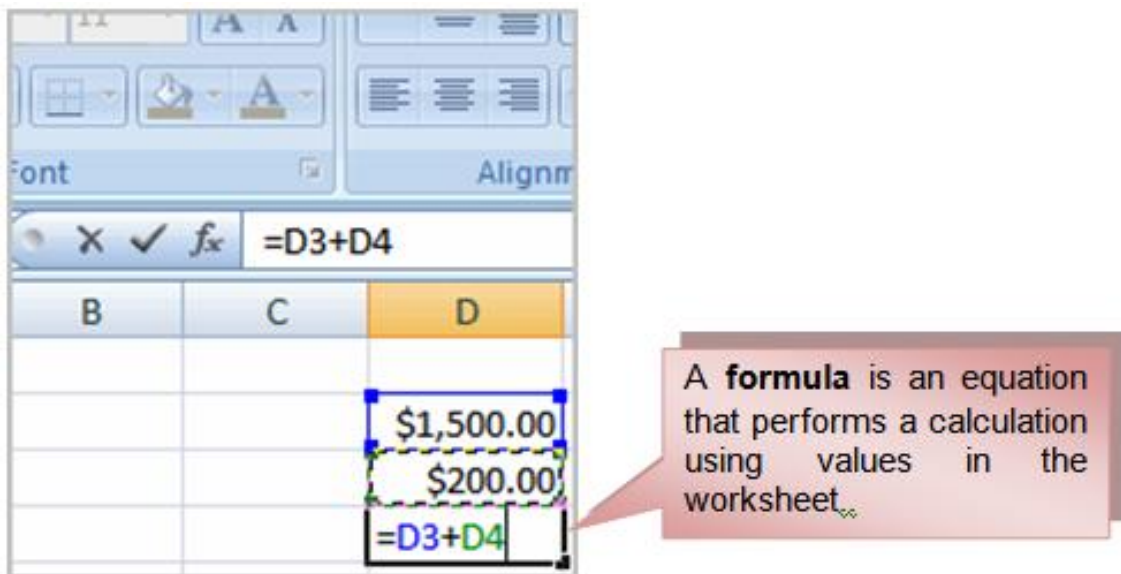
Simple Formulas

To Create a Simple Formula that Adds Two Numbers:
- Click the cell where the formula will be defined (C5, for example).
- Type the equal sign (=) to let Excel know a formula is being defined.
- Type the first number to be added (e.g., 350)
- Type the **addition sign (+)** to let Excel know that an add operation is to be performed.
- Type the second number to be added (e.g., 220)
- Press **Enter** or click the **Enter button** on the Formula bar to complete the formula.

Type the **equal sign (=)** to let Excel know a formula is being defined.

To Create a Simple Formula that Adds the Contents of Two Cells:
- Click the cell where the answer will appear (C5, for example).
- Type the equal sign (=) to let Excel know a formula is being defined.
- Type the cell number that contains the first number to be added (C3, for example).
- Type the **addition sign (+)** to let Excel know that an add operation is to be performed.
- Type the cell address that contains the second number to be added (C4, for example).
- Press **Enter** or click the **Enter button** on the Formula bar to complete the formula.

To Create a Simple Formula using the Point and Click Method:
- Click the cell where the answer will appear (C30, for example).
- Type the equal sign (=) to let Excel know a formula is being defined.
- Click on the **first cell** to be included in the formula (C5, for example).

- Type the **subtraction sign (-)** to let Excel know that a subtraction operation is to be performed.
- Click on the **next cell** in the formula (C29, for example).
- Press **Enter** or click the **Enter button** on the Formula bar to complete the formula.

SUM		▼	● X ✓ fx	=C5-	
	A	B		C	D
24	Deductions				
25	Medical	12/31/2013	$	400.00	
26	Housing Loan	12/31/2013	$	1,500.00	
27	Personal Loan	12/31/2013	$	2,000.00	
28	Appliances Loan	12/31/2013	$	500.00	
29	Total		$	4,400.00	
30	Net Salary		=C5-		
31					

SUM		▼	● X ✓ fx	=C5-C29	
	A	B	Enter	C	D
24	Deductions				
25	Medical	12/31/2013	$	400.00	
26	Housing Loan	12/31/2013	$	1,500.00	
27	Personal Loan	12/31/2013	$	2,000.00	
28	Appliances Loan	12/31/2013	$	500.00	
29	Total		$	4,400.00	
30	Net Salary		=C5-C29		
31					

To Create a Simple Formula that Multiplies the Contents of Two Cells:
- Select the cell where the answer will appear (E32, for example).
- Type the equal sign (=) to let Excel know a formula is being defined.
- Click on the **first cell** to be included in the formula (C9, for example) or type a number.
- Type the multiplication symbol (*) by pressing the Shift key and then the number 8 key. The operator displays in the cell and Formula bar.
- Click on the **next cell** in the formula or type a number (12, for example).
- Press **Enter** or click the **Enter button** on the Formula bar to complete the formula.

References:
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To Create a Simple Formula that Divides One Cell by Another:
- Click the cell where the answer will appear.
- Type the equal sign (=) to let Excel know a formula is being defined.
- Click on the **first cell** to be included in the formula.
- Type a division symbol. The operator displays in the cell and Formula bar.
- Click on the **next cell** in the formula.
- **Enter** or click the **Enter button** on the Formula bar to complete the formula.

USING CELL REFERENCES

The cell address is basically the name of the cell that can be found in the Name Box.

The following example uses actual numbers in the formula in C5.

When a cell address is used as part of the formula, this is called a **cell reference**. It is called a **cell reference** because instead of entering a specific numbers into a formula, the cell address refers to a specific cell. The following example uses cell references in formula in C30.

Chapter 6: Working with Cells

In this chapter, you will learn how to **cut**, **copy**, and **paste**, as well as **drag** and **drop** information.

To Copy and Paste Cell Contents:
- Select the **cell or cells** you wish to **copy**.
- Click the **Copy** command in the Clipboard group on the Home tab. The border of the selected cells will change appearance.

COPY (CTRL+C)
Copy the selection and put it on the Clipboard

References:
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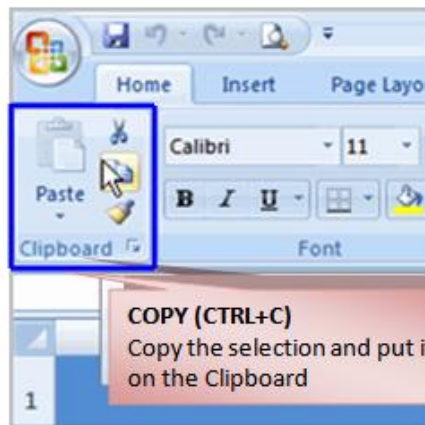
- Select the **cell or cells** where you want to **paste** the information.
- Click the **Paste** command. The copied information will now appear in the new cells.
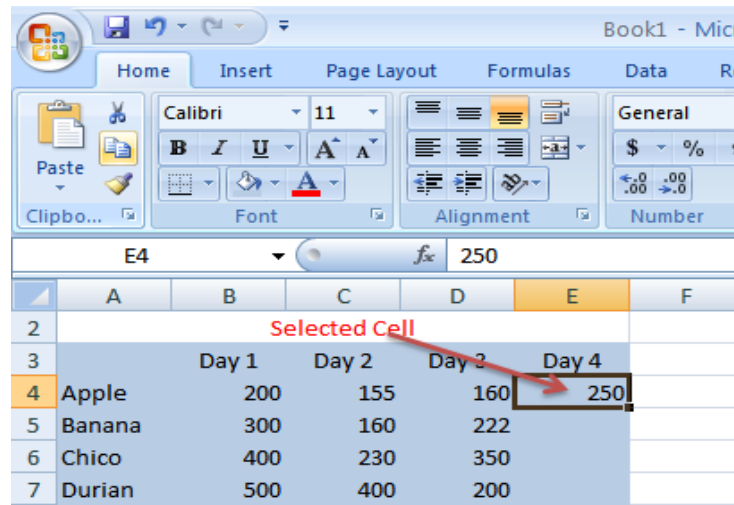
To select more than one adjoining cell:
- Left-click one of the cells.
- Drag the cursor until all the cells are selected.
- Release the mouse button.

The copied cell will **stay selected** until you perform your next task, or double-click the cell to **deselect** the cell.
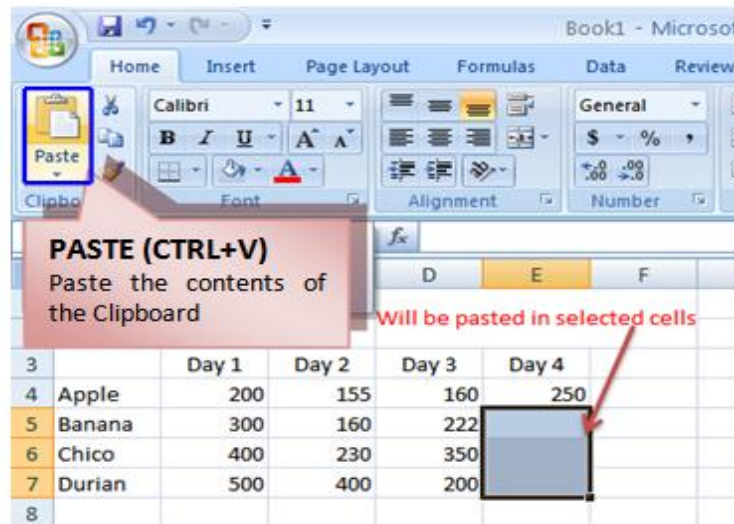
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To Cut and Paste Cell Contents:
- Select the **cell or cells** you wish to **copy**.
- Click the **Cut** command in the Clipboard group on the Home tab. The border of the selected cells will change appearance.
- Select the **cell or cells** where you want to **paste** the information.
- Click the **Paste** command. The cut information will be removed from the **original cells** and **now appear** in the new **cells**.
- **Keyboard shortcut** for Paste: **CTRL+V**.
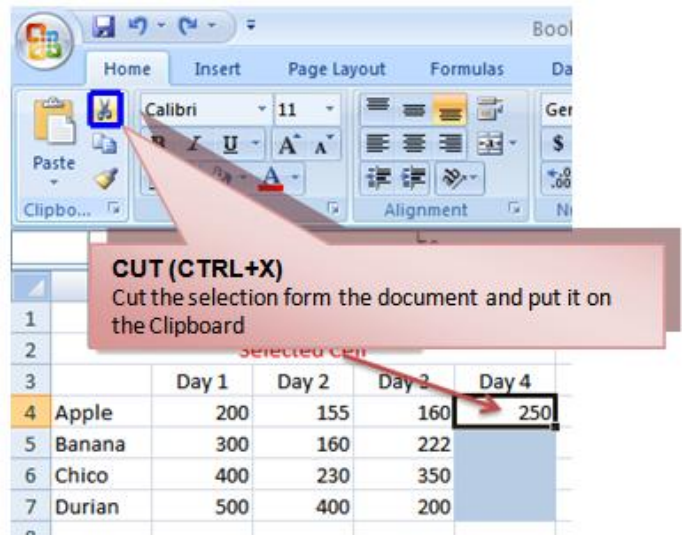
To Drag and Drop Information:
- Select the **cell or cells** you wish to move.
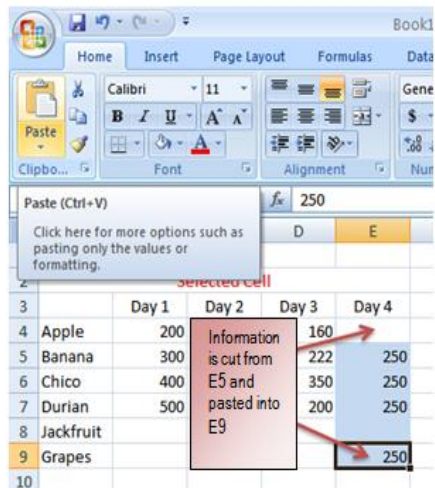
- Position your **mouse pointer** near one of the **outside edges** of the selected cells. The mouse pointer changes from a **large, white cross** to a **black cross with 4 arrows**.

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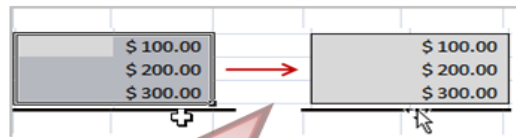
Pointer will change from white, block cross to black, thin cross with 4 arrows

- Left-click and **hold** the mouse button and **drag** the cells to the new location.
- Release the mouse button and the information appears in the new location.

As you drag the selected cells, the outline of the cells will change.

To Use the Fill Handle to Fill Cells:
- Position your cursor over the **fill handle** until the large white cross becomes a thin, black cross.
- Left-click your mouse and **drag it** until all the cells you want to fill are highlighted.
- Release the mouse button and all the selected cells are filled with the information from the original cell.

The fill handle in the bottom, right corner of the selected cell.

The fill handle doesn't **always** copy information from one cell directly into another cell. Depending on the data entered in the cell, it may fill the data in other ways. For example, if I have the formula =A1+B1 in cell C1, and I use the fill handle to fill the

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formula into cell C2, the formula doesn't appear the same in C2 as it does in C1. Instead of =A1+B1, you will see =A2+B2.

Day 2	Day 3	Day 4
155	160	250
160	222	300
230	350	
400	200	

You can use the fill handle to fill cells horizontally or vertically.
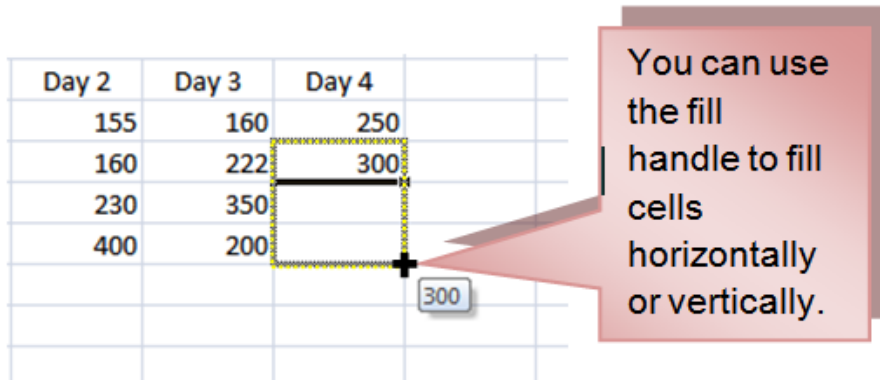
Chapter 7: Printing Workbooks

In this chapter, you will learn how to view the spreadsheet in print preview, modify margins, change the page orientation, use the scale to fit feature, use the Print Titles command, insert breaks, and more.
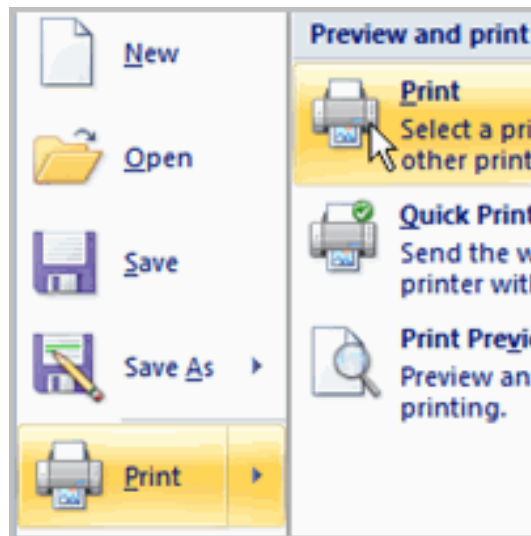
References:
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"Excel 2007 Tutorial" from www.fgcu.edu

Preparing to Print and Printing

To View the Spreadsheet in Print Preview:
- Left-click the **Microsoft Office Button**.
- Select **Print**.
- Select **Print Preview**. The spreadsheet will appear in Print Preview view.
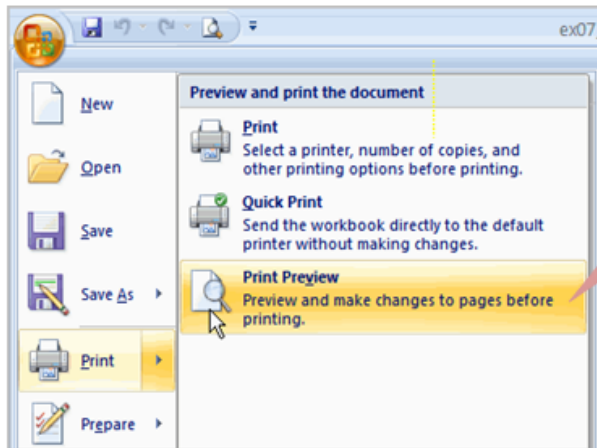
Exploring Print Preview:

Once you are in Print Preview, you can access many of the same features that you can from the Ribbon; however, inn Print Preview you can see how the spreadsheet will appear in printed format.

- Click the **Close Print Preview** button to return to the Normal View.

To make previewing your spreadsheet easier, add the **Print Preview** command to the Quick Access toolbar.

1. Tab indicates you are in Print Preview mode.
2. Provides you with the same print dialog box you can access from the Microsoft Office Button.
3. From here you can access many of the same options that are available from the Ribbon, such as Page Orientation and Scaling.
4. Toggles between zooming in and out of the spreadsheet.
5. Use these commands to move between the pages.
6. View and edit margin markers.
7. Close current view and return to spreadsheet.
8. Indicates number of pages and which page you are currently viewing.

To Modify Margins, Column Width, or Row Height While in Print Preview:
- Click the **Print Preview** command on the Quick Access toolbar, or select Print Preview from the Microsoft Office Button menu. The spreadsheet opens in print preview mode.
- Move your cursor over one of the **black margin markers** until a **double arrow** appears.

Left-click and drag the marker to the desired location. The change will be reflected in the spreadsheet.
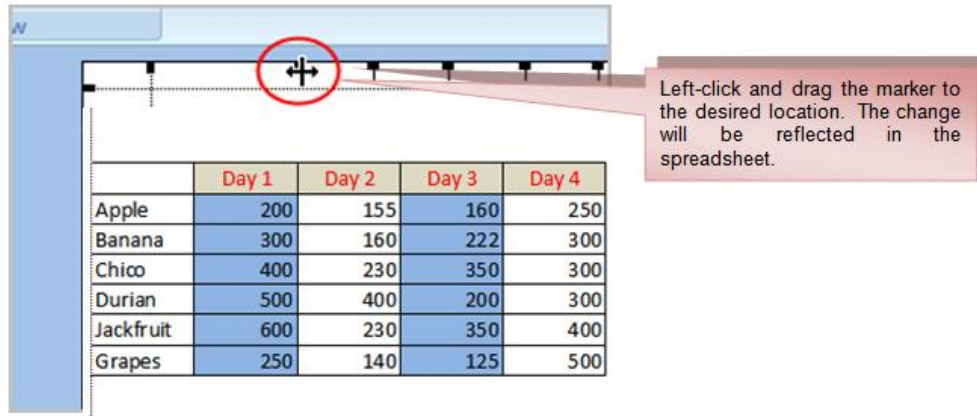
To Modify Margins:
- Select the **Page Layout** tab.
- Left-click the **Margins** command.
- Choose one of the predefined settings or enter custom margins.
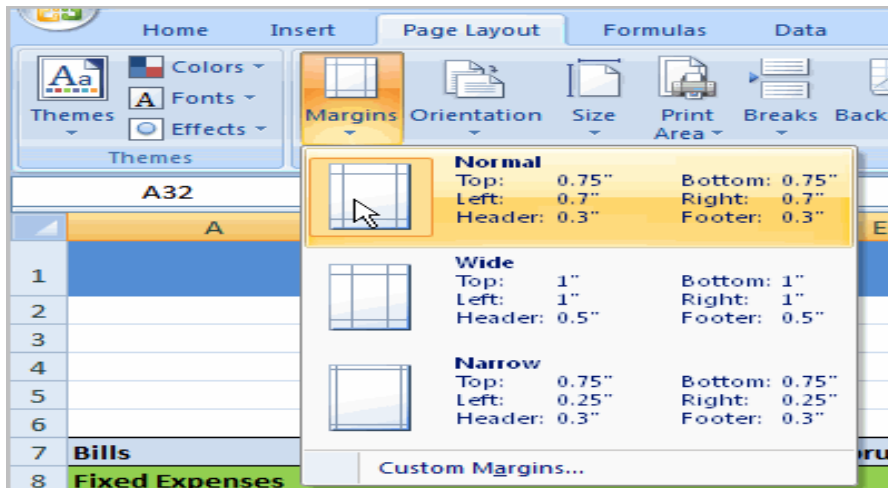
To Change Page Orientation:
- Select the **Page Layout** tab.
- Left-click the **Orientation** command.
- Select either Portrait or Landscape.
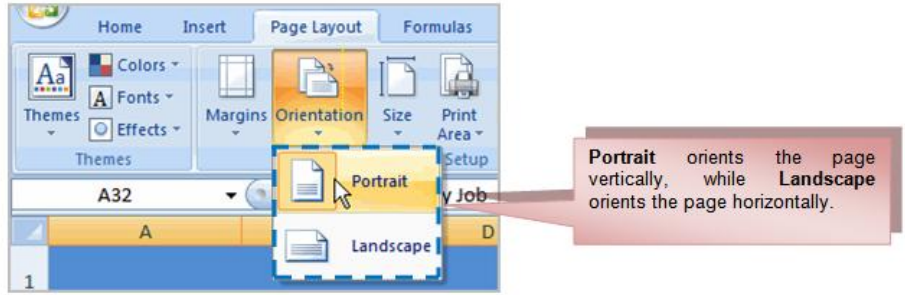
To Use Scale to Fit:
- Select the **Page Layout** tab.
- Locate the Scale to Fit group.
- Enter a specific **height** and **width**, or use the percentage field to decrease the spreadsheet by a specific percent.
- Scale to Fit is a useful feature that can help you format spreadsheets to fit on a page. Be careful with how small you scale the information -- it can become difficult to read!

To Change the Paper Size:
- Select the **Page Layout** tab.
- Click the **Size** command.
- Select a size option from the list.

To Define a Print Area:
- Left-click and drag your mouse to **select the cells** you wish to print.
- Click the **Print Area** command.
- Choose **Set Print Area**.

Note:
- The selected cells will print. To confirm this, view the spreadsheet in Print Preview.

To return to the default setting:
- Click the Print Area command
- Select Clear Print Area.
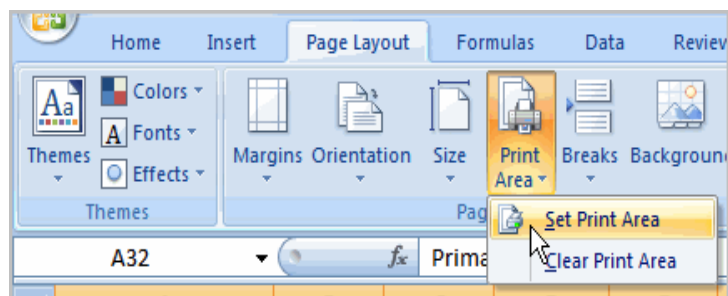
To Insert a Break:
- Select a cell **below** where you want the break to appear.
- Select the **Breaks** command.
- Select **Insert Break**.
- Click Print Preview to confirm the break appears in the correct place in your spreadsheet.

To Use the Print Titles command:

Print Titles command allows you to select **specific rows** and/or **columns** to appear on **each** printed sheet.
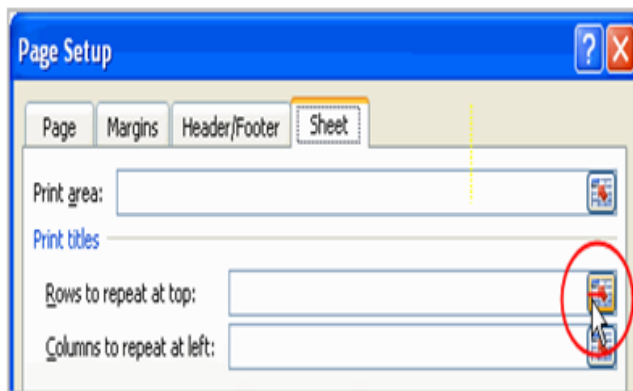
Select the first row in the spreadsheet that you want to appear on each **printed page**. Repeat for the column, if necessary.

Click **OK**.

- Select the **Page Layout** tab.
- Click the **Print Titles** command. The Page Setup dialog box appears.
- Click the icon at the end of the field.
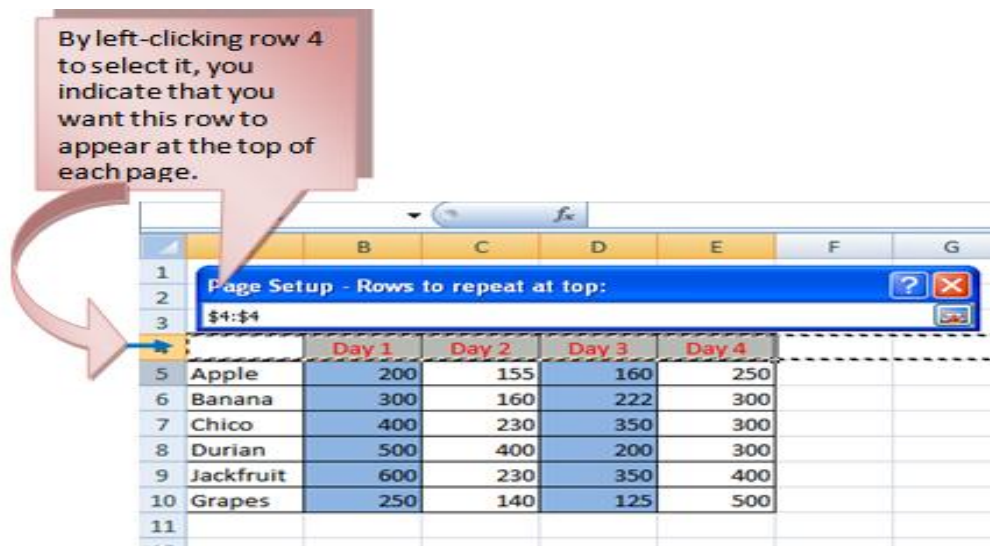
By left-clicking row 4 to select it, you indicate that you want this row to appear at the top of each page.

References:
Microsoft Office Excel Help
"Excel 2007 Tutorial" from www.fgcu.edu

To Print from the Microsoft Office Button:
- Left-click the **Microsoft Office Button**.
- Select **Print** → **Print**. The Print dialog box appears.
- Select a printer if you wish to use a printer other than the default setting.
- Click **Properties** to change any necessary settings.
- Choose whether you want to print specific pages, all of the worksheet, a selected area, the active sheet, or the entire workbook.
- Select the number of copies you'd like to print.
- Click **OK**.

You can select **Quick Print** to bypass the Print dialog box.
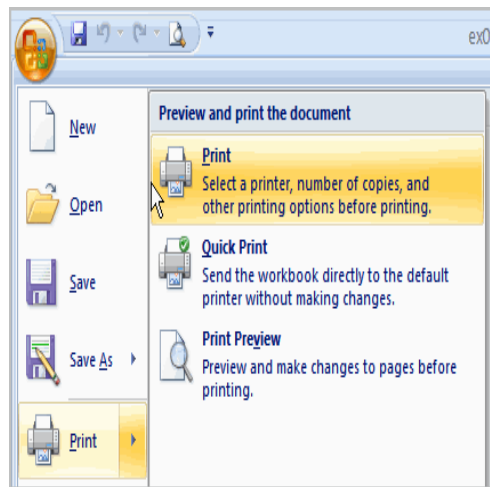
Chapter 8: Creating Complex Formulas

In this chapter, you will learn **complex formulas** that use multiple mathematical operators, and the use of **absolute** and **relative references**.

COMPLEX FORMULAS

Complex Formulas Defined

Simple formulas have **one** mathematical operation. **Complex formulas** involve **more than one** mathematical operation.
Simple Formula: =4+4

Complex Formula: =4+4*2
To calculate complex formulas correctly, you must perform certain operations before others. This is defined in the **order of operations**.

The Order of Mathematical Operations

The order of mathematical operations is very important. If you enter a formula that contains several operations, Excel knows to work those operations in a specific order. The **order of operations** is:

- Operations enclosed in parenthesis
- Exponential calculations (to the power of)
- Multiplication and division, whichever comes first
- Addition and subtraction, whichever comes first

A mnemonic that can help you remember this is **P**lease **E**xcuse **M**y **D**ear **A**unt **S**ally (P.E.M.D.A.S).

Example 1

Using this order, let us see how the formula **10/(4-2)*4-2** is calculated in the following breakdown:
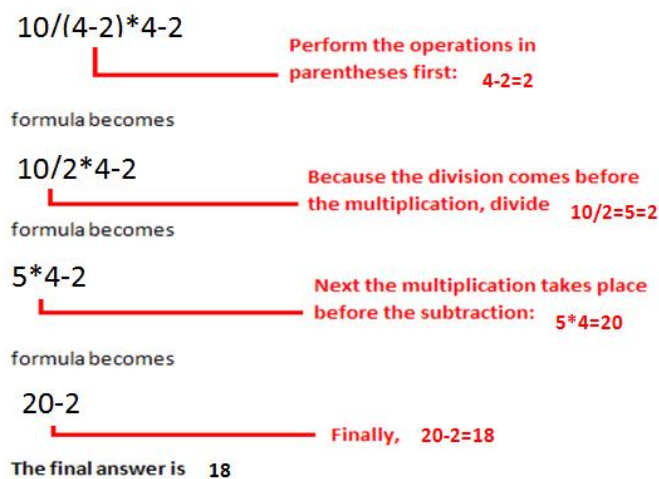
10/(4-2)*4-2
        Perform the operations in parentheses first: 4-2=2

formula becomes

10/2*4-2
        Because the division comes before the multiplication, divide 10/2=5=2

formula becomes

5*4-2
        Next the multiplication takes place before the subtraction: 5*4=20

formula becomes

20-2
        Finally, 20-2=18

The final answer is 18

Example 2

5+4*3=?

Is the answer 27 or 17? The answer is 17.

To Calculate the Correct Answer:
- Calculate 4*3 first because **multiplication** comes **before addition** in the order of operations. The answer is 12.
- Add the answer obtained in step #1, which is 12, to the number 5 that opened the equation. In other words, add 12 + 5.
- The answer is 17.

Order of operations by which Excel calculates the answer:

6*3/2	**Multiply** 6*3 **before** performing the **division** operation because the multiplication sign comes before the division sign. The answer is 9.
6/3*2	**Divide** 6 by 3 **before** performing the **multiplication** operation because the division sign comes before the multiplication sign. The answer is 4.
6/(3*2)	Perform the operation in **parentheses** (3*2) first and **divide** 6 by this result. The answer is 1.
6-3*2	**Multiply** 3*2 before performing the **subtraction** operation because the multiplication sign is of a higher order than the subtraction sign. The answer is 0.

Creating Complex Formulas

Excel **automatically** follows a **standard order of operations** in a complex formula. If you want a certain portion of the formula to be calculated first, put it in parentheses.

Example of How to Write a Complex Formula:
- Click the cell where you want the formula **result** to appear. In this example, H6.
- Type the equal sign (=) to let Excel know a formula is being defined.
- Type an open parenthesis, or (
- Click on the **first cell** to be included in the formula (G6, for example).
- Type the **addition sign (+)** to let Excel know that an add operation is to be performed.
- Click on the **second cell** in the formula (G7, for example)
- Type a close parentheses).

- Type the next mathematical operator, or the **division symbol (/)** to let Excel know that a division operation is to be performed.
- Type an open parenthesis, or (
- Click on the **third cell** to be included in the formula (D6, for example).
- Type the **addition sign (+)** to let Excel know that an add operation is to be performed.
- Click on the **fourth cell** to be included in formula. (D7, for example).
- Type a close parentheses).

Very Important: Press **Enter** or click the **Enter button** on the Formula bar. This step ends the formula.

To show fewer decimal places, you can just click the **Decrease Decimal** place command on the Home tab.

WHAT IS AN ABSOLUTE REFERENCE?

In previous chapters formulas in **cell references automatically adjust** to new locations when the formula is pasted into another cell. This is called a **relative reference**.

When the formula in H2 is copied and pasted into H3, the formula in H3 will appear as =F3*C3 because it is a relative reference.

References:
Microsoft Office Excel Help
"Excel 2007 Tutorial" from www.fgcu.edu

While **Absolute cell references** in a formula, **always** refer to the **same cell** or cell range in a formula. If a formula is copied to a different location, the absolute reference remains the same.

An absolute reference is designated in the formula by the addition of a **dollar sign ($)**. It can be preceded by the column reference or the row reference, or both. Examples of absolute referencing include:

A2:	The column and the row do not change when copied.
A$2:	The row does not change when copied.
$A2:	The column does not change when copied.

To Create an Absolute Reference:
- Select the cell where you wish to write the formula (in this example, H2)
- Type the equal sign (=) to let Excel know a formula is being defined.
- Click on the **first cell** to be included in the formula (F2, for example).
- Enter a mathematical operator (use the multiplication symbol for this example).
- Click on the **second cell** in the formula (C2, for example).
- Add a $ sign before the C and a $ sign before the 2 to create an absolute reference.

	SUM		fx	=F2*C2			
	C	D	E	F	G	H
1	Unit Cost	Units	Quantity	Inventory	Total Cost	
2	$ 50.00	1	box	2	$ 30.00	=F2*C2
3	$ 10.00	2	pcs	3	$ 50.00	
4	$ 20.00	3	pcs	2	$ 45.00	
5	$ 75.00	4	box	4	$ 35.00	
6	$ 15.00	5	box	5	$ 20.00	Absolute Reference

The $ sign makes this an absolute reference. Now, cell C2 will remain constant in the formula

Copy the formula into H3. The new formula should read =F3*C2. The F2 reference changed to F3 since it is a relative reference, but C2 remained constant since you created an absolute reference by inserting the dollar signs.

This is an absolute cell reference. C2 remained constant, while F2 changed to F3 when the formula was copied and pasted into H3.

Chapter 9: Working with Basic Functions

Functions are predefined formula that performs calculations using specific values in a particular order.

In this chapter, you will learn how to use basic functions such as SUM and AVG, use functions with more than one argument, and how to access the other Excel 2007 functions.
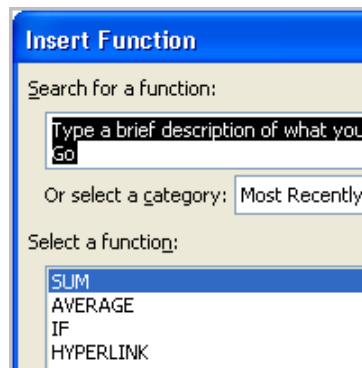
BASIC FUNCTIONS

The Parts of a Function:

Each function has a specific order, called **syntax**, which must be strictly followed for the function to work correctly.
Syntax Order:
- All functions begin with the = sign.
- After the = sign define the **function name** (e.g., Sum).
- Then there will be an **argument**. An argument is the cell range or cell references that are enclosed by parentheses. If there is more than one argument, separate each by a comma.

References:
Microsoft Office Excel Help
"Excel 2007 Tutorial" from www.fgcu.edu

An example of a function with one argument that adds a range of cells, A3 through A9:
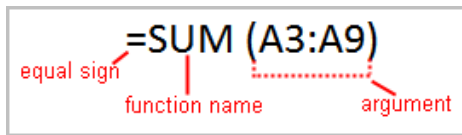
An example of a function with **more than one argument** that calculates the sum of two cell ranges:
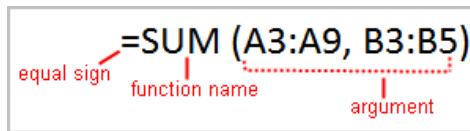
Excel has hundreds of different **functions** to assist you with your calculations.

EXCEL'S DIFFERENT FUNCTIONS

Some of the most common functions include:

Statistical Functions:
- **SUM** - summation adds a range of cells together.
- **AVERAGE** - average calculates the average of a range of cells.
- **COUNT** - counts the number of chosen data in a range of cells.
- **MAX** - identifies the largest number in a range of cells.
- **MIN** - identifies the smallest number in a range of cells.

Financial Functions:
- **Interest Rates**
- **Loan Payments**
- **Depreciation Amounts**
- **Date and Time functions:**
- **DATE** - Converts a serial number to a day of the month
- **Day of Week**
- **DAYS360** - Calculates the number of days between two dates based on a 360-day year
- **TIME** - Returns the serial number of a particular time
- **HOUR** - Converts a serial number to an hour
- **MINUTE** - Converts a serial number to a minute
- **TODAY** - Returns the serial number of today's date
- **MONTH** - Converts a serial number to a month
- **YEAR** - Converts a serial number to a year

To Calculate the Sum of a Range of Data Using AutoSum:
- Select the **Formulas** tab.
- Locate the **Function Library** group. From here, you can access all the available functions.
- Select the cell where you want the function to appear. In this example, select G14.
- Select the drop-down arrow next to the **AutoSum** command.
- Select **Sum**. A formula will appear in the selected cell, G14.
- Press the **Enter key** or **Enter button** on the formula bar. The total will appear.
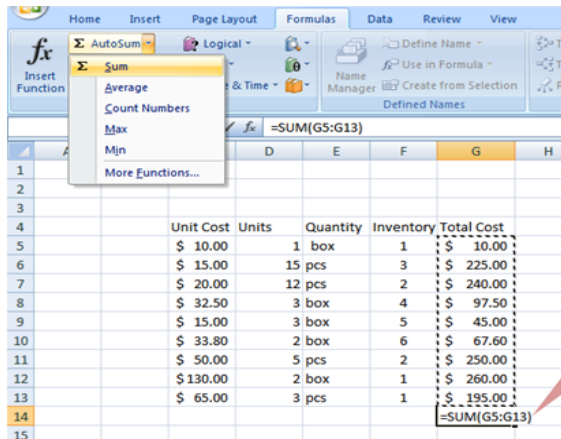
This formula, =SUM(G5:G13), is called a function. An AutoSum command automatically selects the range of cells from G5 to G13, based on where you inserted the function. You can alter the cell range, if necessary.

To Edit a Function:
- Select the cell where the **function is defined**.
- Insert the cursor in the formula bar.
- **Edit the range** by deleting and changing necessary cell numbers.
- Click the **Enter** icon.
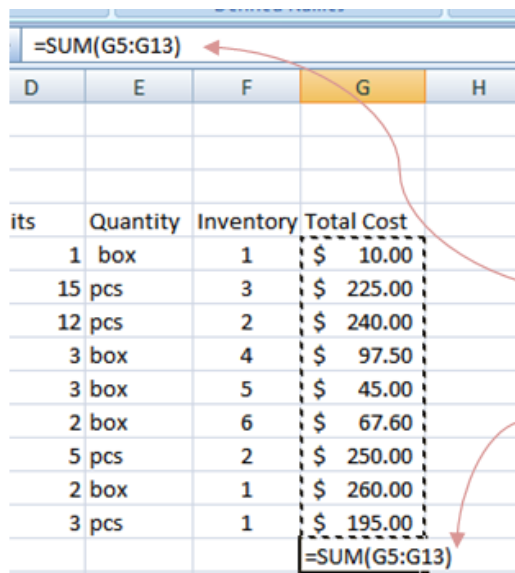
You can edit a range in the formula bar or the cell. To edit in the cell, double click the cell to view the formula.

References:
Microsoft Office Excel Help
"Excel 2007 Tutorial" from www.fgcu.edu

To Calculate the Sum of Two Arguments:
- Select the **cell** where you want the **function to appear**. In this example, G16.
- Click the **Insert Function** command on the Formulas tab. A dialog box appears.
- SUM is selected by default.
- Click **OK** and the **Function Arguments** dialog box appears so that you can enter the range of cells for the function.
- Insert the cursor in the **Number 1** field.
- In the spreadsheet, select the **first range of cells**. In this example, G5 through G9. The argument appears in the Number 1 field.
- Click **OK** in the dialog box and the **sum of the two ranges** is calculated.
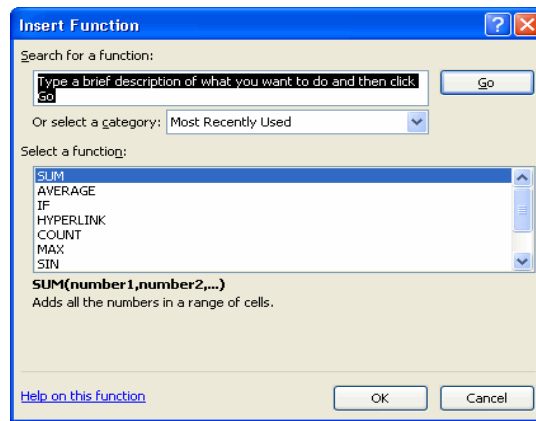
To Calculate the Average of a Range of Data:
- Select the cell where you want the function to appear.
- Click the drop-down arrow next to the AutoSum command.
- Select Average.
- Click on the **first cell** (in this example, C8) to be included in the formula.
- Left-click and **drag** the mouse to define a cell range (C8 through cell C20, in this example).
- Click the Enter icon to calculate the average.
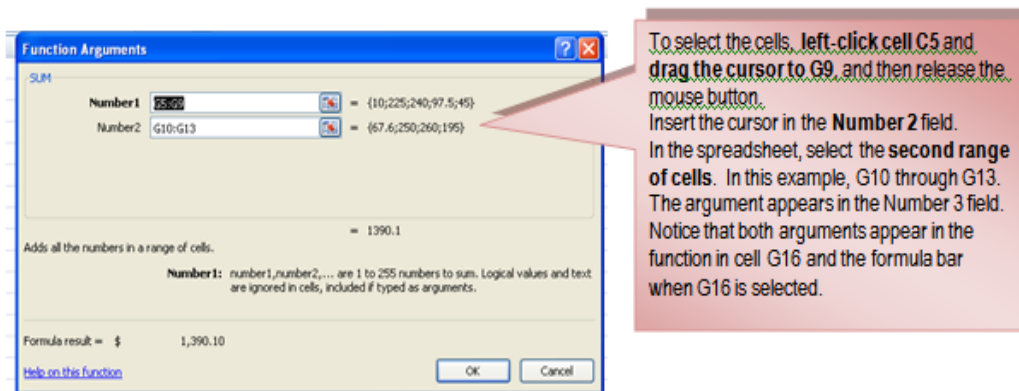
To select the cells, **left-click cell C5** and **drag the cursor to G9**, and then release the mouse button.
Insert the cursor in the **Number 2** field.
In the spreadsheet, select the **second range of cells**. In this example, G10 through G13. The argument appears in the Number 3 field.
Notice that both arguments appear in the function in cell G16 and the formula bar when G16 is selected.

ACCESSING EXCEL 2007 FUNCTIONS

To Access Other Functions in Excel:

- Select a cell range to be included in the formula.
- On the Formulas tab, click on the drop-down part of the **AutoSum** button.
- If you don't see the function you want to use (Sum, Average, Count, Max, Min), display additional functions by selecting **More Functions**.

The **Insert Function** dialog box opens.

Chapter 10: Sorting and Filtering Cells

In this chapter, you will learn how to **sort** and **filter** data in various ways that will enable you to most effectively and efficiently use spreadsheets to locate and analyze information.

SORTING

Sorting lists is a common spreadsheet task that allows you to easily reorder your data. The most common type of sorting is alphabetical ordering in ascending or descending order.
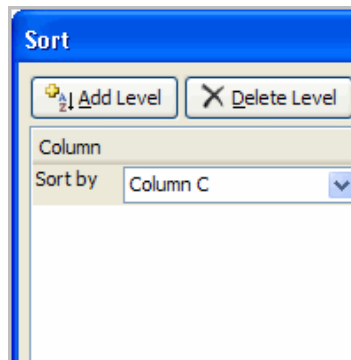
To Sort in Alphabetical Order:
- Select a cell in the column you want to sort (In this example, we choose a cell in column A).
- Click the **Sort & Filter** command in the **Editing** group on the Home tab.
- Select **Sort A to Z**. Now the information in the Category column is organized in alphabetical order.
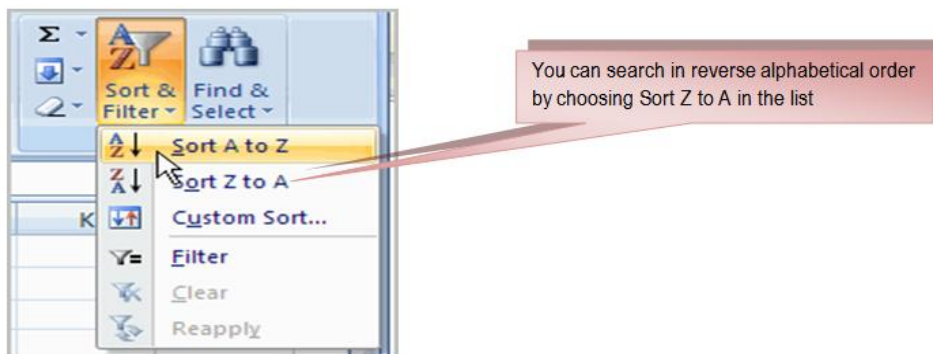
To Sort from Smallest to Largest:
- Select a cell in the column you want to sort (a column with numbers).
- Click the **Sort & Filter** command in the **Editing** group on the Home tab.
- Select **From Smallest to Largest**. Now the information is organized from the smallest to largest amount.

References:
Microsoft Office Excel Help
"Excel 2007 Tutorial" from www.fgcu.edu

You can sort in **reverse numerical order** by choosing **From Largest to Smallest** in the list.
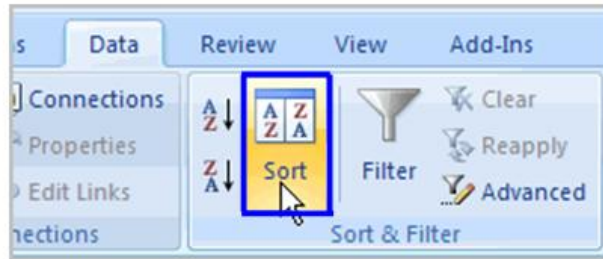
To Sort Multiple Levels:
- Click the **Sort & Filter** command in the **Editing** group on the Home tab.
- Select **Custom Sort** from the list to open the dialog box.

  or
- Select the **Data** tab.
- Locate the **Sort and Filter** group.
- Click the **Sort** command to open the **Custom Sort** dialog box. From here, you can sort by one item, or multiple items.
- Click the drop-down arrow in the **Column Sort by** field, and choose one of the options. In this example, Category.
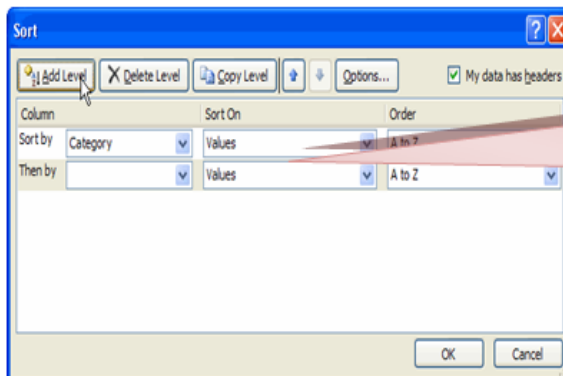
Select an option in the **Column Then By** field. In this example, we chose Unit Cost.

Choose what to **sort on**. In this example, we'll leave the default as Value.
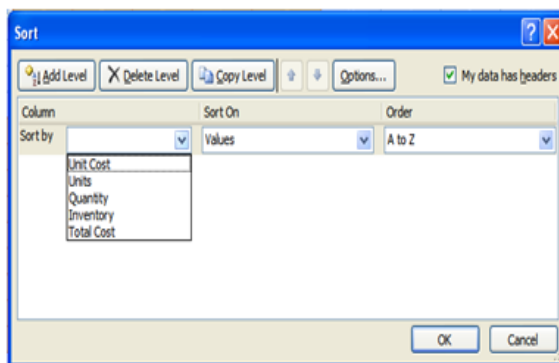
Choose what to **sort on**. In this example, we'll leave the default as **Value**.
Choose how to order the results. Leave it as **A to Z** so it is organized so it is organized alphabetically. Click **Add Level** to add another item to sort by.

The spreadsheet has been sorted. All the categories are organized in alphabetical order, and within each category, the unit cost is arranged from smallest to largest.
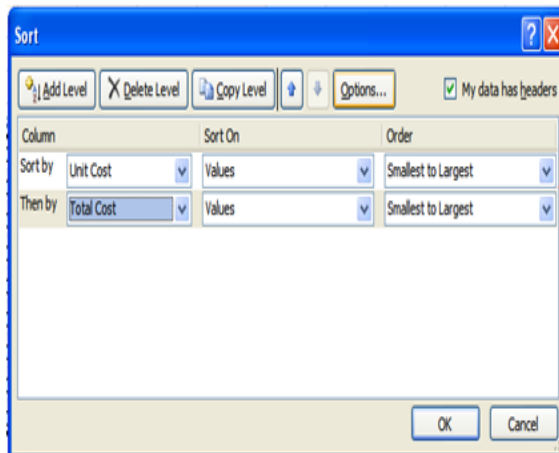
Choose how to **order the results**. Leave it as **smallest to largest**.

Click **OK**.

FILTERING CELLS

Filtering or temporarily hiding of data in a spreadsheet. It allows you to focus on specific spreadsheet entries.

To Filter Data:

Click the drop-down arrow next to the heading you would like to filter. For example, if you would like to only view data regarding **Apple**, click the drop-down arrow next to **Fruits**.

References:
Microsoft Office Excel Help
"Excel 2007 Tutorial" from www.fgcu.edu

Click the **Filter** command on the **Data** tab. Drop-down arrows will appear beside each column heading.

To Clear One Filter:
- Select one of the drop-down arrows next to a filtered column.
- Choose **Clear Filter From...**.
- To remove all filters, click the Filter command.

Select one of the droop-down arrows next to a filtered column.

Choose **Clear Filter From**....

Uncheck Select All.
Choose Apple.
Click OK.
All other data will be filtered, or hidden, and only the Apple data is visible

References:
Microsoft Office Excel Help
"Excel 2007 Tutorial" from www.fgcu.edu

Chapter 11: Formatting Tables

In this chapter, you will learn how to use the **predefined tables styles** in Excel 2007 and some of the **Table Tools** on the Design tab.

To Format Information as a Table:
- Left-click a **table style** to select it.
- A dialog box will appear. Excel has **automatically selected the cells** for your table. The cells will appear selected in the spreadsheet and the range will appear in the dialog box.
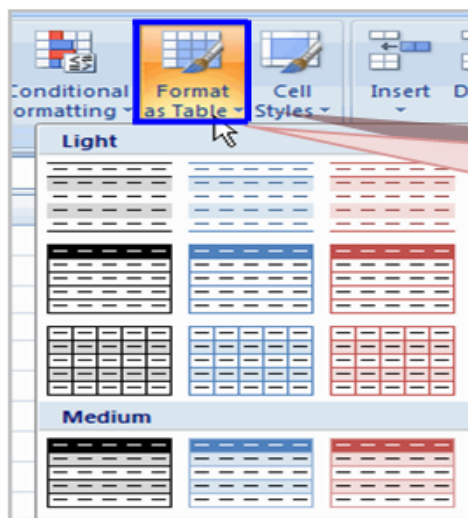
Select any cell that contains any information.
Click the **Format as Table** command in the **Style** group on the Home tab. A list of predefined tables will appear.

- Change the **range** listed in the field, if necessary.
- Verify the box is selected to indicate your table has **headings**, if it does. Deselect this box if your table does not have column headings.
- Click OK. The table will appear formatted in the style you chose.
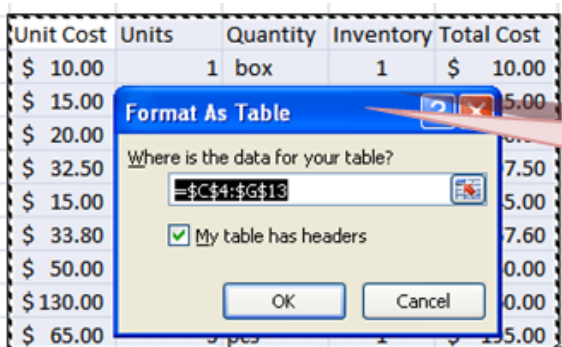
In addition to using the **Format as Table** command, you can also select the **Insert** tab, and click the **Table** command to insert a table.

By default, the table will be set up with the **drop-down arrows in the header** so that you can filter the table, if you wish.

To Modify a Table:
- Select **any cell** in the table. The Table Tools Design tab will become active. From here you can modify the table in many ways.
- When you apply a table style, filtering arrows automatically appear. To **turn off filtering**, select the Home tab, click the **Sort & Filter** command, and select **Filter** from the list.
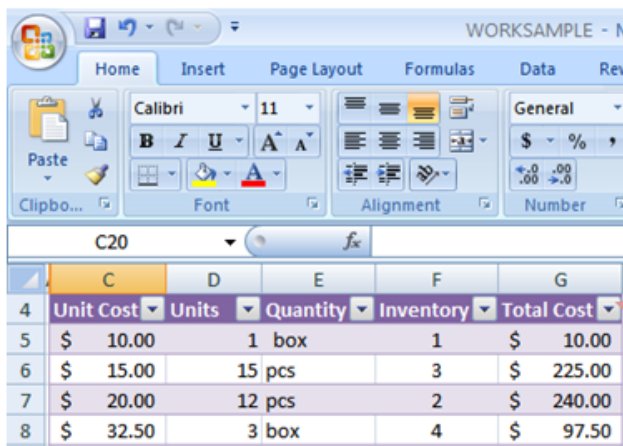
You can:
Select a **different table** in the **Table Styles Options** group. Click the **More** drop-down arrow to see more tables styles.
Delete or add a **Header Row** in the Table Styles Options group.
Insert a **Total Row** in the Table Styles Options group.
Remove or add **banded rows or columns**.
Make the first and last columns **bold**.
Name your table in the Properties group.
Change the cells that make up the table by clicking **Resize Table**.

Chapter 12: Aligning Text

In this chapter, you will learn how to left, center, and right align text, merge and center cells, vertically align text, and apply different types of text control.
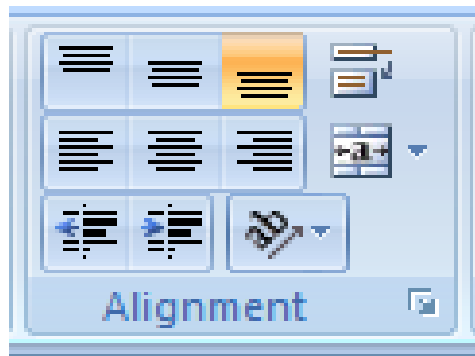
FORMATTING CELLS

Aligning Text

Text and numbers can be defined as left-aligned, right-aligned or centered in Excel.
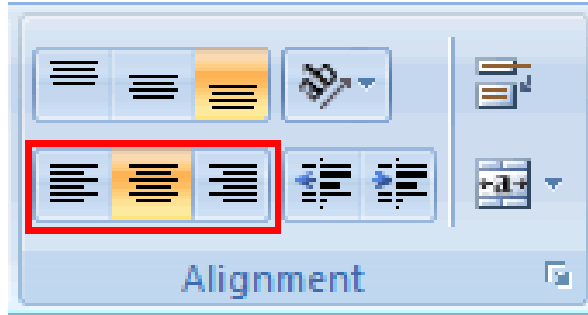
To Align Text or Numbers in a Cell:
- Select a cell or range of cells
- Click on either the **Align Left, Center** or **Align Right** commands on the Home tab.

The text or numbers in the cell(s) take on the selected alignment treatment.
- Left-click a column label to select the entire column, or a row label to select an entire row.

CHANGING VERTICAL CELL ALIGNMENT

To Change Vertical Alignment from the Alignment Group:
- Select a cell or range of cells.
- Click the Top Align, Center, or Bottom Align command.

CHANGING TEXT CONTROL

There are two common types of Text control:
- **Wrapped Text**
- **Merge Cells.**

The **Wrapped Text** wraps the contents of a cell across several lines if it's too large than the column width. It increases the height of the cell as well.

Cell H9 without Text Wrap Applied

Cell H9 with Text Wrap Applied
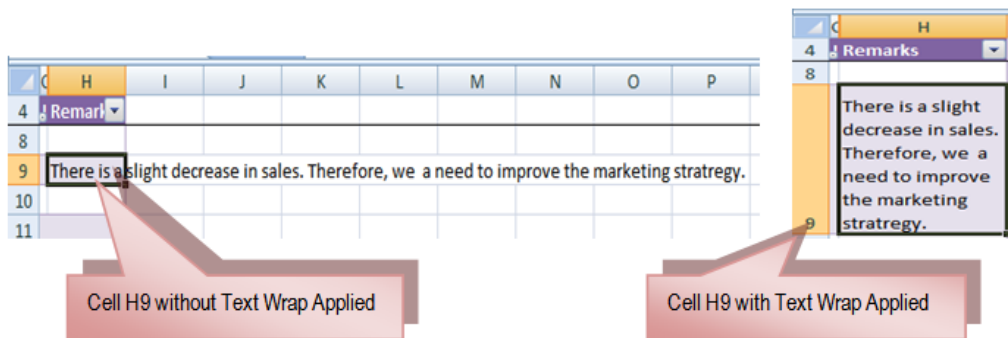
Merge Cells can also be applied by using the **Merge and Center** button on the Home tab.

To Change Text Control:
- Select a cell or range of cells.
- Select the Home tab.
- Click the **Wrap Text** command or the **Merge and Center** command.

Chapter 13: Working with Worksheets

NAMING WORKSHEETS

To Name a Worksheet:
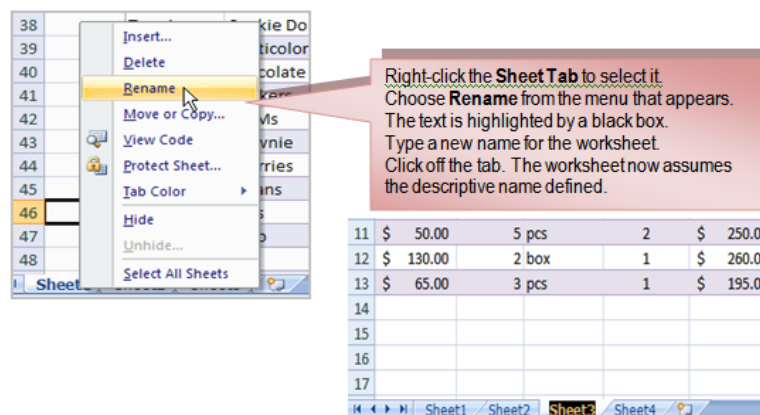
or

Click the **Format command** in the **Cells group** on the Home tab.
Select **Rename Sheet**. The text is highlighted by a black box.
Type a new name for the worksheet.
Click off the tab. The worksheet now assumes the descriptive name defined.
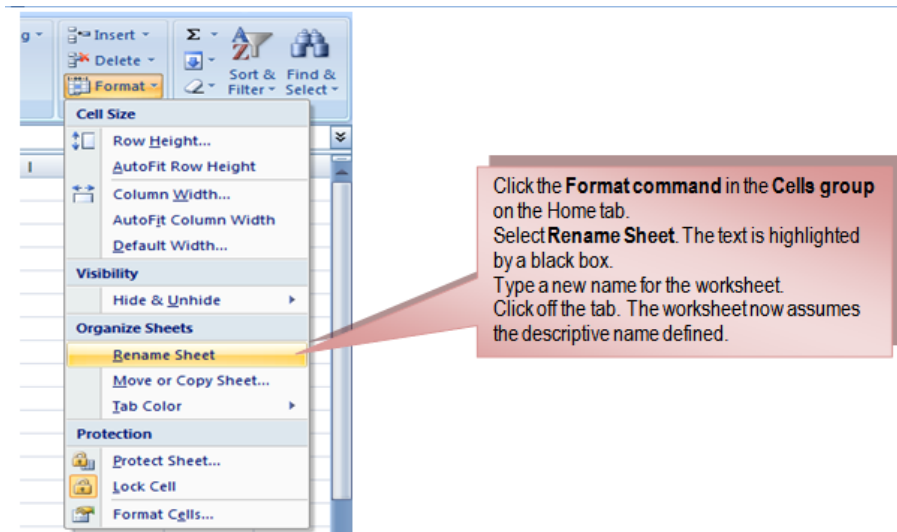
INSERTING WORKSHEETS

To Insert a New Worksheet:
- Left-click the **Insert Worksheet** icon. A new sheet will appear. It will be named Sheet4, Sheet5 or whatever the next sequential sheet number may be in the workbook.

    or
- Press the **Shift** and the **F11** keys on your keyboard.

Insert Worksheet (Shift+F11)

Deleting Worksheets

Any worksheet can be **deleted** from a workbook, including those that have data in it. **A workbook must contain at least one worksheet.**

References:
Microsoft Office Excel Help
"Excel 2007 Tutorial" from www.fgcu.edu

To Delete One or More Worksheets:
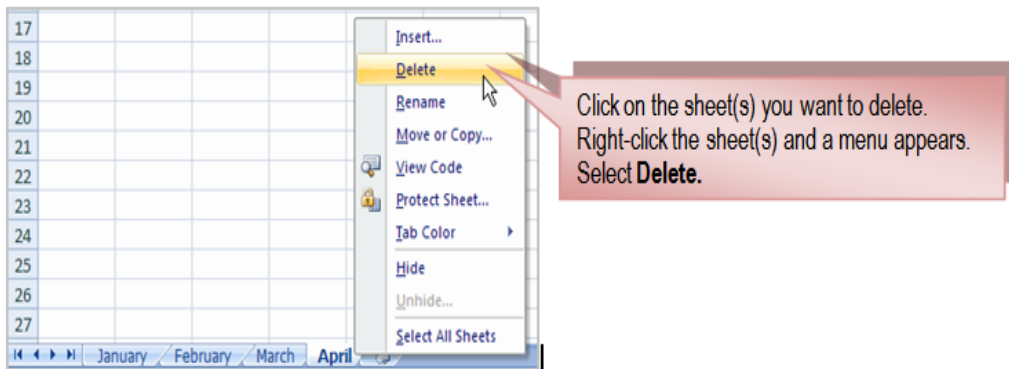
or
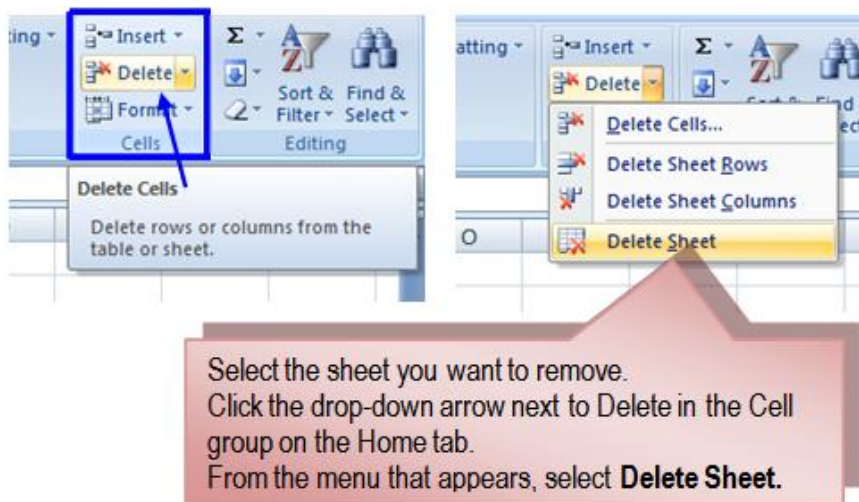
GROUPING AND UNGROUPING WORKSHEETS

Worksheets can be combined together into a group. **Grouping** worksheets allows you to apply identical formulas across all the worksheets.

To Group Contiguous Worksheets:
- Select the **first sheet** you want to group.
- Press and hold the **Shift key** on your keyboard.
- Click the **last sheet** you want to group.
- **Release** the Shift key.

Make any changes to one sheet and the changes will appear in all the grouped sheets.

To Group Non-Contiguous Sheets:
- Select the **first sheet** you want to group.
- Press and hold the **Ctrl key** on your keyboard.
- Click the **next sheet** you want to group.
- Continuing clicking the sheets you want to group.
- **Release** the Control key.

The sheets are now grouped. The sheet tabs will appear white for the grouped sheets. Only the sheets selected are part of the group.
Make any changes to one sheet and the changes will appear in all the grouped sheets.

To Ungroup Worksheets:
- Right-click one of the sheets.
- Select **Ungroup** from the list.

FREEZING WORKSHEET PANES

To Freeze a Row:
- Select the row **below** the one that you want frozen. For example, if you want row 1 & 2 to appear at the top even as you scroll, then select row 3.
- Click the **View** tab.
- Click the **Freeze Pane** command in the Window group.

- Choose **Freeze Panes**. A thin, black line appears **below** everything that is frozen in place.
- Scroll down in the worksheet to see the pinned rows.
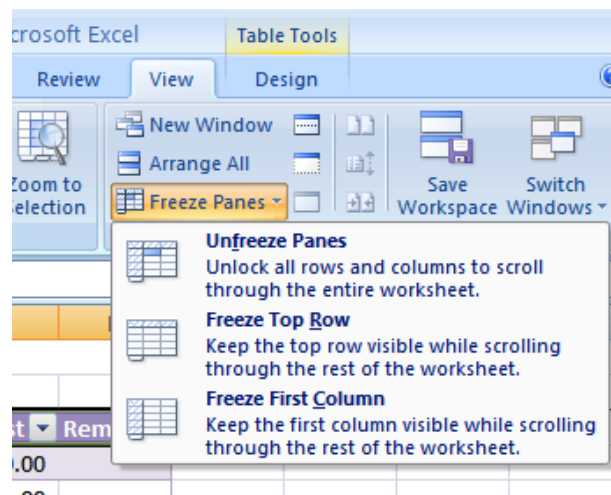
To Unfreeze a Pane:
- Click the **Freeze Pane** command.
- Select the **Unfreeze** command.

To Freeze a Column:
- Select the column to the **right** of the column(s) you want frozen. For example, if you want columns A & B to always appear on the left, just select column C.
- Click the **View** tab.
- Click the **Freeze Pane** command in the Window group.

References:
Microsoft Office Excel Help
"Excel 2007 Tutorial" from www.fgcu.edu

- Choose **Freeze Pane**. A thin, black line appears to the **right** of the frozen area.
- Scroll across in the worksheet to see the pinned columns.

Thin black line indicates the selected rows are **"pinned" or frozen** at the top of the worksheet.

		D	E	F
1			JAPS Marketing Incorporated	
2				
9	$ 33.80	2 box	6	
10	$ 50.00	5 pcs	2	
11	$ 130.00	2 box	1	
12	$ 65.00	3 pcs	1	
13				
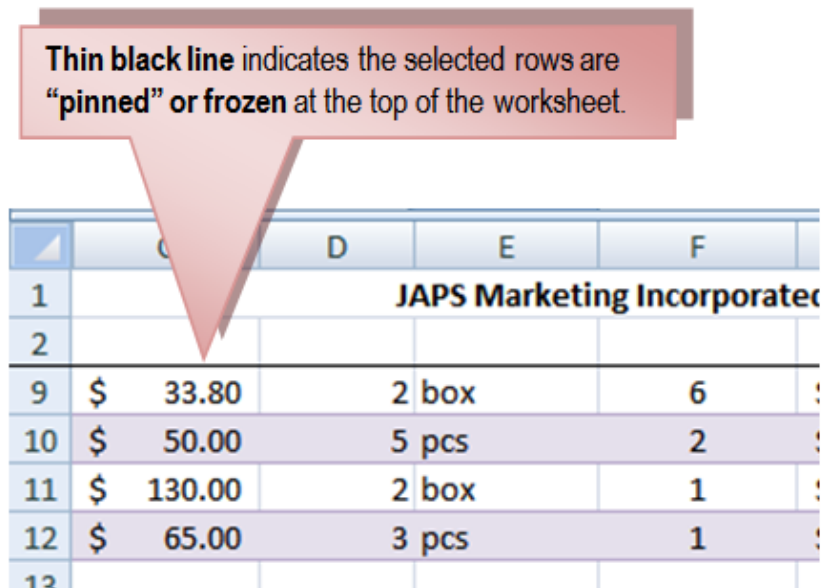
Chapter 14: Sample Exercises

MULTIPLE CHOICE

1. A function inside another function is called _____
   A. Nested function
   B. Round function
   C. Sum function
   D. Text function

2. Formulas in Excel start with
   A. %
   B. =
   C. +
   D. –

3. The default header for a worksheet is
   A. Username
   B. Date and Time
   C. Sheet tab Name
   D. None

4. Which of the following methods will not enter data in a cell?
   A. Pressing the Esc key
   B. Pressing an arrow key
   C. Pressing the tab key
   D. Clicking the enter button to the formula bar

5. The cell reference for cell range of G2 to M12 is _____
   A. G2.M12
   B. G2;M12
   C. G2:M12
   D. G2-M12

6. What is the keyboard shortcut for creating a chart from the selected cell range?
   A. F2
   B. F4
   C. F8
   D. F11

7. The Software which contains rows and columns is called _____
   A. Database
   B. Drawing
   C. Spreadsheet
   D. Word processing

8. You can group noncontiguous worksheets with
   A. The alt+enter key
   B. The ctrl key and mouse
   C. The shift key and the mouse
   D. The group button on the standard toolbar

9. The spelling tool is placed on _____ toolbar
   A. Standard
   B. Formatting
   C. Drawing
   D. Reviewing

10. If you need a text to show vertically in a cell. How will you achieve this?
   A. Choose Vertical on Text alignment in Format Cells dialog box
   B. Choose 90 Degrees in Orientation of Format Cells dialog box
   C. Choose Distributed from the Vertical drop down list of Format Cells dialog box
   D. Choose Center Across Selection from Horizontal combo box in Format Cells dialog box

11. You can automatically adjust the size of text in a cell if they do not fit in width by

A. Double clicking on the right border of column header
B. From Format choose Columns and then Autofit Selection
C. From Format Cells dialog box mark Shrink to fit check box
D. All of above

12. Formatting a cell in Currency, you can specify
    A. Decimal Places
    B. Currency Symbol
    C. Both of above
    D. None of above

13. Formatting a cell in Number format you can't set
    A. Decimal Places
    B. Use 1000 separator
    C. Negative numbers
    D. Currency Symbol

14. Merge cells option can be applied from
    A. Format Cells dialog box Alignment Tab
    B. Formatting toolbar
    C. Both of above
    D. None of above

15. How can you remove borders applied in cells?
    A. Choose None on Border tab of Format cells
    B. Open the list on Border tool in Formatting toolbar then choose first tool (no border)
    C. Both of above
    D. None of above

16. Where can you set the shedding color for a range of cells in Excel?
    A. Choose required color form Patterns tab of Format Cells dialog box
    B. Choose required color on Fill Color tool in Formatting toolbar
    C. Choose required color on Fill Color tool in Drawing toolbar
    D. All of above

17. You can auto fit the width of column by
    A. Double clicking on the column name on column header
    B. Double click on the cell pointer in worksheet
    C. Double clicking on column right border on column header
    D. Double clicking on the column left border of column header

18. Long text can be broken down into many lines within a cell. You can do this through

A. Wrap Text in Format >> Cells
B. Justify in Edit >> Cells
C. Text Wraping in Format >> Cells, Layout tab
D. All of above

19. MS Excel provides the default value for step in Fill Series dialog box
A. 0
B. 1
C. 5
D. 10
E. None of above

20. Ctrl + D shortcut key in Excel will
A. Open the font dialog box
B. Apply double underline for the active cell
C. Fill down in the selection
D. None of above

21. The short cut key Ctrl + R is used in Excel to
A. Right align the content of cell
B. Remove the cell contents of selected cells
C. Fill the selection with active cells to the right

22. Edit >> Delete command
A. Deletes the content of a cell
B. Deletes Formats of cell
C. Deletes the comment of cell
D. Deletes selected cells

23. To remove the content of selected cells you must issue _____ command
A. Edit >> Delete
B. Edit >> Clear >> Contents
C. Edit >> Clear >> All
D. Data >> Delete

24. The Delete key of keyboard is assigned to which command in Excel?
A. Edit >> Clear >> Contents
B. Edit >> Clear >> All
C. Edit >> Delete
D. All of above

25. By default Excel provides 3 worksheets. You need only two of them, how will you delete the thirdone?

A. Right click on Sheet Tab of third sheet and choose Delete from the context menu

B. Click on Sheet 3 and from Edit menu choose Delete

C. Both of above

D. None of above

26. Which of the following action removes a sheet from workbook?
    A. Select the sheet, then choose Edit >> Delete Sheet
    B. Select the sheet then choose Format >> Sheet >> Hide
    C. Both of above
    D. None of above

27. While Finding and Replacing some data in Excel, which of the following statement is valid?
    A. You can Find and Replace within the sheet or workbook
    B. Excel does not have option to match case for find
    C. Both are valid
    D. None are valid

28. You can move a sheet from one workbook into new book by
    A. From Edit menu choose Move or Copy sheet, mark the Create a ccopy and Click OK
    B. From Edit menu choose Move of Copy then choose (Move to end) and click OK
    C. From Edit menu choose Move or Copy then select (new book) from To Book list and click OK
    D. None of above

29. The number of rows in a worksheet is
    A. 36500
    B. 1,048,576
    C. 256
    D. 64536

30. When a formatted number does not fit within a cell, it displays
    A. #####
    B. #DIV/0
    C. #DIV@
    D. None of these

31. What symbol is used to enter number as text?
    A. '

B. "
C. =
D. +

32. Data can be arranged in ascending or descending order by using
    A. Sort command from Insert tab
    B. Sort command from Data tab
    C. Sort command from Review tab
    D. None of these

33. To select multiple non-adjacent cells in a worksheet you will click them holding
    A. CTRL key
    B. ALT key
    C. Shift Key
    D. Ctrl+Shift key

34. How many sheets are there in Excel Workbook by default?
    A. 2
    B. 3
    C. 4
    D. 5

35. Which of the following component displays the contents of active cell?
    A. Name box
    B. Formula bar
    C. Menu bar
    D. Status bar

36. To move to the previous worksheet press
    A. Ctrl+PgUp
    B. Ctrl+PgDn
    C. Shift+Tab
    D. Ctrl+Tab

37. The accounting style shows negative numbers in
    A. Bold
    B. Brackets
    C. Paranthesis
    D. Quotes

38. When you create two or four separate windows containing part of the spreadsheet that can be viewed, you have created

A. sections
B. panes
C. views
D. subsheets

39. The process of identifying specific rows and columns so that so that certain columns and rows are always visible on the screen is called
    A. freezing
    B. locking
    C. selecting
    D. fixing

40. A quick way to return to a specific area of a worksheet is to type in the _____
    A. Name box
    B. Formula bar
    C. Zoom box
    D. None of these

41. Which keyboard shortcut opens the Go To dialog box?
    A. Ctrl + B
    B. Ctrl + Shift + B
    C. F2
    D. F5

42. Which task does the icon in the given image perform?

    A. Add a worksheet
    B. Save a worksheet
    C. Delete a worksheet
    D. Rename a worksheet
    E. Create a folder to save a worksheet

ICDL TYPE OF EXAM

1. Open the Spreadsheet application. Create a new worksheet by typing all text and numbers shown in the spreadsheet below. Start typing at cell A1.

	A	B	C	D	E	F	G
	A17			f_x			
1	Travel Expenses for the Month of June 2014						
2							
3	Sales Rep	Week 1 Km	Week 2 Km	Week 3 Km	Week 4 Km	Total Km Trave	Amount Due
4	Piolo San Jose	150	230	95	186	?	?
5	John Santos	210	309	120	95	?	?
6	Jericho Matias	105	126	142	86	?	?
7	Gabriel Cuneta	155	148	162	135	?	?
8	Julian Tan	110	152	133	122	?	?
9	Tony Barrientos	108	123	121	111	?	?
10	Anne Cortez	106	164	153	145	?	?
11	Kim Tiu	101	132	135	162	?	?
12	Albert Madrigal	198	205	210	187	?	?
13	Angel Sentillas	200	220	225	232	?	?
14							
15							

2. Apply the type font in Arial with size 12 for all the data.

3. Format all numbers in comma style.

4. Center the spreadsheet heading "Travel Expenses for the Month of June 2014" across the spreadsheet. Format the heading to Elephant and change to size 16. Change the font color with the color of your choice.

5. Format cell range A3:G3 into 45 degrees with center alignment and text control of shrink to fit. Fill color the range of cells with color of your choice.

6. Create a formula to display the Total Km Travelled for each sales rep.

7. Create formula to calculate the amount due to each sales rep on the basis that each rep is reimbursed 0.63 cents per kilometer travelled.

8. Apply all borders and shading (color). Feel free to experiment with your own color schemes.

9. Sort the data who incurred the highest to lowest travel expenses.

10. Save the worksheet with filename ***Travel underscore your First name underscore Last name.xls*** at My Document folder.