



University Information  
Technology Services

# Microsoft Excel 2010

## Level 1



University Information Technology Services

Outreach, Training, Learning Technologies &  
Video Production

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# University Information Technology Services

## Excel 2010 Level 1

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## Introduction

This booklet is the companion document to the Excel 2010 Level 1 workshop. It includes an introduction to the Microsoft Office 2010 interface, and covers the various aspects of creating, formatting, editing, saving, and printing a document in Word 2010.

## Learning Objectives

After completing the instructions in this booklet, you will be able to:

- *Identify the components of the Office 2010 interface*
- *Be familiar with the layout of the spreadsheet*
- *Have the ability to enter text and numbers*
- *Have the ability to modify a spreadsheet*
- *Understand formulas and functions*
- *Know how to change the appearance of text and numbers within the spreadsheet*
- *Be able to apply borders*
- *Have the ability to print*
- *Know how to save a worksheet*

# The Office 2010 Interface

There were a number of prominent changes to the look and functionality of the Microsoft Office 2007 interface when compared to previous versions. The Office 2010 interface is very similar to the Office 2007 interface, with a few minor changes. The following describes the Office 2010 interface.

## The File Tab

The *File Tab* (see *Figure 1*), located in the top left corner of the window, replaces the *Office Button* (see *Figure 2*) from Office 2007.



Figure 1 – The File Tab (Excel 2010)



Figure 2 – The Office Button (Excel 2007)

When you click the *File Tab*, your view will change to what is called *Backstage* (see *Figure 3*).

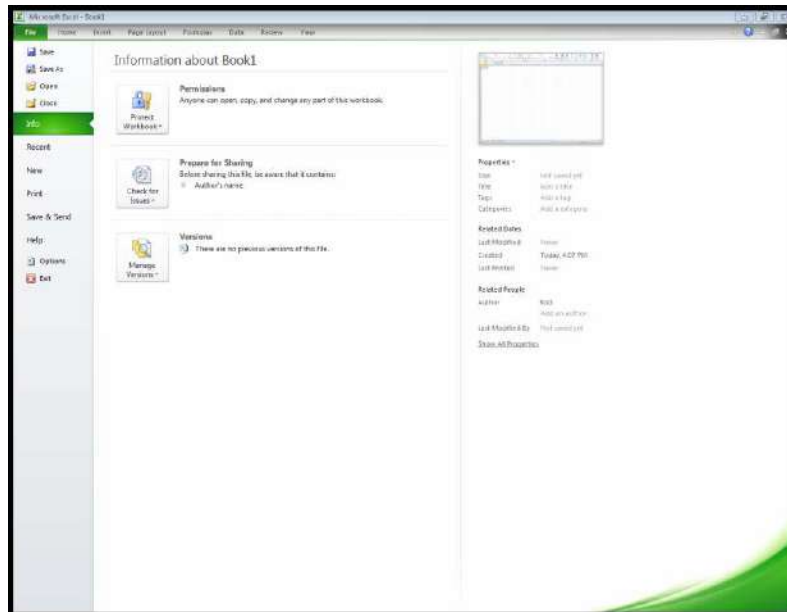


Figure 3 - Backstage

When you are viewing the *Backstage*, you can do the following:

- Save and close spreadsheets
- Obtain information about spreadsheets
- See recent files created and edited
- Create new spreadsheets and templates
- Print spreadsheets
- Obtain help
- Exit *Excel 2010*

If you click the *Print* option, you will automatically see a preview of your document. For this reason, you will not find the *Print Preview* button that has been provided with previous versions of Excel.

To leave the *Backstage* view and return to your document, click any of the tabs (*Home*, *Insert*, *Page Layout*, etc.).

## The Ribbon

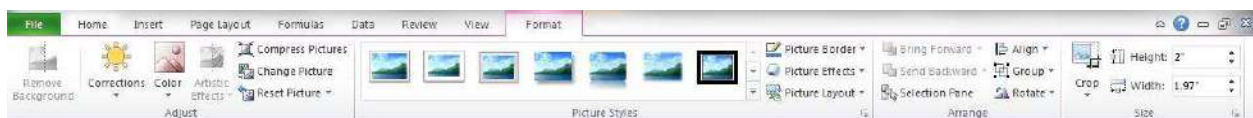
The Ribbon (see *Figure 4*) is a panel that contains functional groupings of buttons and drop-down lists organized by tabs. Each application in the Office Suite has a different set of tabs (with some tabs in common) that pertain to the functionality of that particular application. Each tab is further divided into groups (of buttons), such as the Font and Alignment groups, which are shown in *Figure 4*.



*Figure 4 – The Ribbon*

At the bottom-right corner of some groups, there is a diagonal arrow called a *Dialog Box Launcher*. Clicking this button opens a dialog box for that group containing further option selections for the group.

There are also *contextual tabs* that appear, depending on what you are working on. For example, if you have inserted pictures, the *Picture Tools* tab appears whenever a picture is selected (see *Figure 5*).



*Figure 5 – Example of a Contextual Tab*

A new feature with Excel 2010 is the ability to build your own tab(s). The following explains how to build your own tabs/groups:

1. Right-click anywhere in the ribbon.
2. Select *Customize the Ribbon*.
3. Click the button *New Tab*.
4. You will see that *New Tab* has been added in the list of *Main Tabs*. Under *New Tab*, you will see *New Group*. Click once to select *New Group*.
5. In the *Word Options* window, you will see a pane on the left with many commands. Click to select the command that you want to add to the *New Group* that you selected in the previous step. Then click the *Add>>* button.
6. To create another group within a tab, select *New Tab*.
7. Then, click *New Group*.
8. Repeat steps 4-5 above to add additional commands to the group.
9. To rename the tab or group, select *New Tab* or *New Group*. Then, right-click and select *Rename*.
10. To hide a tab, remove the check-mark next to the name of the tab.

## The Quick Access Toolbar

The Quick Access Toolbar is a small toolbar at the top left of the window that you can customize to contain the buttons for the functions that you use most often. In essence, it is the same as the toolbars from previous versions of Office with only the buttons you want to see on it.

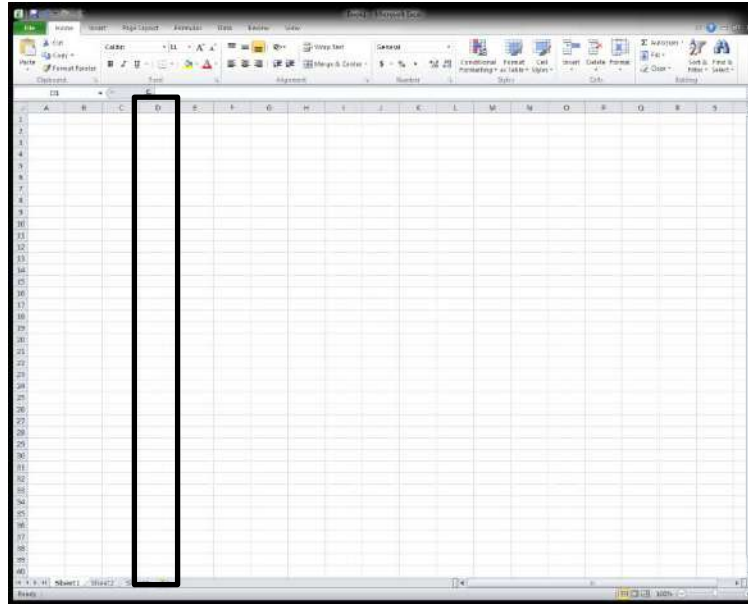
To customize the Quick Access Toolbar, click on the drop-down arrow (see *Figure 6*). You can add or remove items from the Toolbar, as well as show the Toolbar below the Ribbon, rather than above, and minimize the Ribbon.



Figure 6 – Quick Access Toolbar

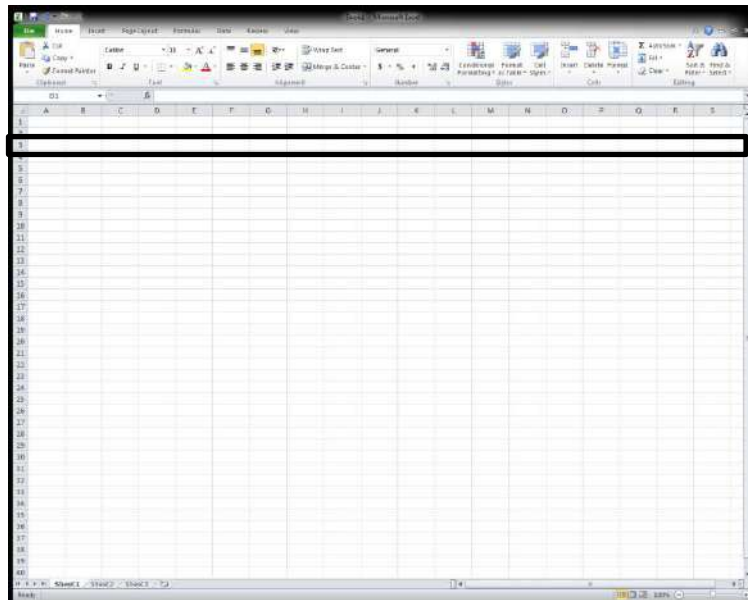
# Columns and Rows

**Column** – A vertical line of cells. A letter identifies each column (see *Figure 7*).



*Figure 7 – Columns*

**Row** – A horizontal line of cells (see *Figure 8*). A number identifies each row.



*Figure 8 – Rows*



## Entering Text

1. Click the cell where you want to enter data and type the text or numbers (see *Figure 9*).
2. The data you type appears in the active Text cell and in the formula bar.
3. If you make a typing error, press the *Backspace Key* on your keyboard to remove the incorrect data.
4. To enter the data and move down one cell, press the *Enter Key* on your keyboard. To enter data and move in any direction, press either the *Tab Key* or the *Arrow Keys* on your keyboard. Repeat the previous steps until you have finished entering in all the data.

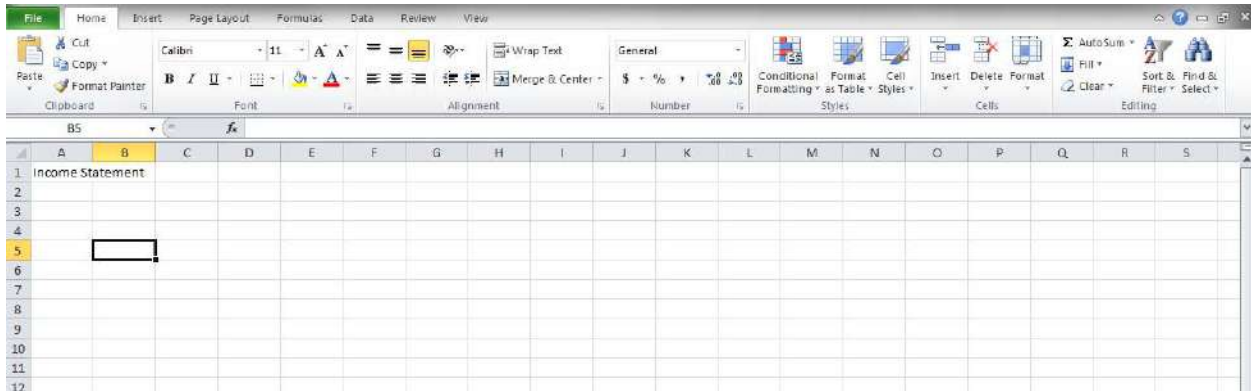


Figure 9 – Entering Text

## Long Words and Numbers

**Long Words** - The text will spill into the neighboring cell. If the neighboring cell contains data, Excel will display as much of the text as the column will allow.

**Long Numbers** - Excel will display the number in scientific form or as number signs (##).

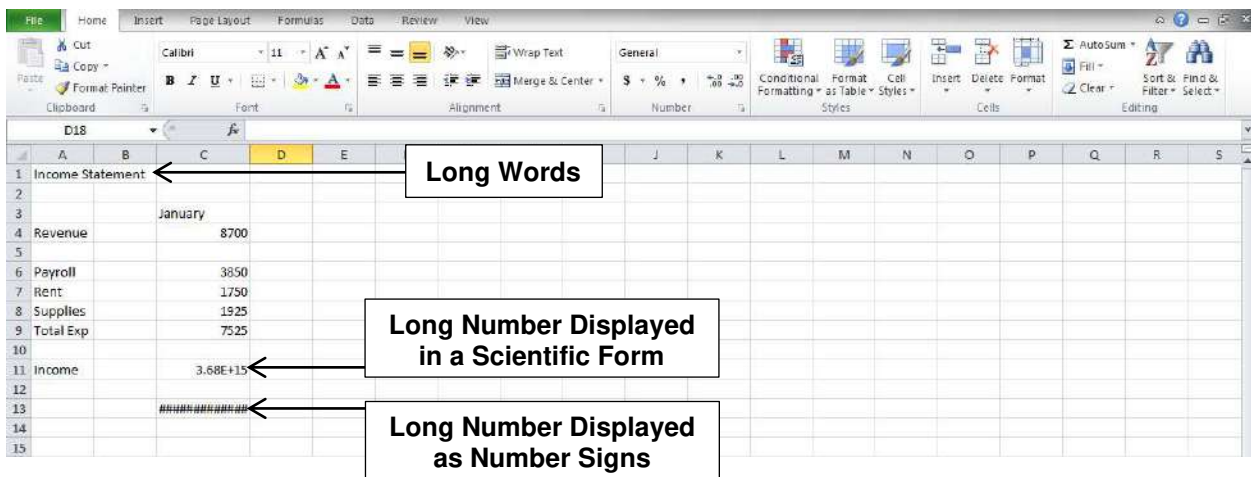
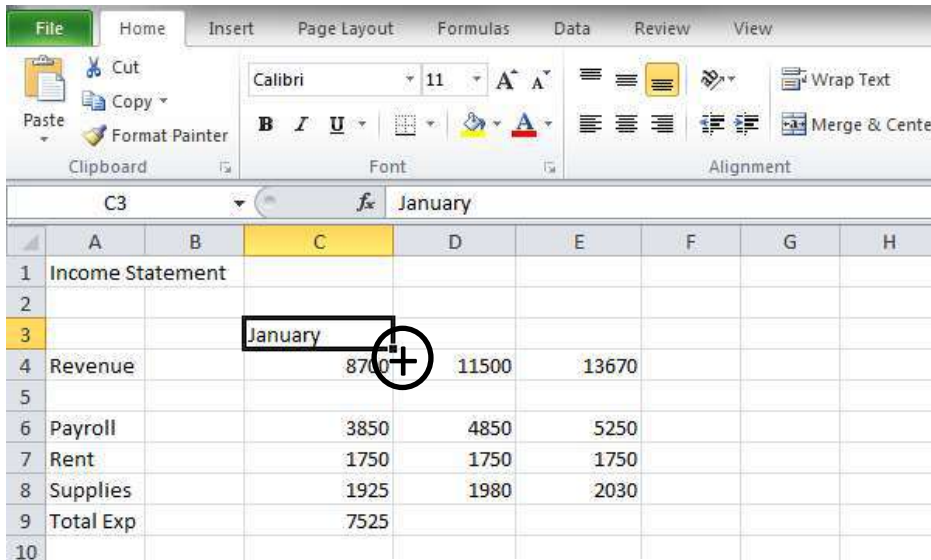


Figure 10 – Long Words and Numbers

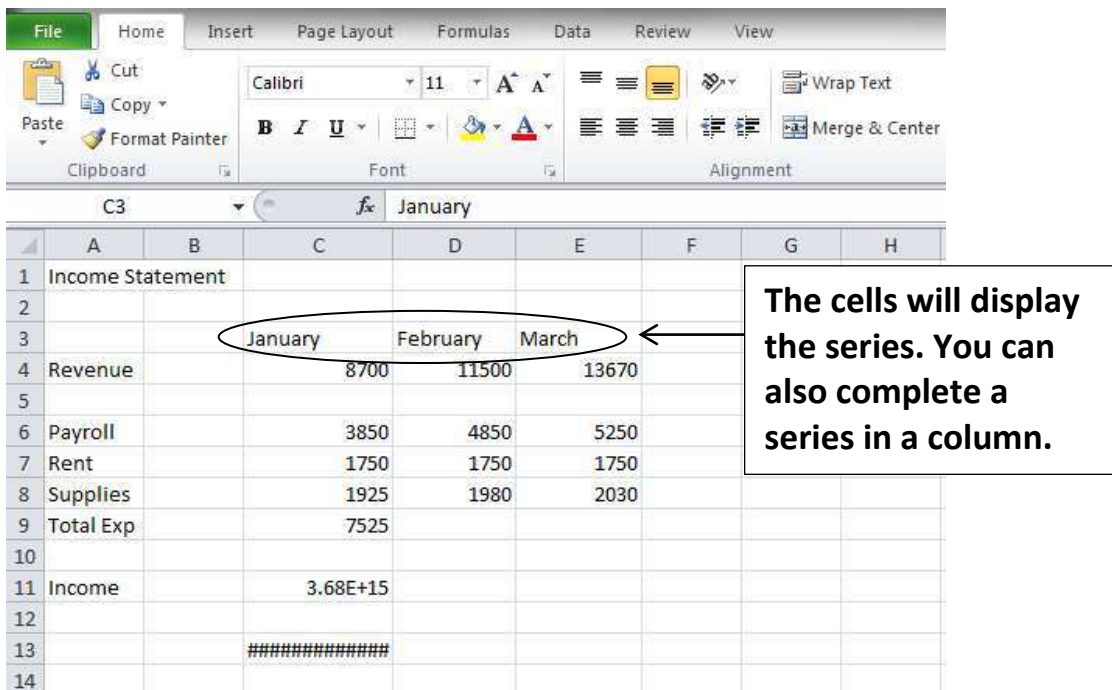
## Complete a Series

1. Enter the text or the numbers that will begin your series (example: January).
2. Position the mouse over the bottom right corner of the selected cell until the white plus-sign turns into a black plus-sign (see *Figure 11*).



*Figure 11 – Complete a Series*

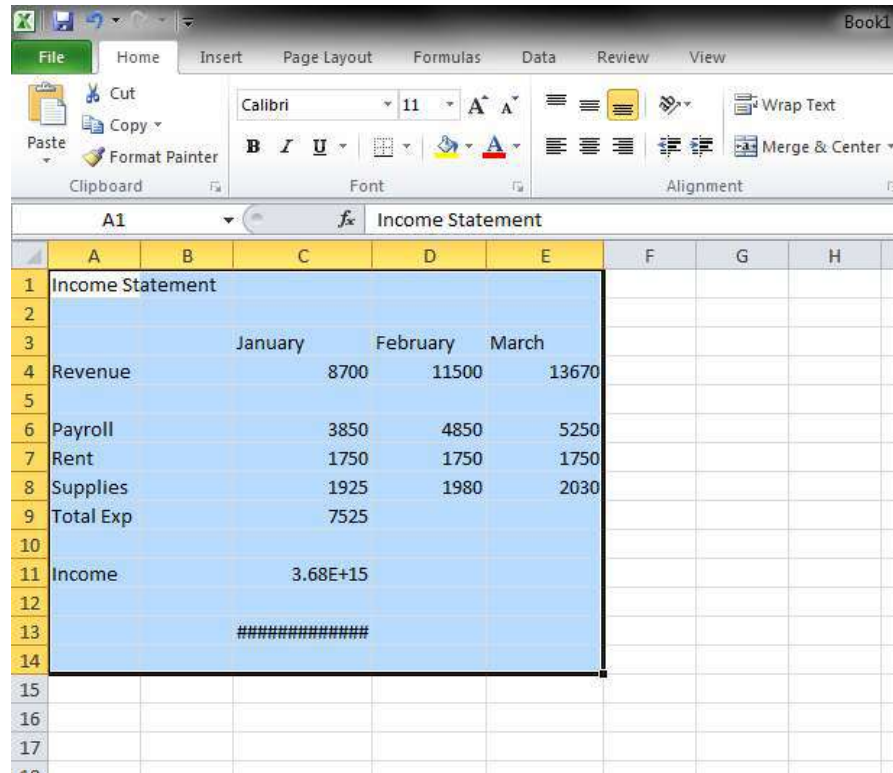
3. Left click and hold the mouse button down. Drag the mouse pointer over the cells that you want to include in your series (see *Figure 12*).



*Figure 12 – Complete a Series*

## Selecting Text and Numbers

1. To select text and/or numbers, click and hold the left mouse button down on the first cell in the group that you want to select.
2. Drag the mouse until you have selected the area of the text that you want to manipulate (see *Figure 13*).



The screenshot shows the Microsoft Excel interface with the 'Home' ribbon selected. The active cell is A1, containing the text 'Income Statement'. A range of cells from A1 to E14 is selected, indicated by a blue background. The data in the selected range is as follows:

	A	B	C	D	E
1	Income Statement				
2					
3			January	February	March
4	Revenue		8700	11500	13670
5					
6	Payroll		3850	4850	5250
7	Rent		1750	1750	1750
8	Supplies		1925	1980	2030
9	Total Exp		7525		
10					
11	Income		3.68E+15		
12					
13			#####		
14					

*Figure 13 – Selection*

3. Once the area is selected, you can edit using the functions and tools located in the Ribbon (see *Figure 14*).



*Figure 14 –The Ribbon*

4. You can also delete the selection by pressing the *Delete* key on your keyboard.

## Moving Text and Numbers

1. Select the cells containing the data that you want to move.
2. Position the mouse over a border of the selected cells. The cursor changes from a white plus sign to a four-way-arrow (See *Figure 15*).

	A	B	C	D	E	F	G	H
1	Income Statement							
2								
3			January	February	March			
4	Revenue		8700	11500	13670			
5								
6	Payroll		3850	4850	5250			
7	Rent		1750	1750	1750			
8	Supplies		1925	1980	2030			
9	Total Exp		7525					
10								
11	Income		3.68E+15					
12								
13			#####					
14								
15								
16								

*Figure 15 – Selecting Cells*

3. Click and hold the left mouse button and drag the mouse to where you want to place the data. Then, release the left mouse button.

	A	B	C	D	E	F	G	H
1	Income Statement							
2								
3								
4	Revenue							
5								
6	Payroll		3850	4850	5250			
7	Rent		1750	1750	1750			
8	Supplies		1925	1980	2030			
9	Total Exp		7525					
10								
11	Income		3.68E+15					
12								
13			#####					
14								
15								

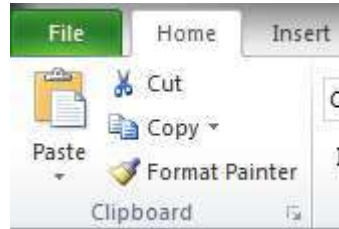
The text was moved to the new location from the original location in *Figure 15*.

January	February	March
8700	11500	13670

*Figure 16 – Moving Text/Numbers*

To move text and numbers, you can also *cut and paste* by using the buttons on the *Home* tab (see *Figure 17*). The following instructions explain how to *cut and paste* text and numbers.

1. Click to select the cell with the text and/or numbers to be moved.
2. Click on the *cut* button.
3. Then, move your cursor and click to select the cell where you want to move the text and/or numbers.
4. Click the *paste* button. The data will appear in the new location.



*Figure 17 – Cut and Paste*

## Copying Data

1. Select the cells containing the data that you want to copy.
2. Position the mouse over a border of the selected cells so that the cursor will change from a white plus sign to a four-way-arrow (see *Figure 18*).

	A	B	C	D	E	F	G	H
1	Income Statement							
2								
3			January	February	March			
4	Revenue		8700	11500	13670			
5								
6	Payroll		3850	4850	5250			
7	Rent		1750	1750	1750			
8	Supplies		1925	1980	2030			
9	Total Exp		7525					
10								
11	Income		3.68E+15					
12								
13			#####					
14								
15								
16								

*Figure 18 – Selecting Cells*

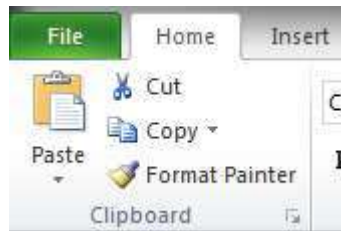
3. Press and hold down the *Control Key* on the keyboard. As you hold down the *Control Key*, drag the mouse pointer to the cell where you want to place the copy.
4. Release the *Control Key* and the data will be placed in the new location (see *Figure 19*).

	A	B	C	D	E	F	G	H	I	J	K
1	Income Statement										
2											
3			January	February	March						
4	Revenue		8700	11500	13670						
5											
6	Payroll		3850	4850	5250			January	February	March	
7	Rent		1750	1750	1750			8700	11500	13670	
8	Supplies		1925	1980	2030						
9	Total Exp		7525								
10											
11	Income		3.68E+15								
12											
13			#####								
14											

*Figure 19 – Copying Data*

You can also copy data by using the buttons on the *Home Tab* (see *Figure 20*). The following instructions explain how to copy data.

1. Highlight the area that you would like to copy.
2. Click on the *copy* button.
3. Then click to select the empty cell where you want the copied data to appear.
4. Click on the *paste* button. Notice that the original text remains in its original position.



*Figure 20 – Copying Data*

## Insert a Row or Column

To insert a *row*, follow the steps below.

1. Select a row by clicking on the *row number* (the numbers on the left-side of the spreadsheet).
2. Click on the *Insert* button on the *Home* tab (see *Figure 21*).
3. Click on the *Insert Cells* button in the drop-down menu that appears.

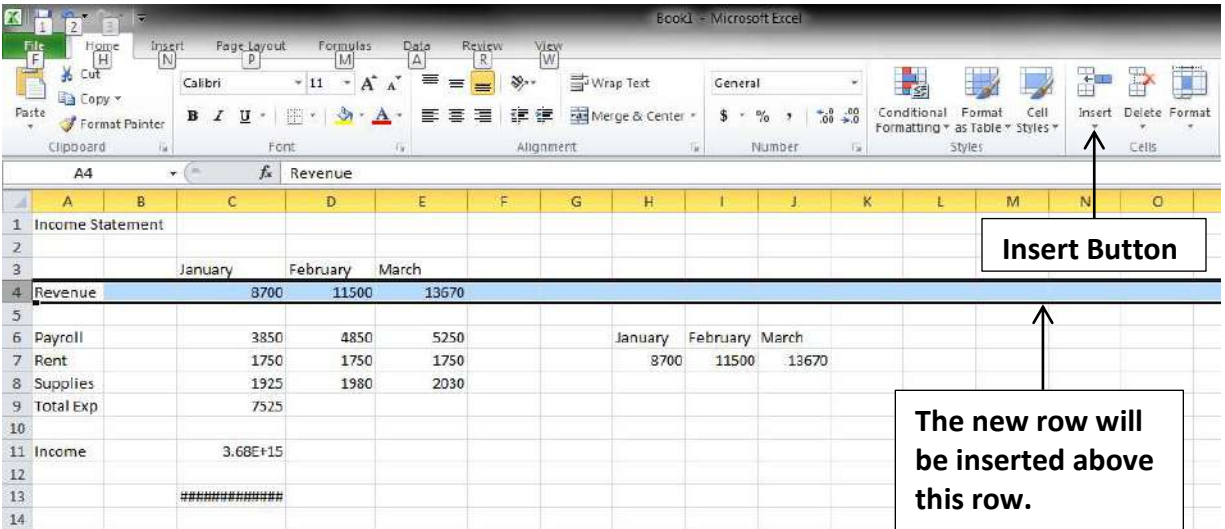


Figure 21 – Copying Data

4. The new row appears and all the rows that follow shift downward (see Figure 22).

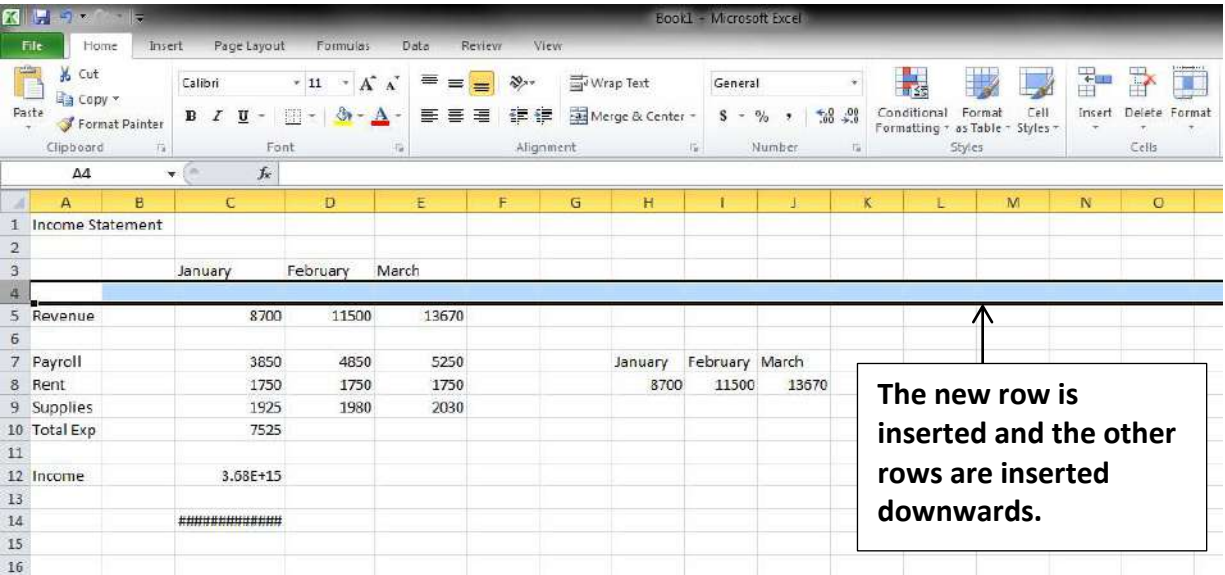


Figure 22 – Copying Data

To insert a *Column*, follow the steps below.

1. Click on the *column* letter (the letters across the top of the spreadsheet).
2. Click on the *Insert* button on the *Home* tab.
3. Click on the *Insert Cells* button in the drop-down menu that appears.

## Delete a Row or Column

To delete a *Row*, follow the steps below.

1. Select the row that you want to delete by clicking on the row number (the numbers on the left-side of the spreadsheet).
2. Click the *Delete* button on the *Home* tab (see *Figure 23*).

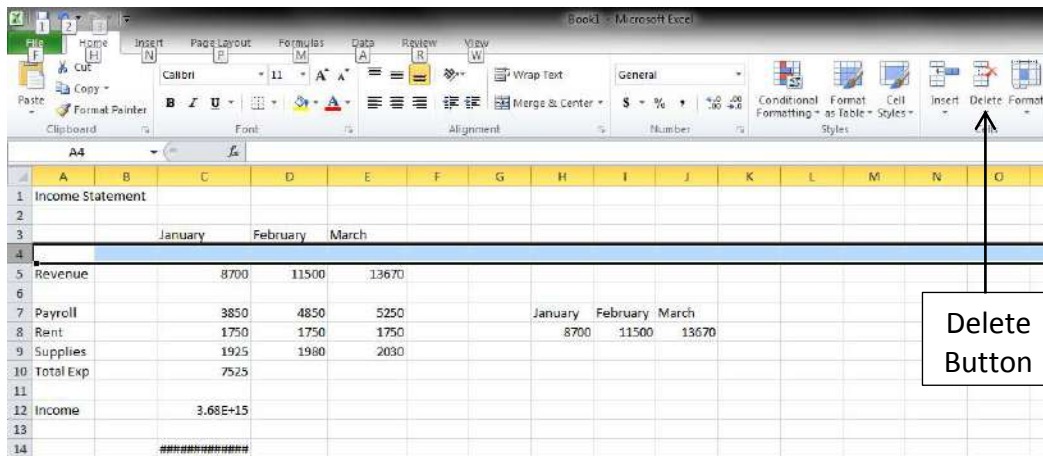


Figure 23 – Deleting a Row

3. Click the *Delete Cells* button that appears in the menu.
4. The row will disappear and all the rows that follow will shift upward.

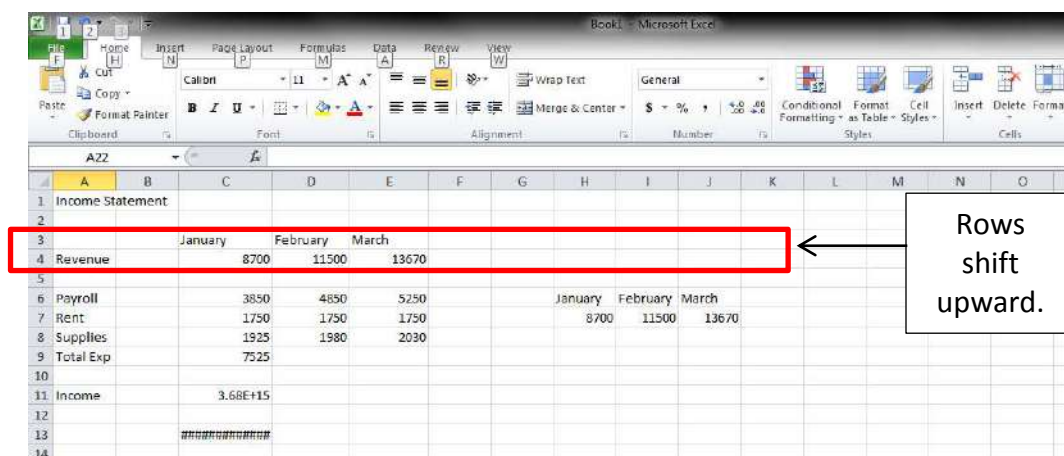


Figure 24 – Deleting a Row



To Delete a *Column* follow the steps below:

1. Select the column that you want to delete by clicking on the *column* letter (the letters across the top of the spreadsheet).
2. Click on the *Delete* button on the Home tab.
3. Click the *Delete Cells* button in the menu that appears.

## Introduction to Functions and Formulas

It is important to understand the following information about functions and formulas.

### Basic Information

A function always begins with an equal sign (=). The data Excel will use to calculate a function is enclosed in parentheses ().

### How to Specify Individual Cells

When there is a comma (,) between cell references in a function, Excel uses each cell to perform the calculation. For example, the function =SUM (A1, A2, A3) is the same as the formula =A1+A2+A3.

### How to Specify a Group of Cells

When there is a colon (:) between cell references in a function, Excel uses the specified cells and all cells between them to perform the calculation. For example, the function =SUM (A1:A3) is the same as the formula =A1+A2+A3.

### Common Functions

The following are some common functions used in Excel:

*Average* – Calculates the average value of a list of numbers.

*Max* – Finds the largest value in a list of numbers.

*Sum* – Adds a list of numbers.

*Count* – Counts the number of items in a list.

*Min* – Finds the lowest value in a list of numbers.

*Round* – Rounds a value to a specific number of digits.

## Entering a Formula

1. Click on the cell where you want to enter a formula. This is where the answer will appear. In *Figure 25*, cell G4 has been selected.
2. Type an *equal sign* (=) to begin the formula (see cell G4 of *Figure 25*).

- Then type the formula and press *Enter* on your keyboard (in cell G4 of *Figure 25*, the formula is C4+D4) .
- The results of the calculation should appear in the selected cell.

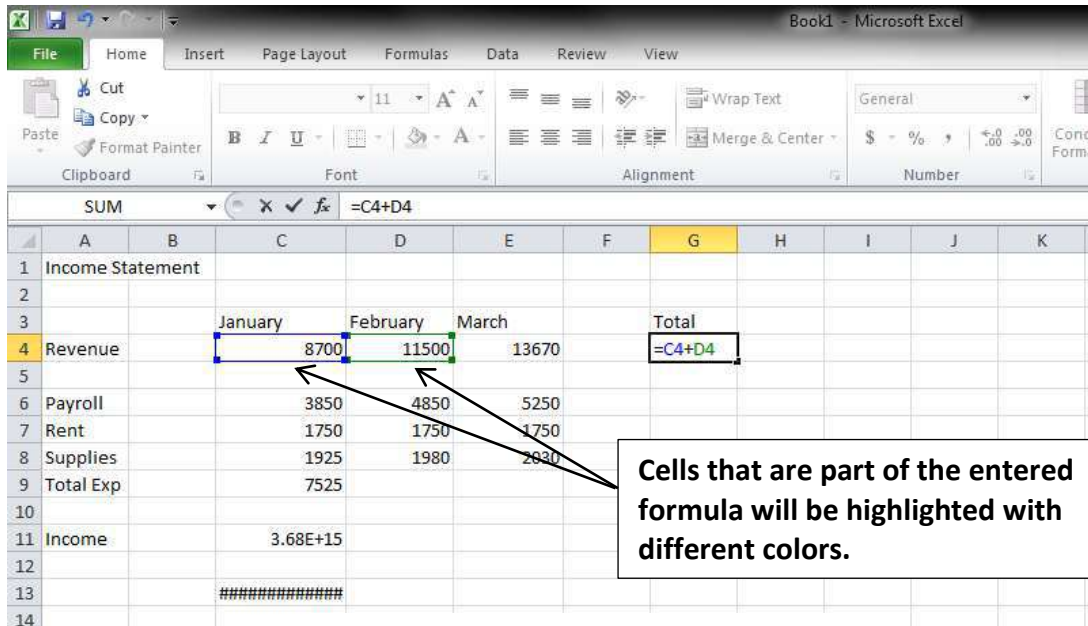


Figure 25 – Entering a Formula

- To view the formula that you entered, click the cell containing the formula and it will appear in the formula bar (see *Figure 26*).

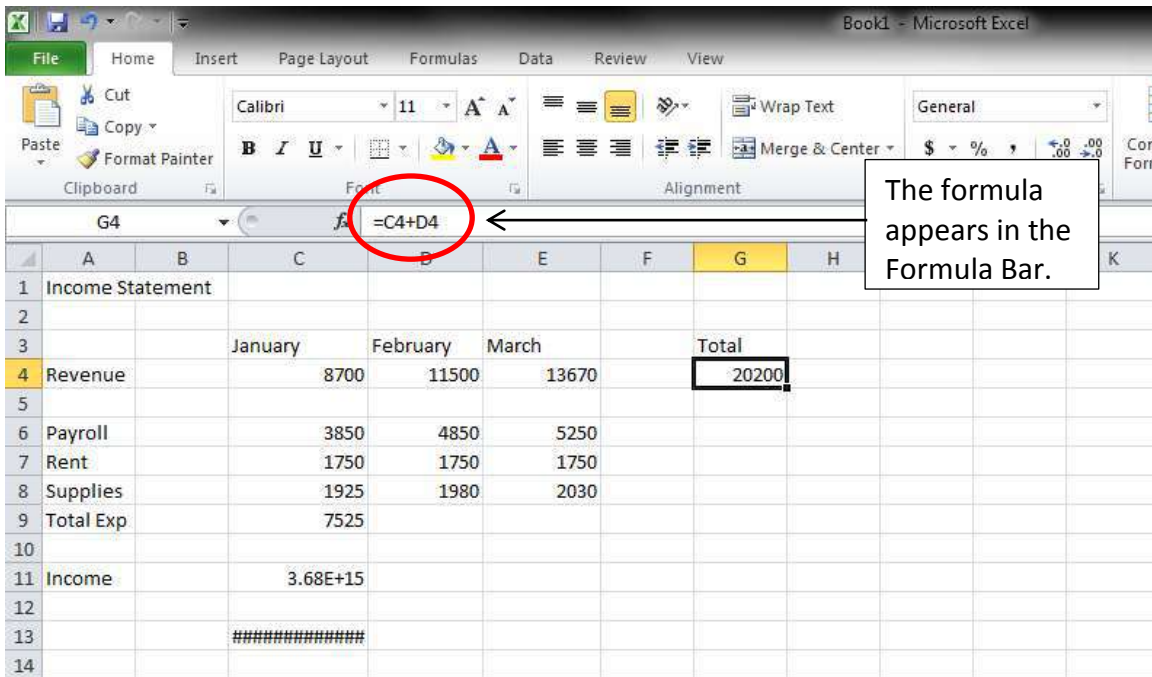


Figure 26 – Entering a Formula

## Editing a Formula

1. Click on the cell containing the formula that you would like to edit and the formula will be shown inside the formula (fx) bar at the top (see *Figure 27*).

	A	B	C	D	E	F	G	H	I	J	K
1	Income Statement										
2											
3			January	February	March		Total				
4	Revenue		8700	11500	13670		20200				
5											
6	Payroll		3850	4850	5250						
7	Rent		1750	1750	1750						
8	Supplies		1925	1980	2030						
9	Total Exp		7525								
10											
11	Income		3.68E+15								
12											
13			#####								
14											

*Figure 27 – Editing a Formula*

2. Click inside the formula bar and make the necessary changes (in *Figure 28*, E4 was added to the formula).

	A	B	C	D	E	F	G	H	I	J	K
1	Income Statement										
2											
3			January	February	March		Total				
4	Revenue		8700	11500	13670		+D4+E4				
5											
6	Payroll		3850	4850	5250						
7	Rent		1750	1750	1750						
8	Supplies		1925	1980	2030						
9	Total Exp		7525								
10											
11	Income		3.68E+15								
12											
13			#####								
14											

*Figure 28 – Editing a Formula*

3. After making the necessary changes, press *Enter* and the answer will appear.

# Basic Formulas

## SUM

**Sum** – Adds a list of numbers.

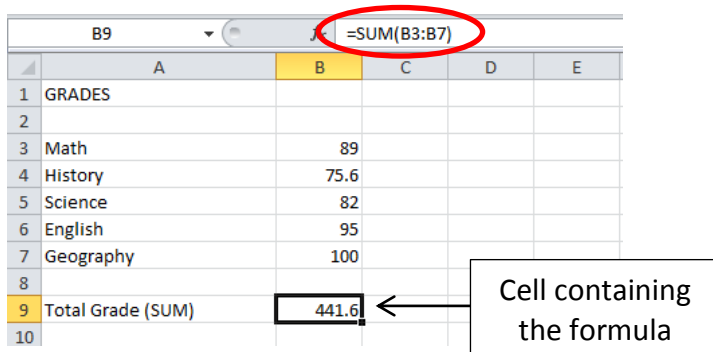


Figure 29 – SUM

**Function:** =SUM(B3:B7)

**Result:** 441.6

## AVERAGE

**Average** – Calculates the average value of a list of numbers.

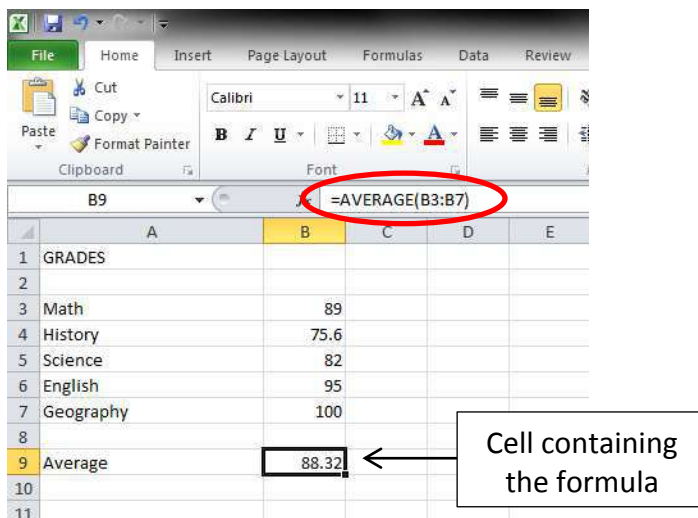


Figure 30 – AVERAGE

**Function:** = AVERAGE(B3:B7)

**Result:** 88.32

## MAX

**Max** – Finds the largest value in a list of numbers.

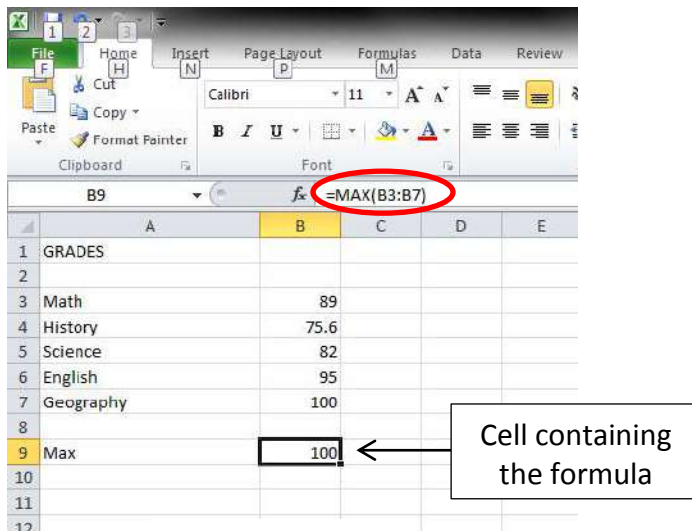


Figure 31 – MAX

**Function:** = MAX(B3:B7)

**Result:** 100

## MIN

**Min** – Finds the smallest value in a list of numbers.

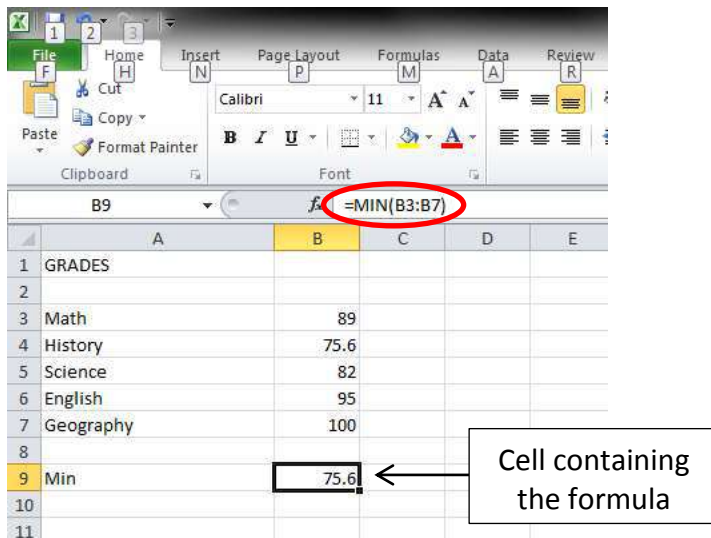


Figure 32 – MIN

**Function:** =MIN(B3:B7)

**Result:** 75.6

## COUNT

**Count** – Calculates the number of values in a list.

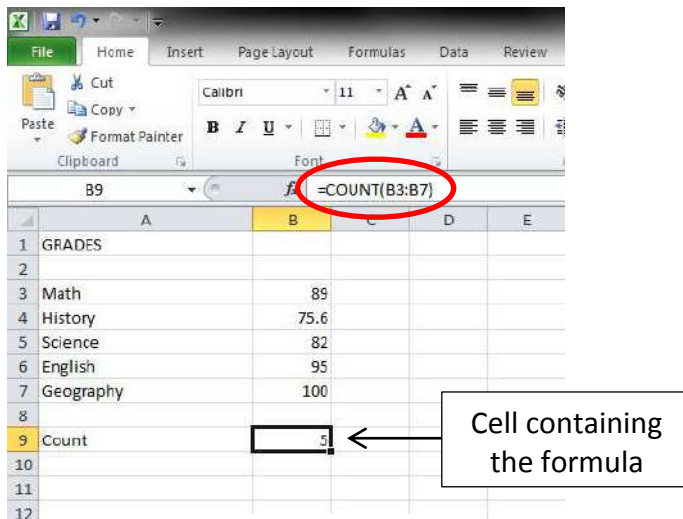


Figure 33 – COUNT

**Function:** =COUNT(B3:B7)

**Result:** 5

## ROUND

**Round** – Rounds a value to a specific number of digits.

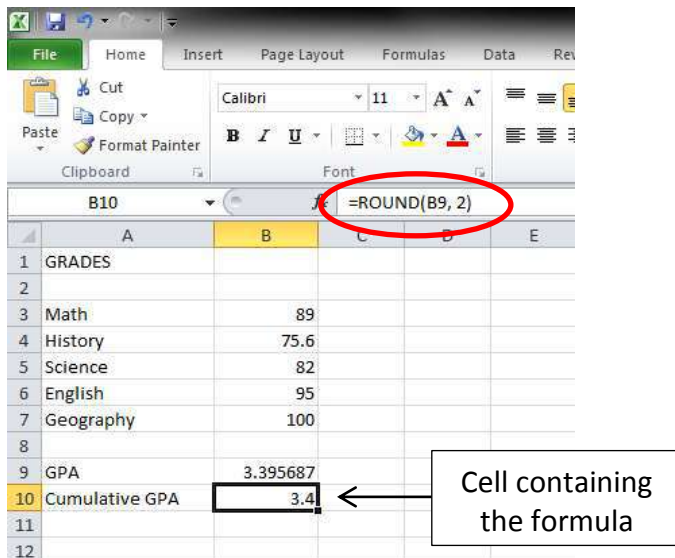


Figure 34 – ROUND

**Function:** =ROUND(B9, 2)

**Result:** 3.4

## Entering a Function

Excel helps you enter functions in your worksheet. Functions let you perform calculations without typing long, complex formulas. The following explains how to use functions.

1. Click to select the cell where you want to enter the function on the worksheet.
2. Click the *Paste Function* button on the *Formula Bar* (see *Figure 35*).

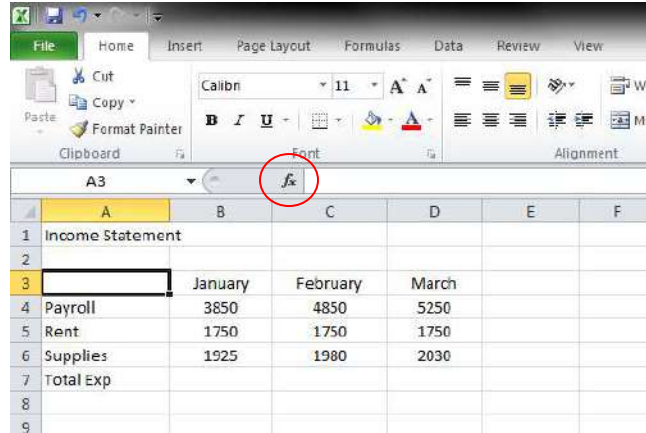


Figure 35 – Paste Function

3. The *Paste Function* dialog box will appear (see *Figure 36*). Select the category that contains the function that you want to use (example: SUM) and click *OK* (if you do not know which category contains the function that you want to use, use the *Function Search Field* to search for the needed function).

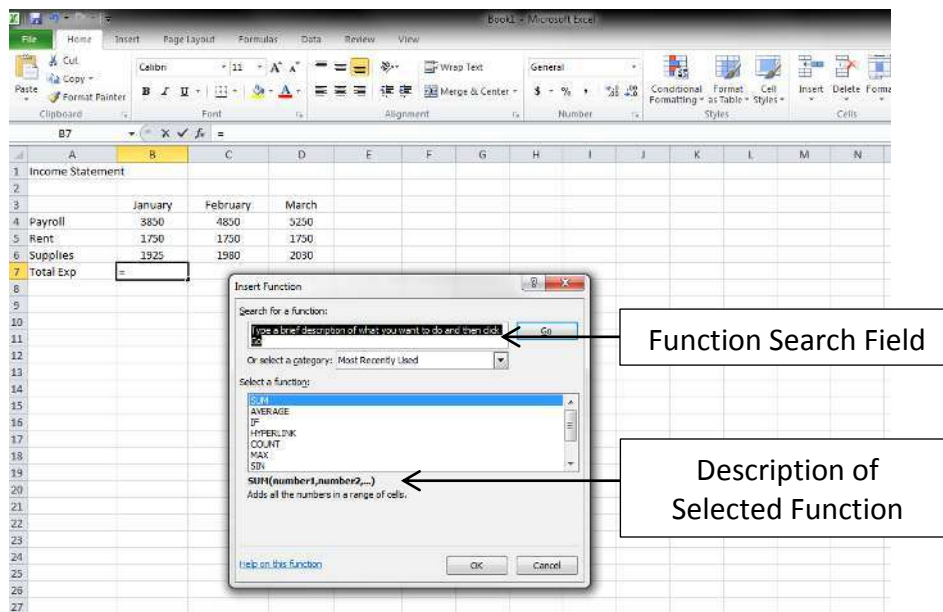
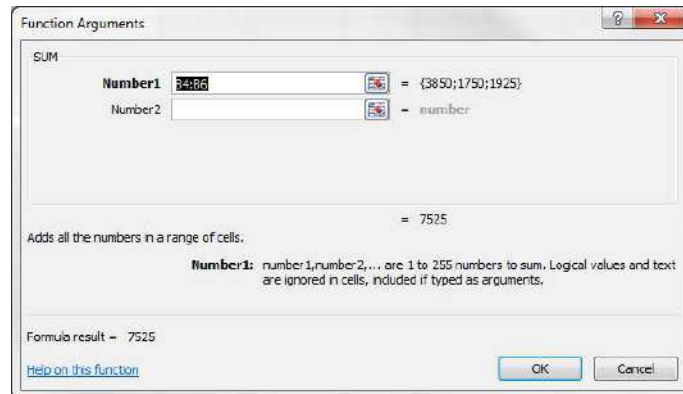


Figure 36 – Paste Function

4. The *Function Arguments* dialog box will appear (see *Figure 37*).



*Figure 37 – Function Arguments Dialog Box*

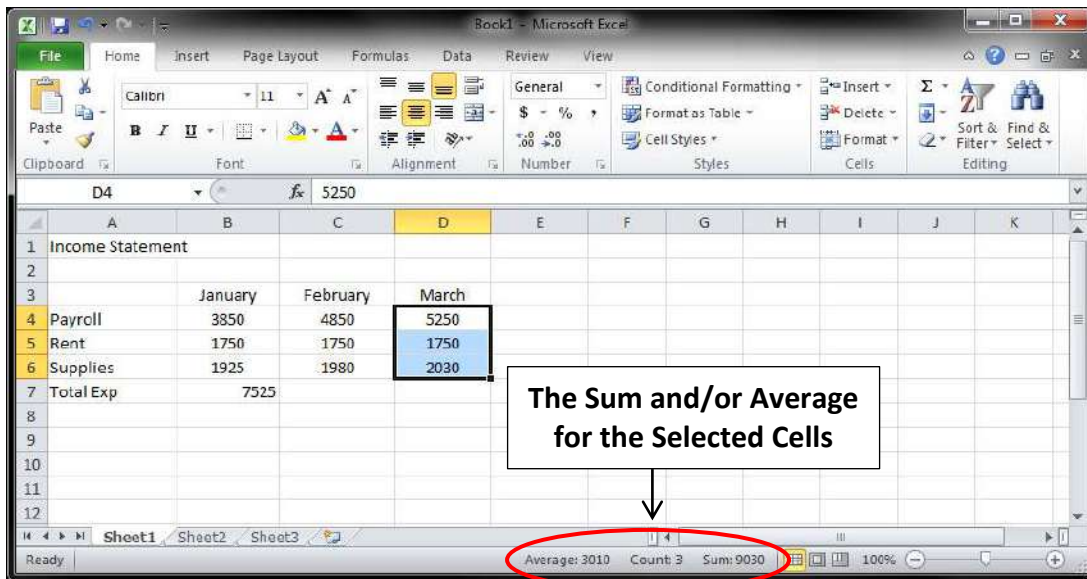
5. Select the cell(s) in the worksheet that contain(s) the number(s) to be used in the formula.

6. The *Number 1* field now displays the cell reference you selected.

7. Click *OK*. The results of the formula will appear in the selected cell.

## Auto Calculate

1. Select the cells that you want to include in the calculation.
2. The *status bar* will display the Sum and/or the Average of the cells that you selected (see *Figure 38*).



*Figure 38 – Auto Calculate*



- Other calculations can also appear on the *status bar*. To see the other calculations available, right-click on the status bar (see *Figure 39*).
- A list will appear displaying the calculations you can perform.
- Select the calculation of your choice.
- The results of the calculation will appear in the Auto Calculate area of the status bar.

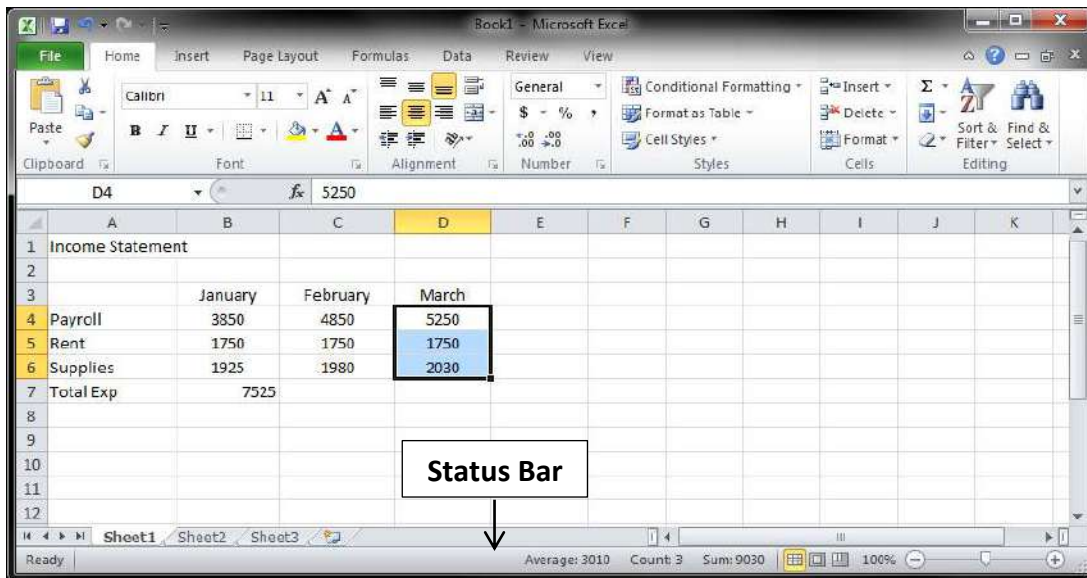


Figure 39 – Auto Calculate

## AutoSum

The following explains one way to use the AutoSum feature.

- Click to select the cell where you want the answer to appear.
- Click the *AutoSum* button located in the *Formulas* tab as shown in *Figure 40*.
- Select the Function of your choice (example: *AutoSum*).
- Adjust the selection box to capture the numbers that need to be manipulated.
- Press the *Enter* key.

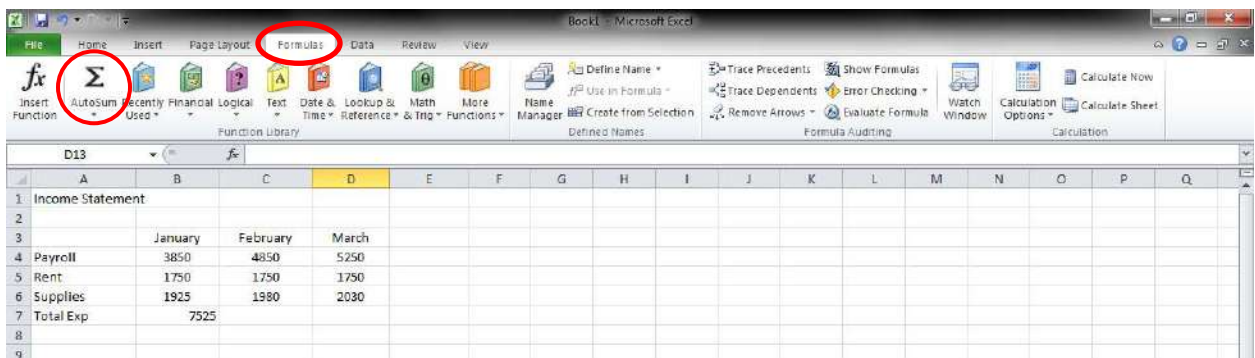


Figure 40 – AutoSum

The following explains a **second** way to gain the sum of numbers.

1. Click to select the cell where you want the results of the formula to appear (for example, in *Figure 41* you might select cell D7).
2. Type the equal sign (=).
3. Choose **one** of the following methods to enter your formula:
  - a) Type the cell reference (for example, in *Figure 41*, you might type D4).
  - b) Click the cell containing the number that you want to use in your formula (for example, in *Figure 41*, you might select D4).
4. Type an operator (such as the plus sign (+) for addition).
5. Repeat steps 3 and 4 as often as necessary to build your formula
6. Press the *Enter* key so that the answer appears in the cell.

Which of the previous two methods listed in this section do you think is easier?

	A	B	C	D	E
1	Income Statement				
2					
3		January	February	March	
4	Payroll	3850	4850	5250	
5	Rent	1750	1750	1750	
6	Supplies	1925	1980	2030	
7	Total Exp	7525			
8					

*Figure 41 – AutoSum*

## Changing Column Width and Row Height

### Column Width

1. To change the width of a column, position the mouse pointer (white plus sign) over the right edge of the column heading until it changes to a double headed arrow (see *Figure 42*).

	A	B	C	D	E	F
1	Income Statement					
2						
3		January	February	March		
4	Payroll	3850	4850	5250		
5	Rent	1750	1750	1750		
6	Supplies	1925	1980	2030		
7	Total Exp	7525				
8						
9						

*Figure 42 – Adjusting Columns*

2. Hold down the left-mouse button and drag until the column width adjusts to the size that you want.
3. Release the left mouse button and the column will display the new width.

## Row Height

1. To change the height of a row, position the mouse pointer (white plus sign) between the row numbers until it changes to a double headed arrow (see *Figure 43*).

	A	B	C	D	E	F
1	Income Statement					
2						
3		January	February	March		
4	Payroll	3850	4850	5250		
5	Rent	1750	1750	1750		
6	Supplies	1925	1980	2030		
7	Total Exp	7525				
8						
9						

*Figure 43 – Adjusting Rows*

2. Hold down the left-mouse button and drag the mouse until the height adjusts to the size that you want.
3. Release the left mouse button and the column will display the new width.

## Automatically Adjusting the Column Width and Row Height

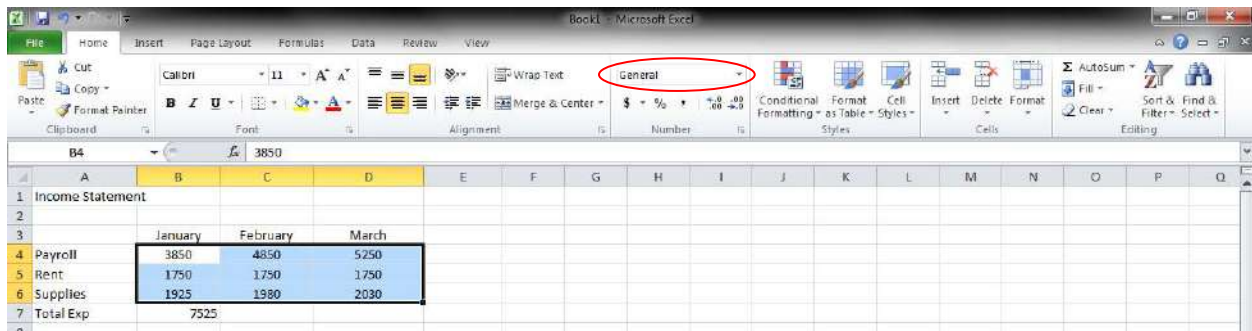
You can have Excel adjust a column width to fit the longest item in the column. To do this, double-click the right edge of the column heading. The column will automatically be changed to fit the longest text or number within the column.

The row height can be changed in a similar manner, the only difference being that the placement of the cursor will be located between the row headings instead of the column headings.

## Formatting Numbers

You can easily change the format of numbers in your worksheet. The following explains how to adjust the format of numbers.

1. Select the cells containing the numbers that you want to format.
2. Click the *Currency Style Button* on the *Home* tab (see *Figure 44*).



*Figure 44 – Formatting Numbers*

3. The numbers will appear with the selected format.

**NOTE:** If you see number signs (####) appearing in a cell instead of the data that you entered, this is due to the width of the column not being wide enough to display the entire number. Refer to the section, *Changing Column Width and Row Height* on page 26 to make the necessary adjustment.

## Formatting Text and Numbers

1. Select the text that you want to format.
2. From the *Home* tab, select any of the formatting options indicated in *Figure 45*.

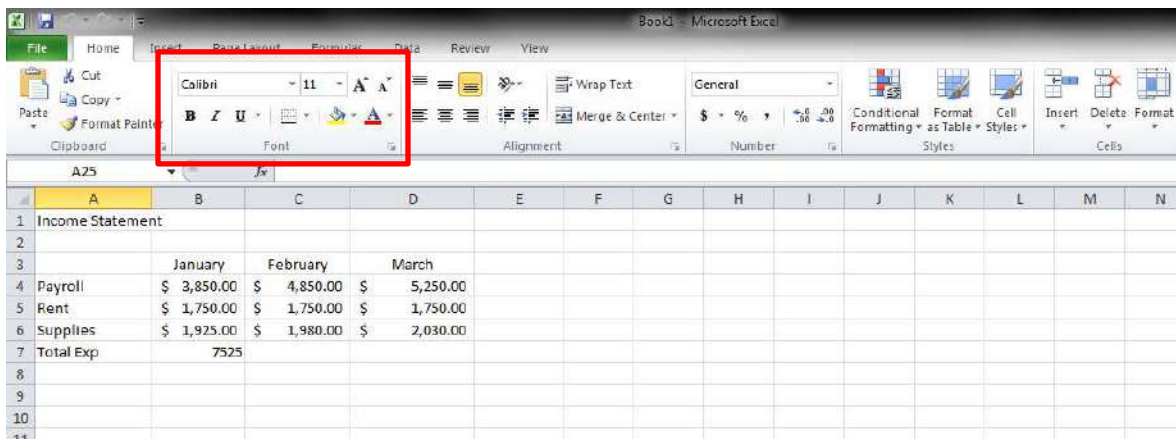


Figure 45 – Formatting Text and Numbers

The following are three ways to adjust the appearance of data within a cell.

- **Bold** – Select a cell and then click on the button labeled with *B* to make the contents bold.
- **Italics** – To make the contents italicized, select the cell and click on the button labeled with an *I*.
- **Underline** – To underline the cell contents, select the cell and click on the button labeled with a *U*.

The following explains how to change the font.

1. First, select the cell containing the data.

- From the *Home* tab, click on the *Down Arrow* to the right of the font style (example: *Calibri*), and select the font of your choice (see *Figure 46*).

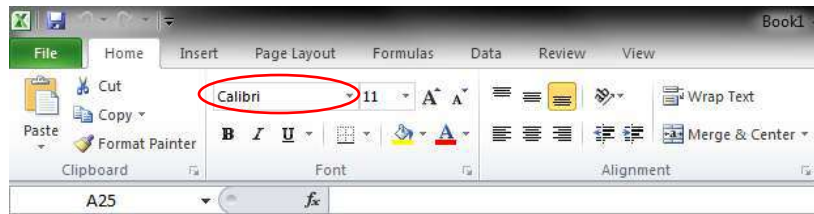


Figure 46 – Fonts

## Adding Borders

Borders can be added to enhance the appearance of your worksheet. The following explains how to add borders.

- Select the cells where you want to add borders.
- From the *Home* tab, click on the *Down Arrow* to the right of the *Border* button (see *Figure 47*).
- From the menu that appears, select the type of border you want to add.
- The selected border will be added to the worksheet.

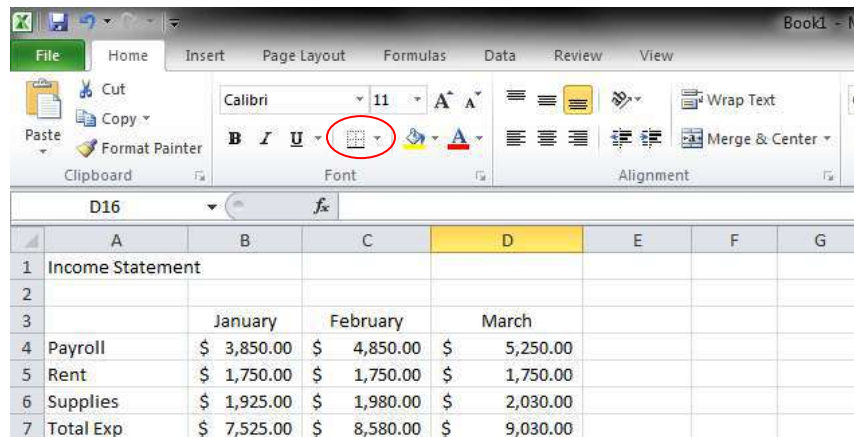


Figure 47 – Borders

- To remove the border, select the cells containing the border.
- Click the *Down Arrow* to the right of the *Border* button (see *Figure 47*).
- From the menu that appears, select the *No Border* button.

# Printing a Worksheet

You can print the worksheet on your screen to paper. The following explains how to do this.

1. Select the worksheet that you wish to print.
2. Click the *File* tab located at the top-left corner of the *Excel* window.
3. Select *Print*.
4. The *Print* window will appear (see *Figure 48*).
5. Review and select the print options in the window.
6. Click on the *Print* button.
7. The worksheet will print to the selected printer.

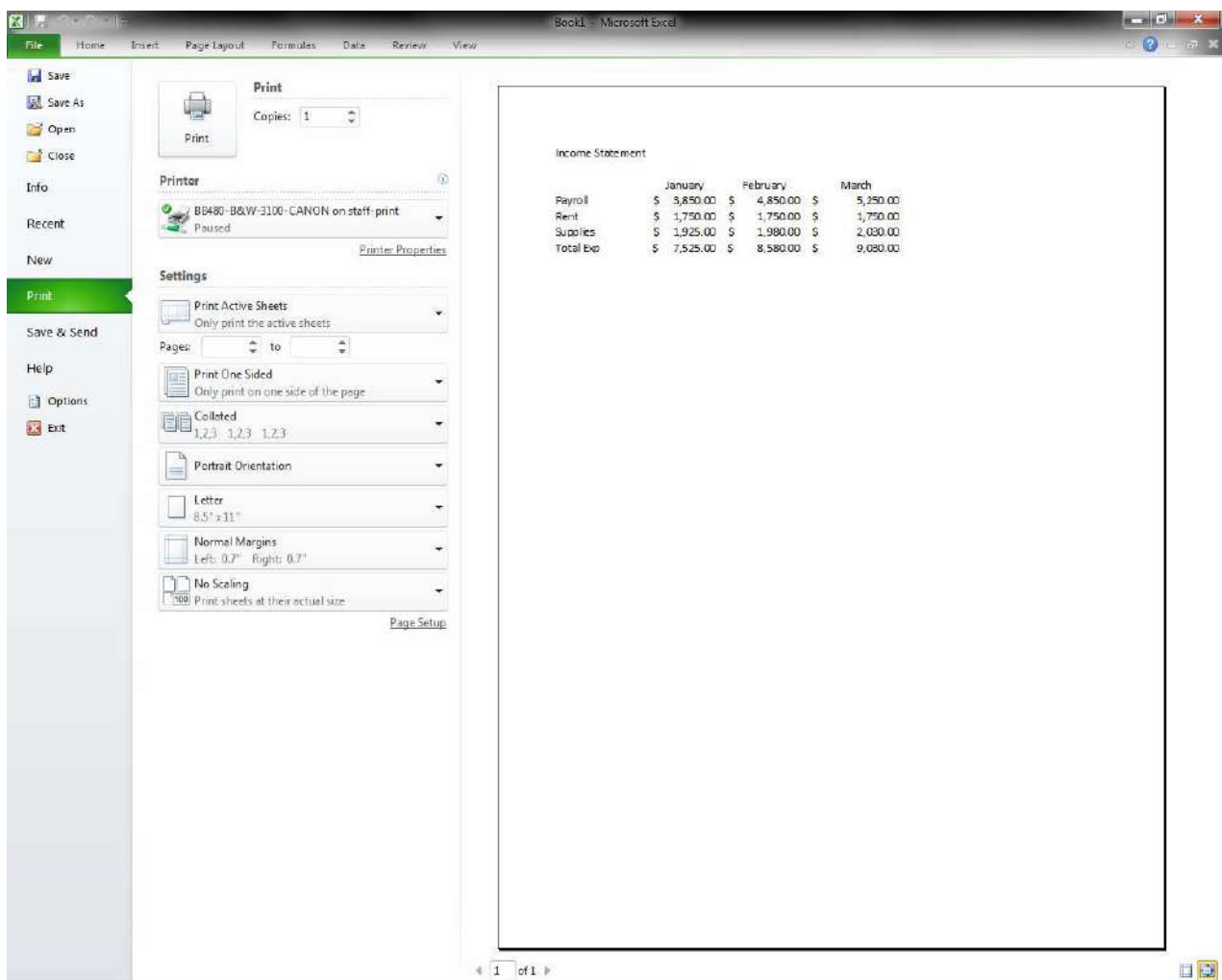


Figure 48 – Printing

## Saving a Worksheet

1. Click the *File* tab located at the top-left corner of the *Excel* window.
2. Select the *Save As* button (see *Figure 49*).
3. The *Save As* window will appear.
4. Enter a file name.
5. Select the location where the file will be saved.
6. Click *Save*.

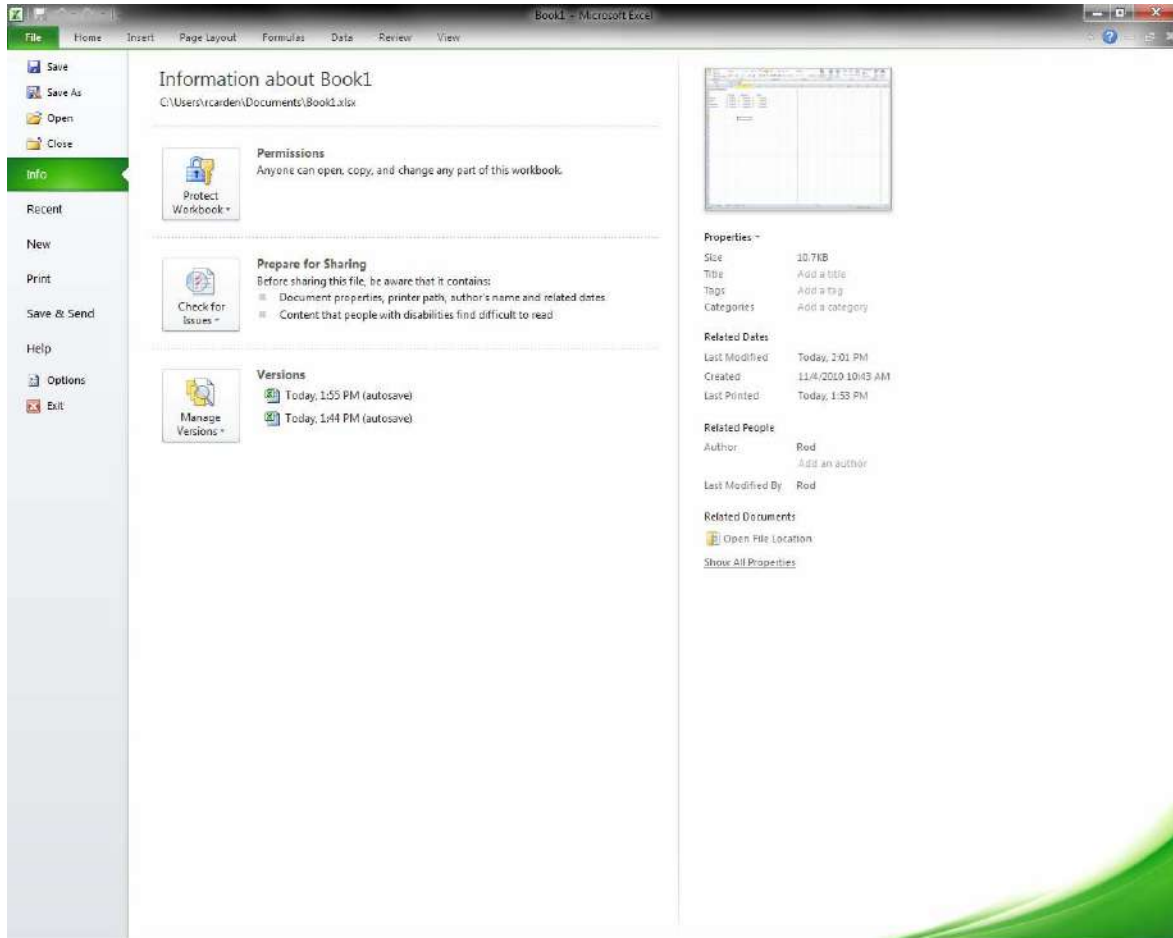


Figure 49 – Saving a File