UNIT III: INTRODUCTION TO EXCEL

SPREAD SHEET

A spreadsheet is a large sheet having data and information arranged in rows and columns. Spreadsheet is quite useful in entering, editing, analysing and storing data. Arithmetic operations with numerical data such as addition, subtraction, multiplication and division can be done using Excel. You can sort numbers/ characters according to some given criteria (like ascending, descending etc.) and use simple financial, mathematical and statistical formulas.

In a spreadsheet, spaces that hold items of data are called cells. Each cell is labeled according to its placement (for example, A1, A2, A3...) and may have an absolute or relative reference to the cells around it.

Excel is one of the most widely used spreadsheet applications. Microsoft Excel is a software program produced by Microsoft that allows users to organize, format and calculate data with formulas using a spreadsheet system. This software is part of the Microsoft Office suite and is compatible with other applications in the Office suite.

Here we've to explore the basic concepts of spreadsheet using MS Excel 2007.

FEATURES OF SPREADSHEETS

There are a number of features that are available in Excel to make your task easier. Some of the main features are:

1. **AutoSum** - helps you to add the contents of a cluster of adjacent cells.
2. **List AutoFill** - automatically extends cell formatting when a new item is added to the end of a list.
3. **AutoFill** - allows you to quickly fill cells with repetitive or sequential data such as chronological dates or numbers, and repeated text. AutoFill can also be used to copy functions. You can also alter text and numbers with this feature.
4. **AutoShapes** toolbar will allow you to draw a number of geometrical shapes, arrows, flowchart elements, stars and more. With these shapes you can draw your own graphs.
5. **Wizard** - guides you to work effectively while you work by displaying various helpful tips and techniques based on what you are doing.
6. **Drag and Drop** - it will help you to reposition the data and text by simply dragging the data with the help of mouse.
7. **Charts** - it will help you in presenting a graphical representation of your data in the form of Pie, Bar, Line charts and more.
8. **PivotTable** - it flips and sums data in seconds and allows you to perform data analysis and generating reports like periodic financial statements, statistical reports, etc. You can also analyse complex data relationships graphically.
9. **Shortcut Menus** - the commands that are appropriate to the task that you are doing will appear by clicking the right mouse button.

Starting a Excel

1. Click on (with the help of mouse) the Start button on the Taskbar at the bottom left corner of the Screen
2. Highlight the All Programs item. The program menu will open.

3. Select Microsoft Office from the list of programs.
4. Click on Microsoft Excel.

Symbolically these actions are shown below.

Select Start®All Programs®Microsoft Office®Microsoft Excel 2007 commands from your menu bar.

Working with Worksheets

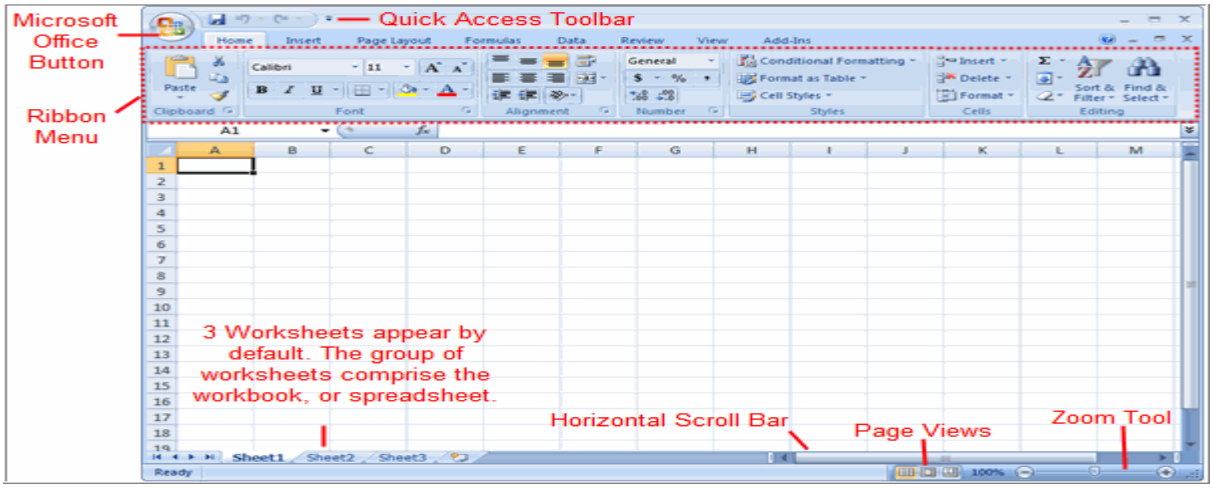
In this section, you will learn how to create a new workbook, insert and delete text, navigate a worksheet, and save an Excel workbook.

Excel allows you to create worksheets much like paper ledgers that can perform automatic calculations. Each Excel file is a workbook that can hold many worksheets. The worksheet is a grid of columns (designated by letters) and rows (designated by numbers). The letters and numbers of the columns and rows (called labels) are displayed in gray buttons across the top and left side of the worksheet. The intersection of a column and a row is called a cell. Each cell on the spreadsheet has a cell address that is the column letter and the row number. Cells can contain text, numbers, or mathematical formulas.

To create a new blank workbook:

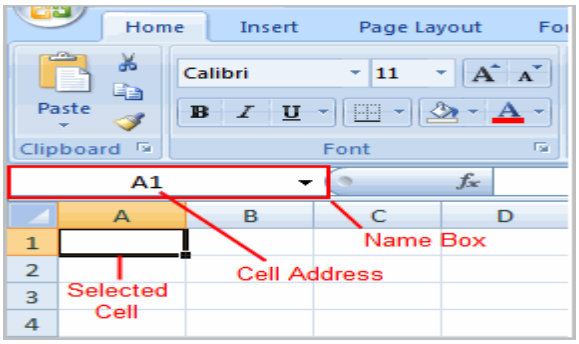
- Left-click the **Microsoft Office button**.
- Select **New**. The New Workbook dialog box opens, and Blank Workbook is highlighted by default.
- Click **Create**. A new blank workbook appears in the window.

When you first open Excel, the software opens to a new blank workbook as below.

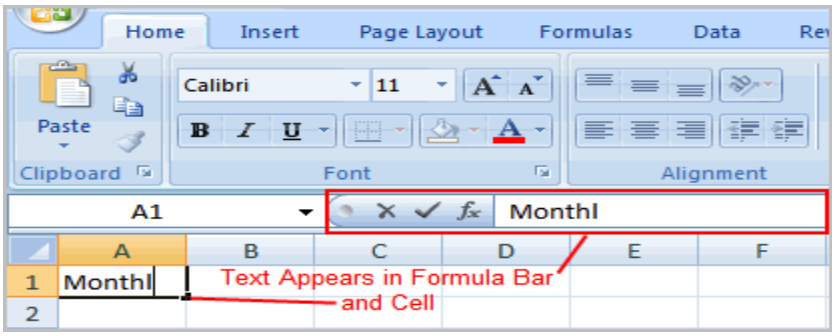


To insert text:

- 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**.

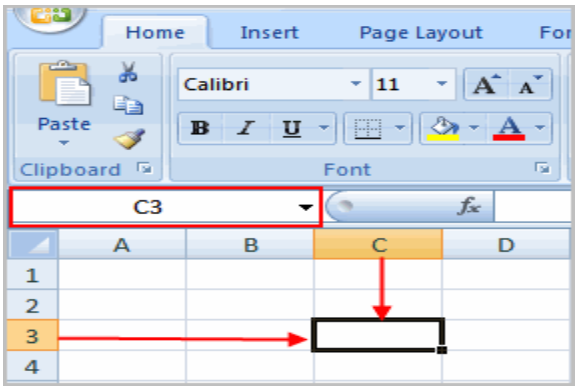


- Enter **text** into the **cell** using your keyboard. The text appears in the cell and in the **formula bar**.



Cell addresses

Each cell has a name, or a **cell address**, based on the **column** and **row** where it is located. For example, this cell is C3 because it is where column C and row 3 intersect.



You can also select **multiple cells** at the same time. A group of cells is known as a **cell range**. Rather than a single cell address, you will refer to a cell range using the cell addresses of the **first** and **last** cells in the cell range, separated by a **colon**. For example, a cell range that included cells A1, A2, A3, A4, and A5 would be written as **A1:A5**.

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.

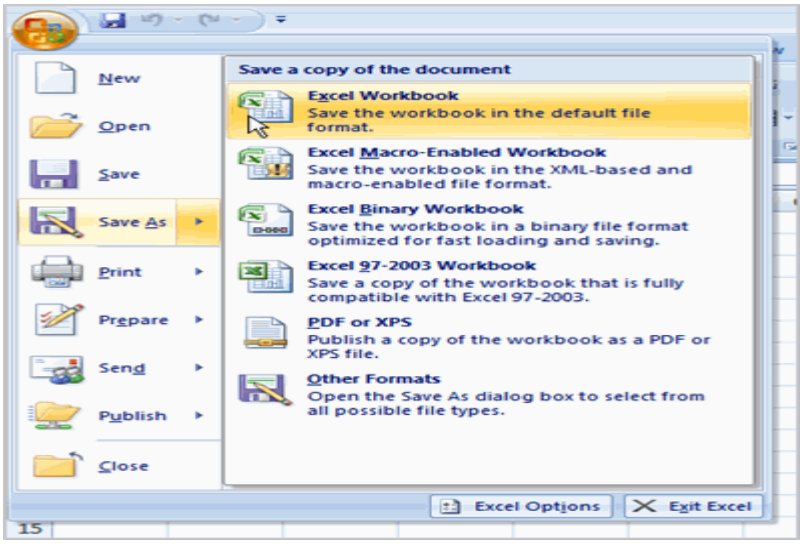
You can also make changes to and delete text from the **formula bar**. Just select the cell, then place your insertion point in the formula bar.

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 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**.
    - **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.



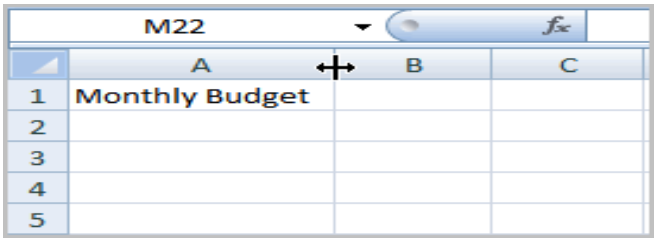
You can save a workbook in many ways, but the two most common ones are as an **Excel Workbook**, which saves it with a 2007 file extension, and as an **Excel 97-2003 Workbook**, which saves the file in a compatible format so people who have earlier versions of Excel can open the file.

Modifying Columns, Rows, and Cells

In this section, you will learn various methods to modify the column width and row height, as well as how to insert new columns, rows, and cells.

To modify column width:

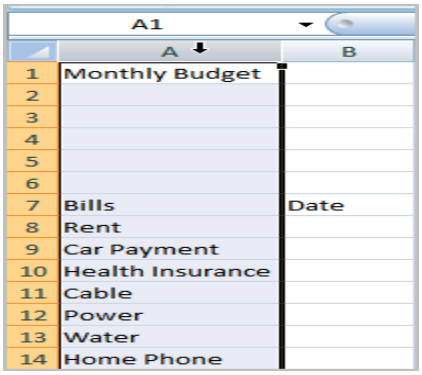
- Position the **cursor** over the **column line** in the column heading, and a **double arrow** will appear.



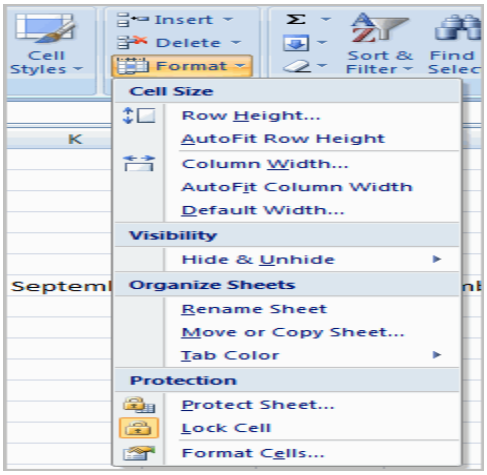
- Left-click the mouse, then **drag** the cursor to the **right** to **increase** the column width or to the **left** to **decrease** the column width.
- **Release** the mouse button.

OR

- Left-click the **column heading** of a column you'd like to modify. The entire column will appear **highlighted**.



- Click the **Format** command in the Cells group on the **Home** tab. A menu will appear.

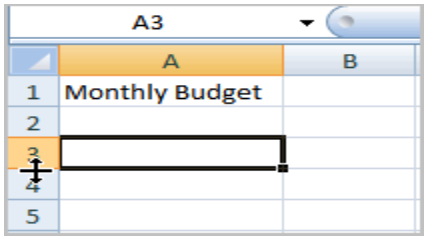


- Select **Column Width** to enter a **specific** column **measurement**.
- Select **AutoFit Column Width** to adjust the column so all of the text will fit.

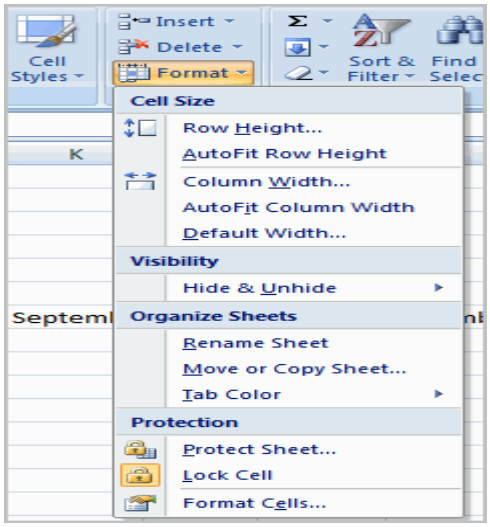
If you see **pound signs** (#######) in a cell, it means that the column is not wide enough to display the cell content. Simply **increase the column width** to show the cell content.

To modify the row height:

- Position the **cursor** over the **row line** you want to modify, and a **double arrow** will appear.



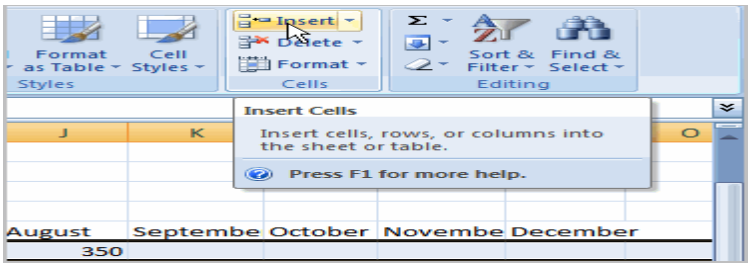
- Left-click the mouse, then **drag** the cursor **upward** to **decrease** the row height or **downward** to **increase** the row height.
- **Release** the mouse button.
  OR
- Click the **Format** command in the Cells group on the **Home** tab. A menu will appear.



- Select **Row Height** to enter a **specific** row **measurement**.
- Select **AutoFit Row Height** to adjust the row so all of 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. The row will appear.



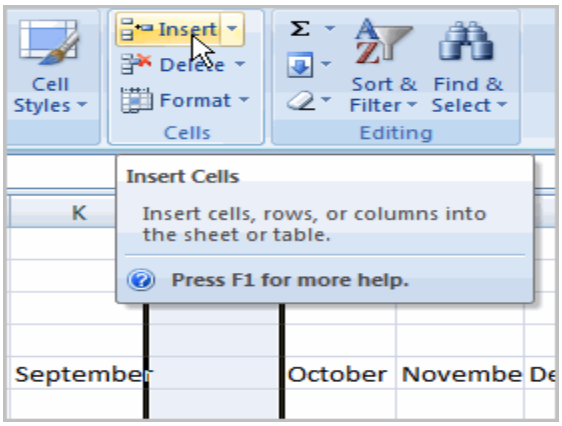
The new row always appears above the selected row.

Make sure 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. The column will appear.

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, then click the Insert command.



Make sure 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.

Formatting Text

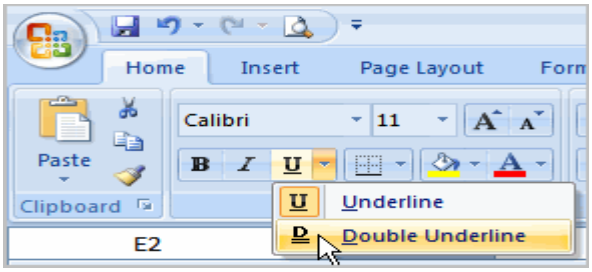
Once you have entered information into a spreadsheet, you will need to be able to **format** it. In this section, you will learn how to use the bold, italic, and underline commands; modify the font style, size, and color; and apply borders and fill colors.

To 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.

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.



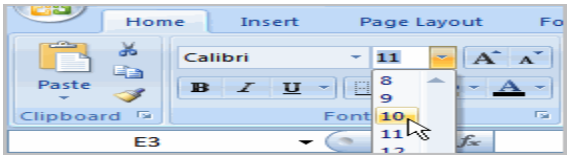
To change the font style:

- 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.

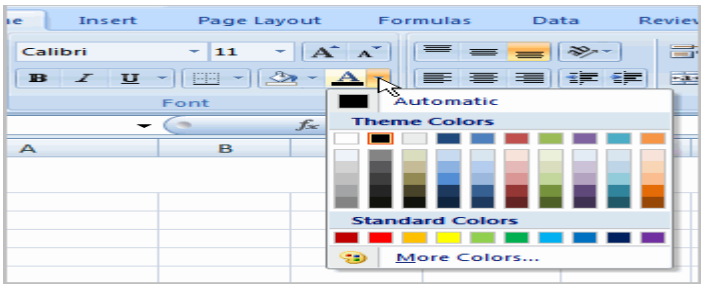
To change the font size:

- 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.

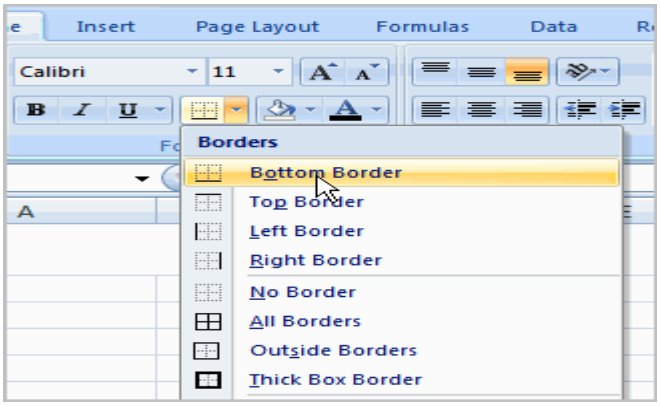


OR

- Select **More Colors**. A dialog box will appear.
- 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.

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 it's 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.

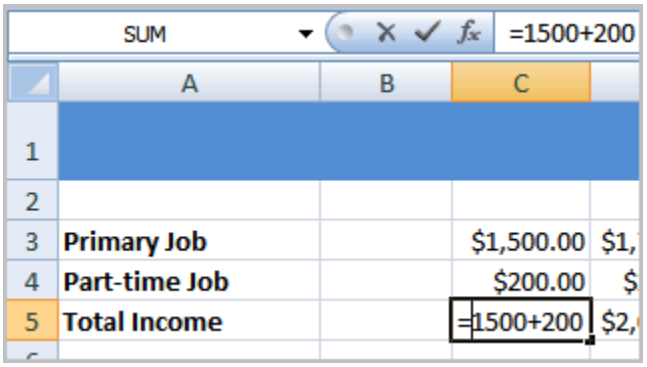
By default, the numbers appear in the **General** category, which means there is no special formatting.

Creating Simple Formulas

In this section, you will learn how to **create simple formulas** using mathematical operators such as the addition, subtraction, multiplication, and division signs.

To create a simple formula that adds two numbers:

- Click the cell where the formula will be defined (C5, for example).
- Type the equals sign (=) to let Excel know a formula is being defined.
- Type the first number to be added (e.g., 1500).
- 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., 200).
- Press **Enter**, or click the **Enter button** on the Formula bar to complete the formula.

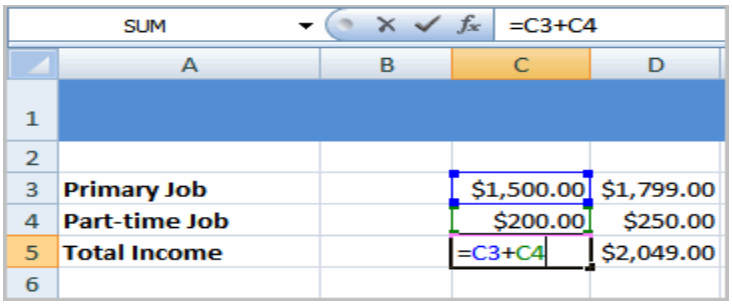


If the result of a formula is too large to be displayed in a cell, it may appear as **pound signs** (#######) instead of a value. This means that the column is not wide enough to display the cell content. Simply **increase the column width** to show the cell content.

To create a simple formula that adds the contents of two cells:

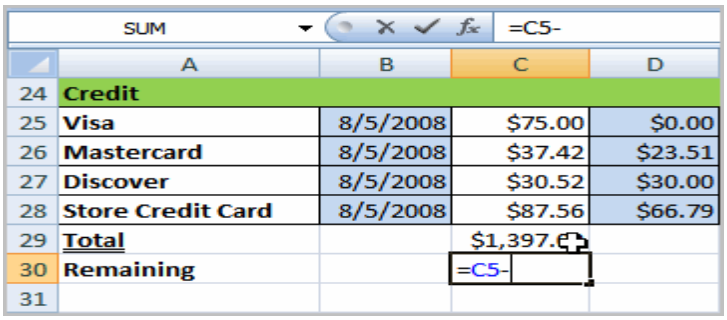
- Click the cell where the answer will appear (C5, for example).
- Type the equals sign (=) to let Excel know a formula is being defined.
- Type the cell number that contains the first number to be added (C3, for example).
- Type the **addition sign (+)** to let Excel know that an add operation is to 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.

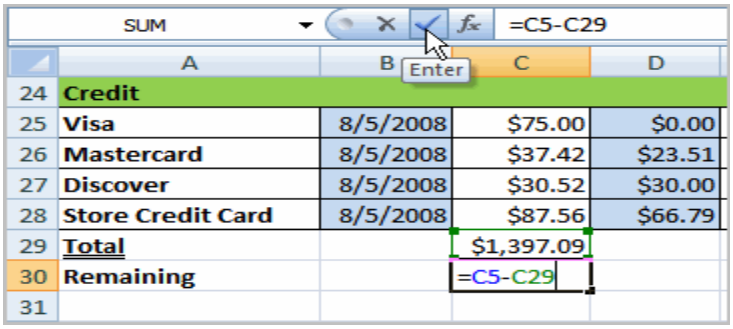


To create a simple formula using the point-and-click method:

- Click the cell where the answer will appear (C30, for example).
- Type the equals 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).



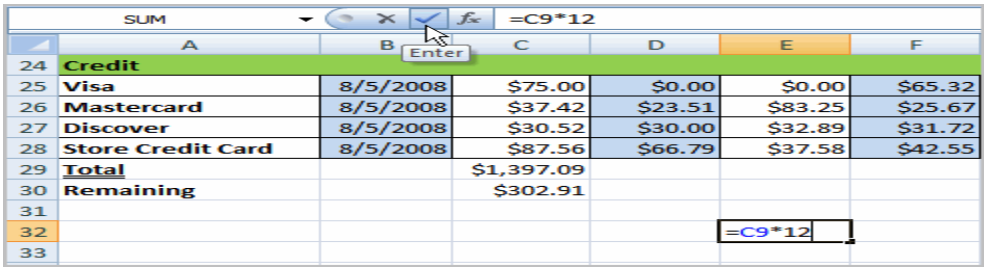
- Press **Enter**, or click the **Enter button** on the Formula bar to complete the formula.



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 equals 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.



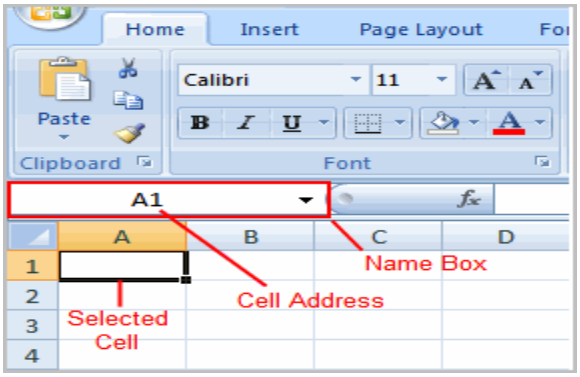
	A	B	C	D	E	F
24	**Credit**					
25	**Visa**	8/5/2008	$75.00	$0.00	$0.00	$65.32
26	**Mastercard**	8/5/2008	$37.42	$23.51	$83.25	$25.67
27	**Discover**	8/5/2008	$30.52	$30.00	$32.89	$31.72
28	**Store Credit Card**	8/5/2008	$87.56	$66.79	$37.58	$42.55
29	**Total**		$1,397.09			
30	**Remaining**		$302.91			
31						
32					=C9*12	
33						

To create a simple formula that divides one cell by another:

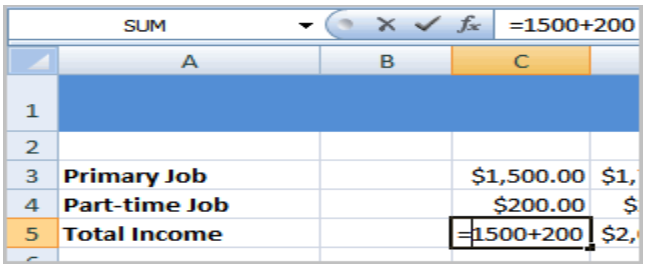
- Click the cell where the answer will appear.
- Type the equals sign (=) to let Excel know a formula is being defined.
- Click on the **first cell** to be included in the formula.
- Type a division symbol. The operator displays in the cell and Formula bar.
- Click on the **next cell** in the formula.
- Press **Enter**, or click the **Enter button** on the Formula bar to complete the formula.

Using cell references

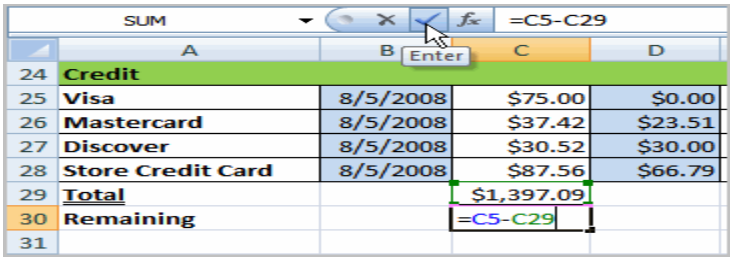
As you can see, there are many ways to create a simple formula in Excel. Most likely, you will choose one of the methods that enters the cell address into the formula rather than an actual number. The cell address is basically the name of the cell and can be found in the Name Box.



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



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

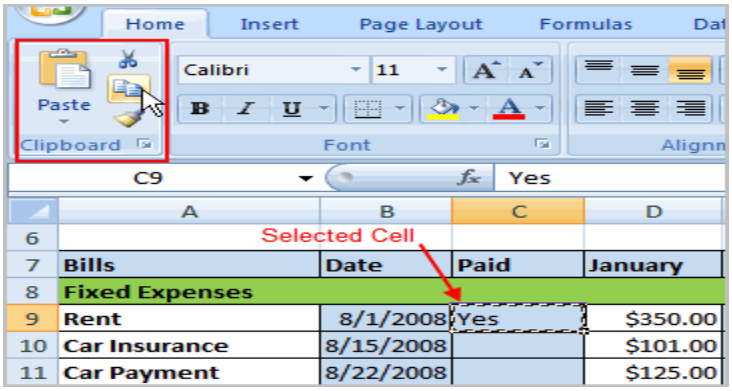


Working with Cells

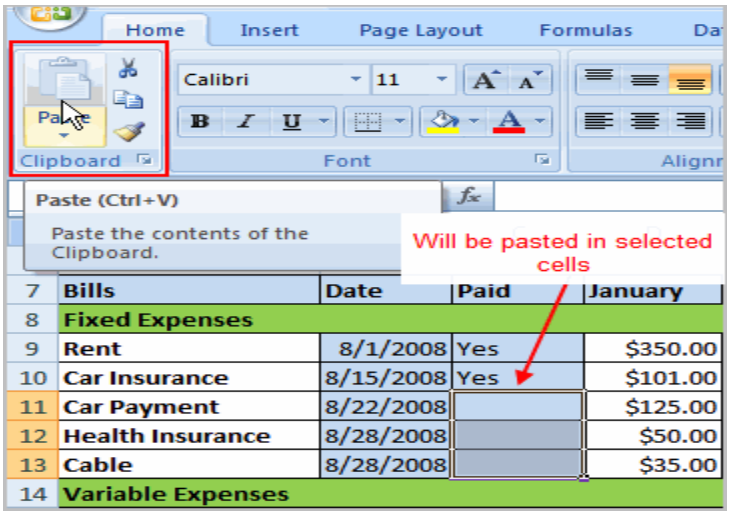
In this section, you will learn how to **cut**, **copy**, and **paste**.

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.



- 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.

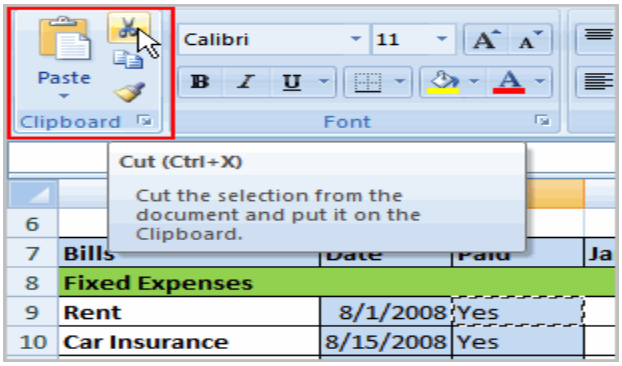


To select **more than one adjoining cell**, left-click one of the cells, drag the cursor until all of the cells are selected, and release the mouse button.

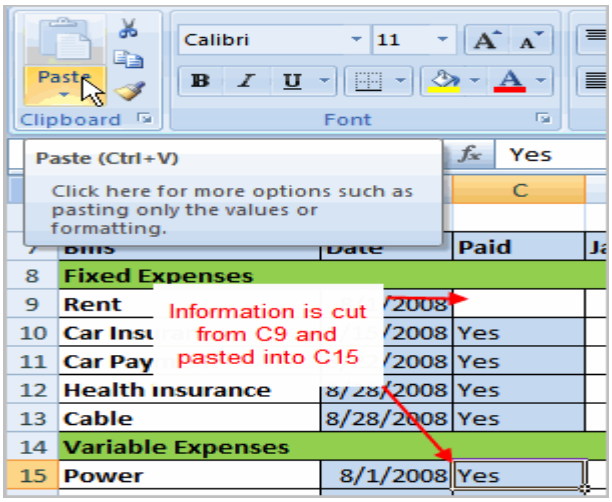
The copied cell will **stay selected** until you perform your next task, or you can double-click the cell to **deselect** it.

To cut and paste cell contents:

- Select the **cell or cells** you wish to **cut**.
- 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**.



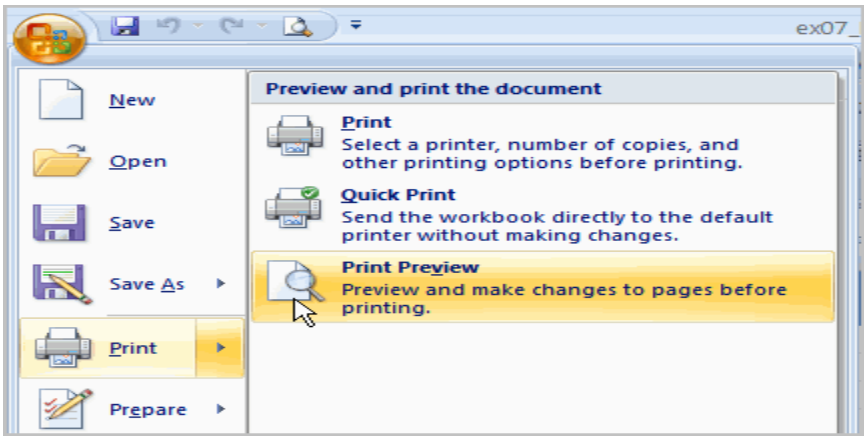
The keyboard shortcut for Paste is the **Control Key** and the **V** key.

Printing Workbooks

In this section, 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, and insert breaks.

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.

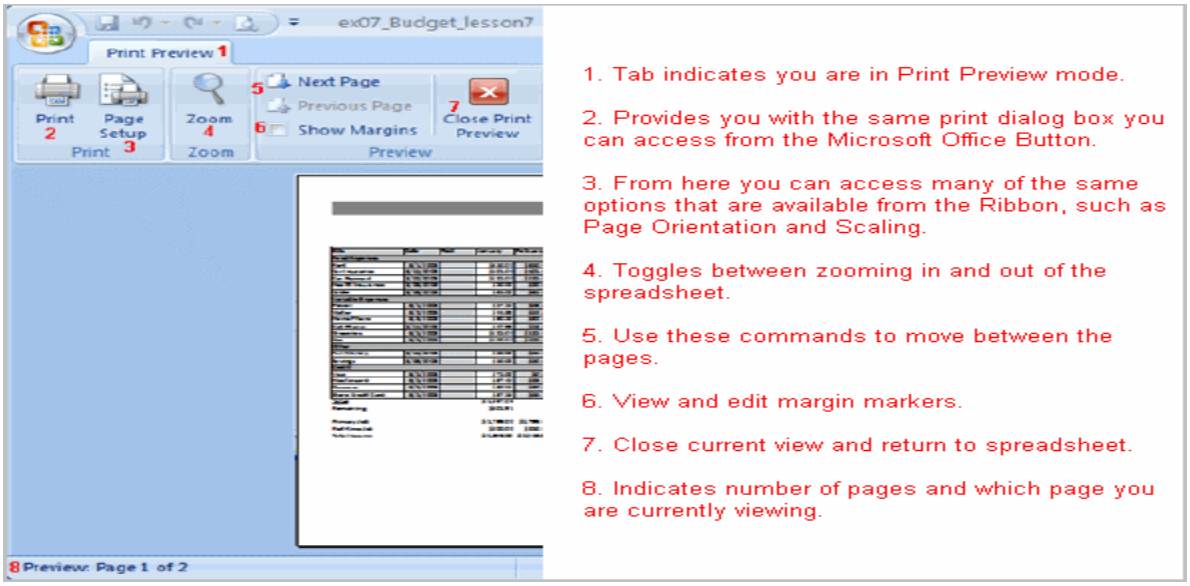


Click the **Close Print Preview** button to return to the Normal View.

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

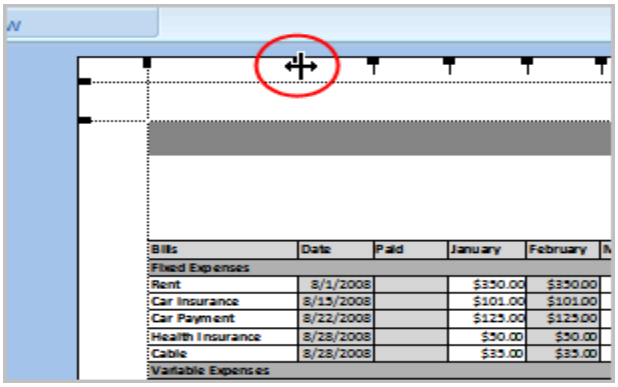
Exploring Print Preview

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



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.
- Hover your cursor over one of the **black margin markers** until a **double arrow** appears.

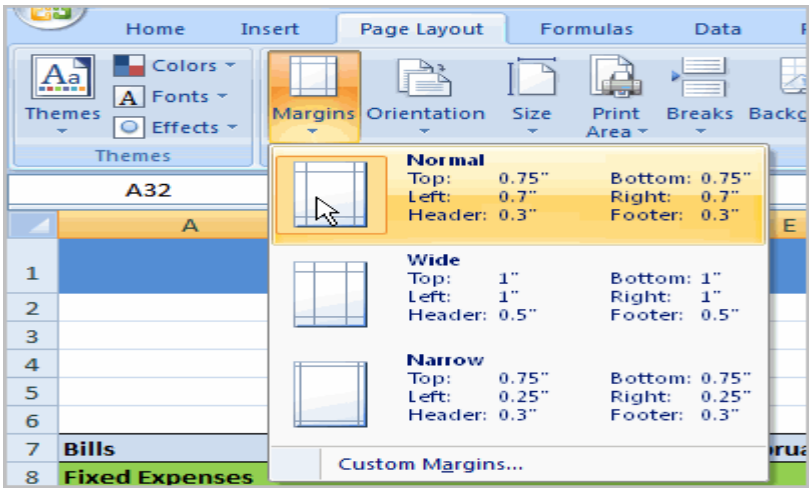


- Left-click and drag the marker to the desired location. The change will be reflected in the spreadsheet.

To modify margins:

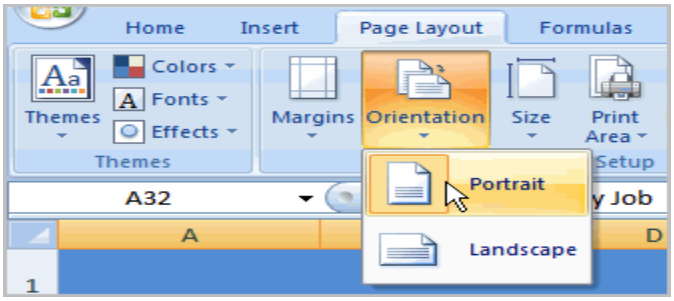
- Select the **Page Layout** tab.
- Left-click the **Margins** command.

- Choose one of the pre-defined settings, or enter custom margins.



To change page orientation:

- Select the **Page Layout** tab.
- Left-click the **Orientation** command.
- Select either Portrait or Landscape.



Portrait orients the page **vertically**, while **Landscape** orients the page **horizontally**.

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.

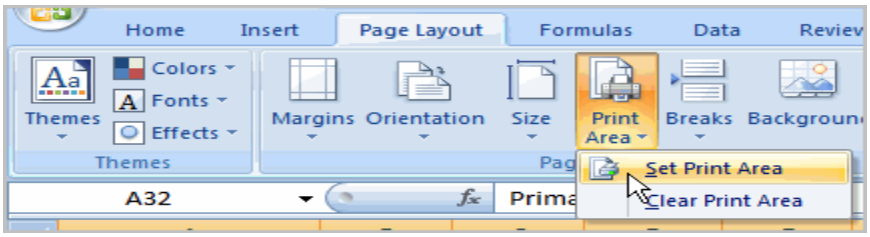
Scale to Fit is a useful feature that can help you format spreadsheets to fit on a page. However, be careful with how small you scale the information—it can become difficult to read!

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, then drag your mouse to **select the cells** you wish to print.
- Click the **Print Area** command.
- Choose **Set Print Area**.



- Now, only the selected cells will print. You can confirm this by viewing the spreadsheet in Print Preview.

To return to the default setting, which is the entire worksheet, click the Print Area command, then select Clear Print Area.

To insert a break:

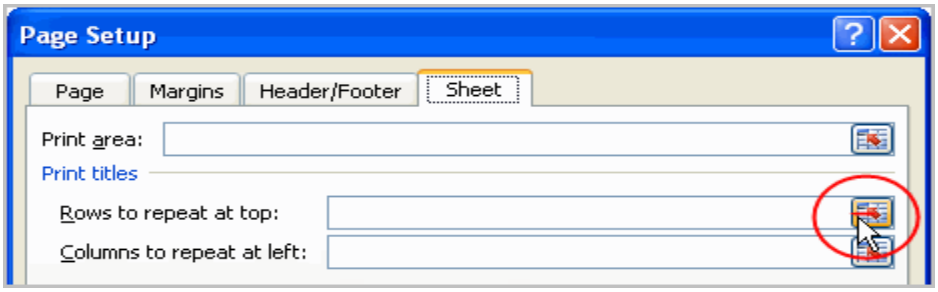
- Select a cell **below** where you want the break to appear.
- Select the **Breaks** command.
- Select **Insert Break**.

Click Print Preview to confirm that the break appears in the correct place in your spreadsheet.

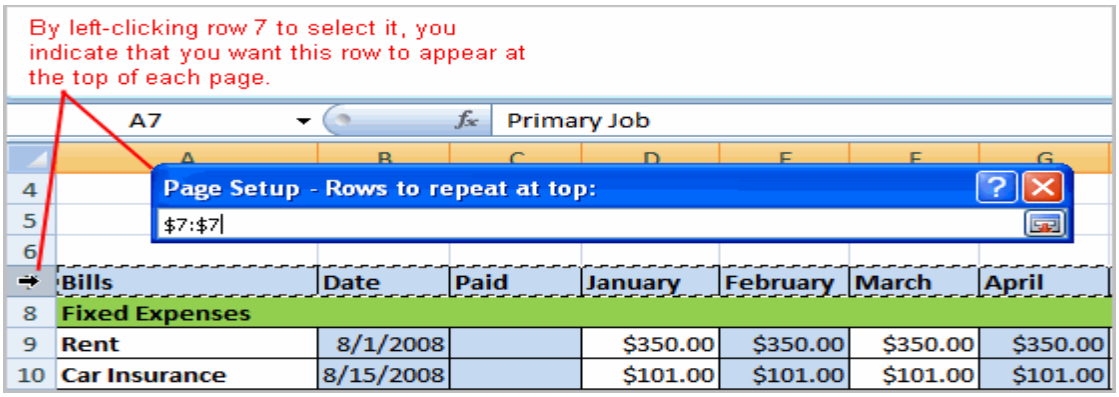
To use the Print Titles command:

This is an important command to be familiar with if you intend to print your worksheets. It allows you to select **specific rows** and/or **columns** that will be repeated on **each** printed sheet. Imagine how difficult it would be to read page 48 of a printed spreadsheet if the column and row headings only appeared on the first page.

- 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.



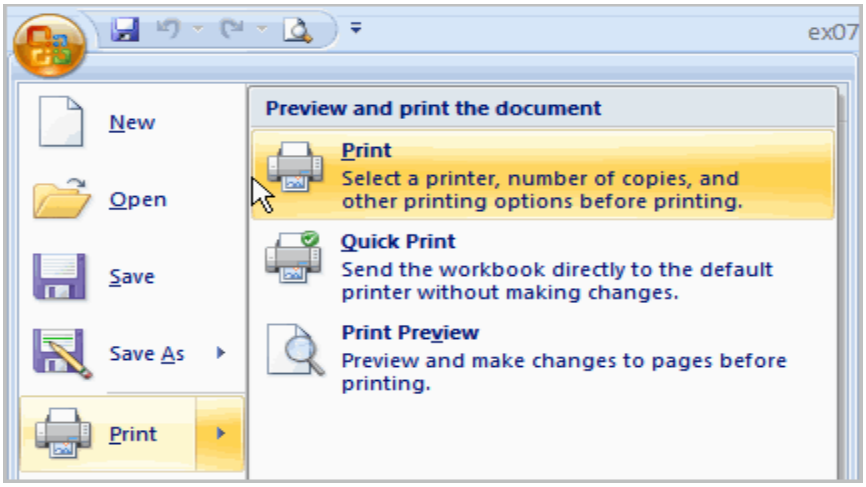
- Select the first row in the spreadsheet that you want to appear on **each printed page**.



- Repeat for the column, if necessary.
- Click OK.

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.

Creating Complex Formulas

In this section, we'll discuss **complex formulas** that use multiple mathematical operators, as well as those that use **absolute** and **relative references**.

Complex formulas defined

Simple formulas have **one** mathematical operation. **Complex formulas** involve **more than one** mathematical operation.

Simple formula: =2+2
Complex formula: =2+2*8

To calculate complex formulas correctly, you must perform certain operations before others. This is defined in the **order of operations**.

The order of operations

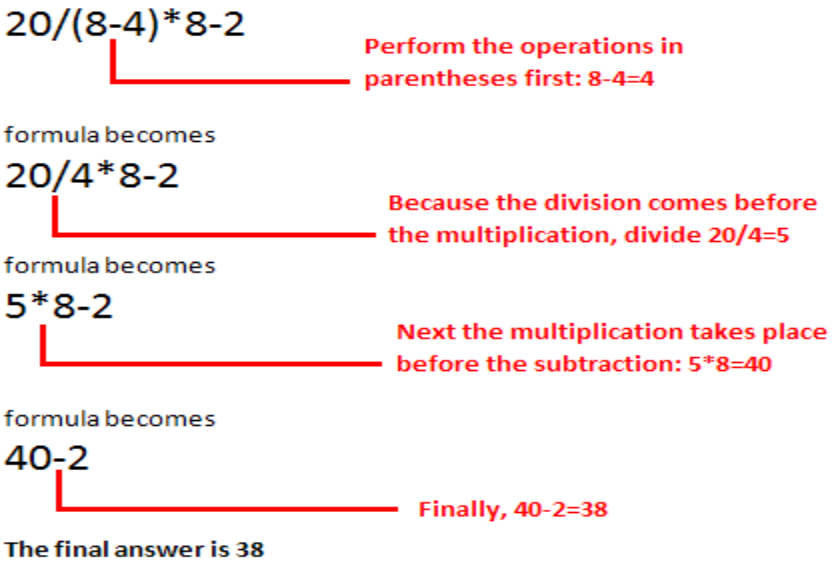
The order of mathematical operations is important. If you enter a formula that contains several operations, Excel knows to work those operations in a specific order. The **order of operations** is:

1. Operations enclosed in parenthesis
2. Exponential calculations (to the power of)
3. Multiplication and division, whichever comes first
4. 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's see how the formula **20/(8-4)*8-2** is calculated in the following breakdown:



Example 2

3+3*2=?

Is the answer 12 or 9? Well, if you calculated in the order in which the numbers appear, 3+3*2, you'd get the wrong answer: 12. You must follow the order of operations to get the correct answer.

To calculate the correct answer:

1. Calculate 3*2 first because **multiplication** comes **before addition** in the order of operations. The answer is 6.
2. Add the answer obtained in step 1, which is 6, to the number 3 that opened the equation. In other words, add 3 + 6.
3. The answer is 9.

Complex formulas

Before moving on, let's explore some more formulas to make sure you understand the order of operations by which Excel calculates the answer.

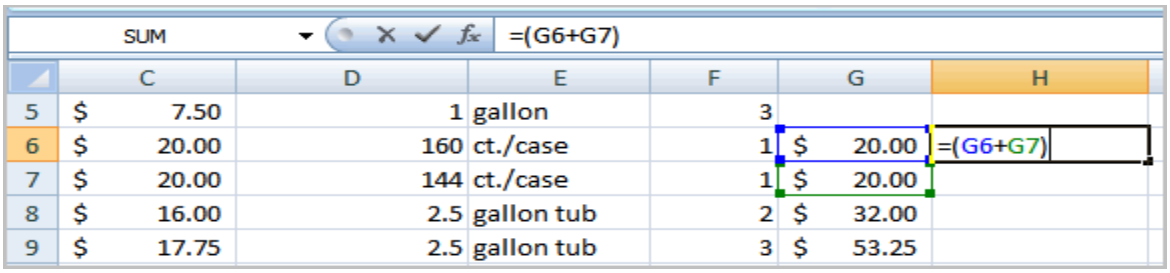
4*2/4	**Multiply** 4*2 **before**performing the **division**operation because the multiplication sign comes before the division sign. The answer is 2.
4/2*4	**Divide** 4 by 2 **before**performing the **multiplication**operation because the division sign comes before the multiplication sign. The answer is 8.
4/(2*4)	Perform the operation in **parentheses** (2*4) first, and **divide** 4 by this result. The answer is 0.5.
4-2*4	**Multiply** 2*4 before performing the **subtraction** operation because the multiplication sign is of a higher order than the subtraction sign. The answer is -4.

Creating complex formulas

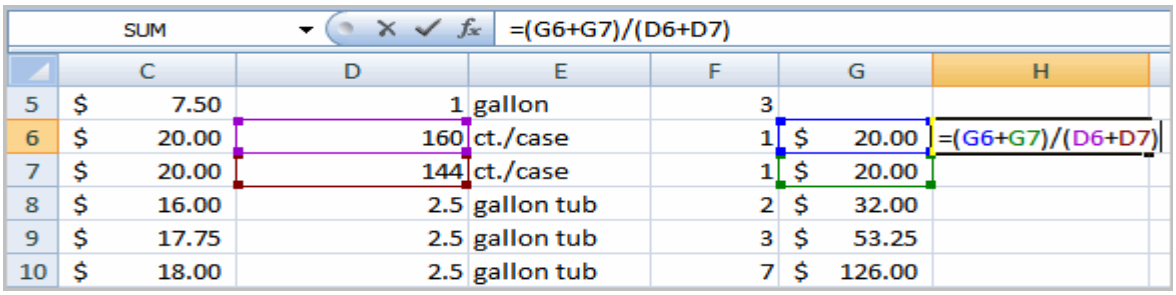
Excel **automatically** follows a **standard order of operations** in a complex formula. If you want a certain portion of the formula to be calculated first, put it in parentheses.

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 equals 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 closed parentheses).



- Type the next mathematical operator, or the **division symbol (/)**, to let Excel know 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 closed parentheses).



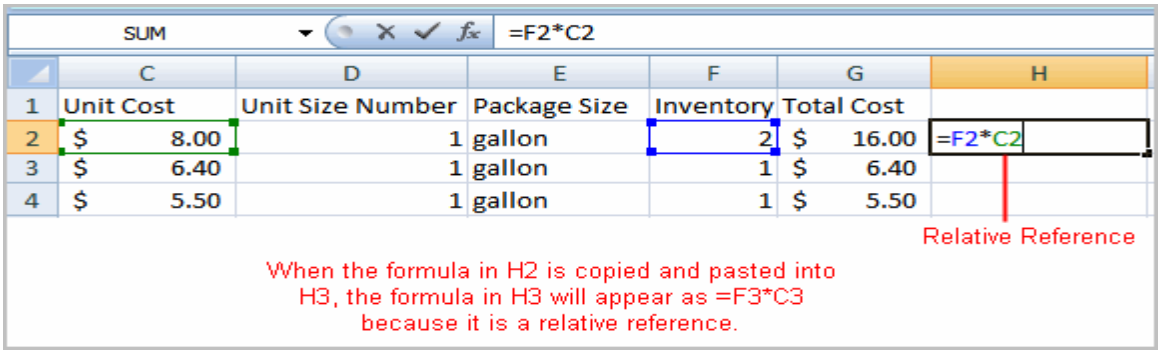
- **Important:** Press **Enter**, or click the **Enter button** on the Formula bar. This step ends the formula.

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

Excel **will not always tell you** if your formula contains an error, so it's up to you to check all of your formulas.

What is an absolute reference?

In earlier lessons, we saw how **cell references** in formulas **automatically adjust** to new locations when the formula is pasted into different cells. This is called a **relative reference**.



Sometimes when you copy and paste a formula, you don't want one or more cell references to change. An **absolute reference** solves this problem. **Absolute cell references** in a

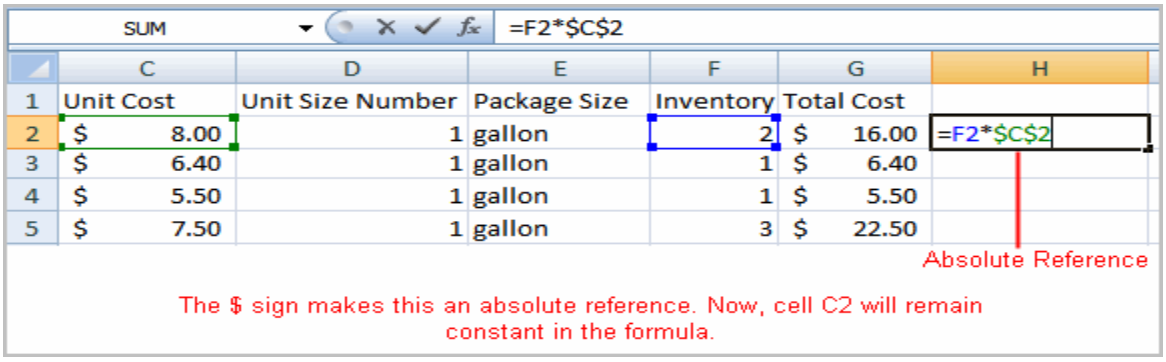
formula **always** refer to the **same cell** or cell range in a formula. If a formula is copied to a different location, the absolute reference remains the same.

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

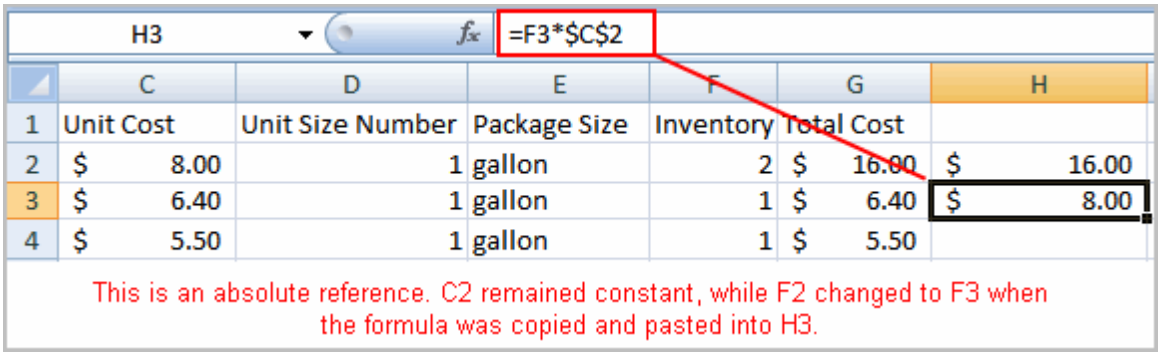
A2:	The column and the row do not change when copied.
A$2:	The row does not change when copied.
$A2:	The column does not change when copied.

To create an absolute reference:

- Select the cell where you wish to write the formula (in this example, H2).
- Type the equals 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.



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



When writing a formula, you can press the **F4** key on your keyboard to switch between relative and absolute cell references. This is an easy way to quickly insert an absolute reference.

Working with Basic Functions

A **function is a predefined formula** that performs calculations using specific values in a particular order. While you may think of formulas as being short mathematical equations, like 2+2 or F2*C2, they can actually be very lengthy and involve complex mathematical calculations.

In this section, you will learn how to use basic functions such as SUM and AVERAGE, use functions with more than one argument, and access other Excel 2007 functions.

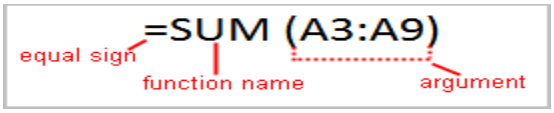
The parts of a function:

Each function has a specific order, called **syntax**, which must be strictly followed for the function to work correctly.

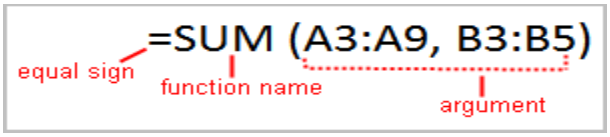
Syntax order:

1. All functions begin with the = sign.
2. After the = sign, define the **function name** (e.g., Sum).
3. 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.

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 literally has hundreds of different **functions** to assist with your calculations. Building formulas can be difficult and time consuming. Excel's functions can save you a lot of time and headaches.

Excel's different functions

There are many different functions in Excel 2007. Some of the more common functions include:

Statistical functions:

- **SUM**: Adds a range of cells together
- **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**

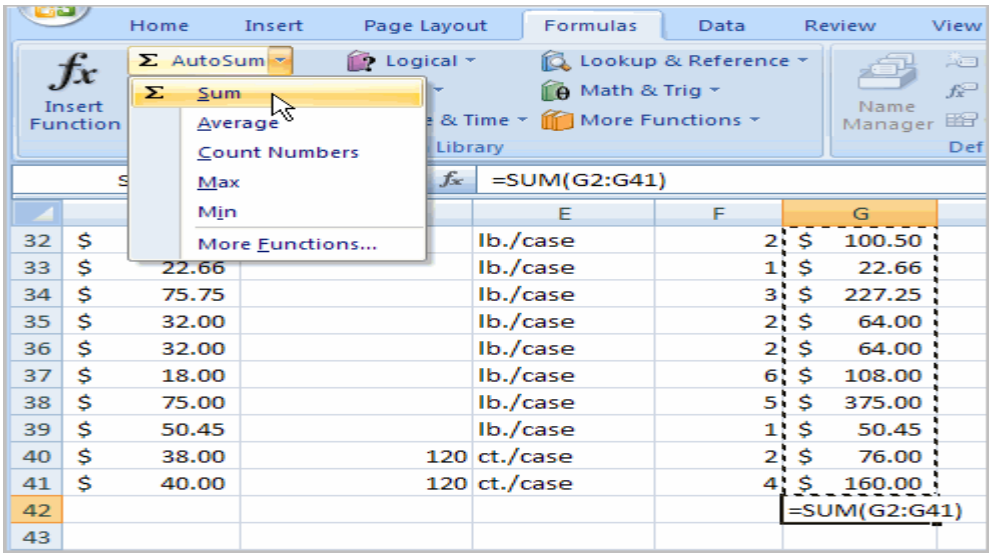
Date and time functions:

- **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

You don't have to memorize the functions, but you should have an idea of what each can do for you.

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 available functions.
- Select the cell where you want the function to appear. In this example, select G42.
- Select the drop-down arrow next to the **AutoSum** command.
- Select **Sum**. A formula will appear in the selected cell, G42.
    - This formula, **=SUM(G2:G41)**, is called a **function**. The AutoSum command automatically selects the range of cells from G2 to G41, based on where you inserted the function. You can alter the cell range if necessary.

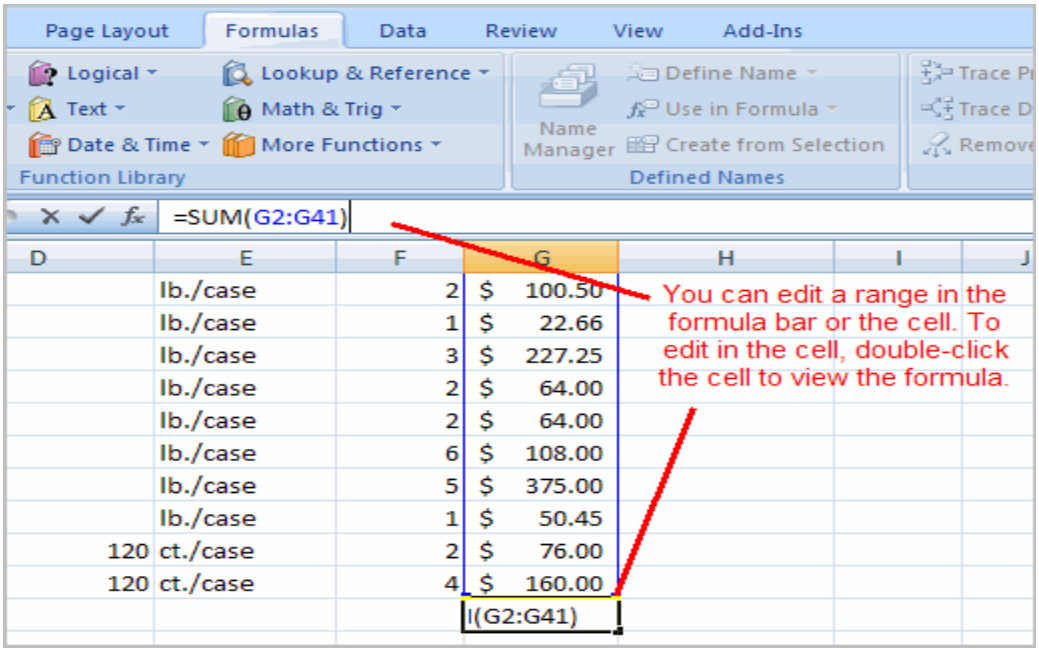


- Press the **Enter key** or **Enter button** on the formula bar. The total will appear.

Excel **will not always tell you** if your formula contains an error, so it's up to you to check all of your formulas.

To edit a function:

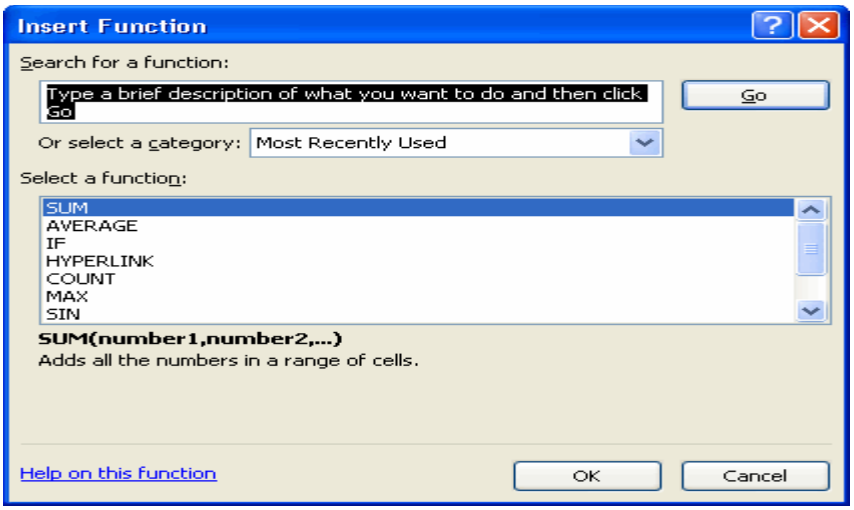
- Select the cell where the **function is defined**.
- Insert the cursor in the formula bar.
- **Edit the range** by deleting and changing necessary cell numbers.



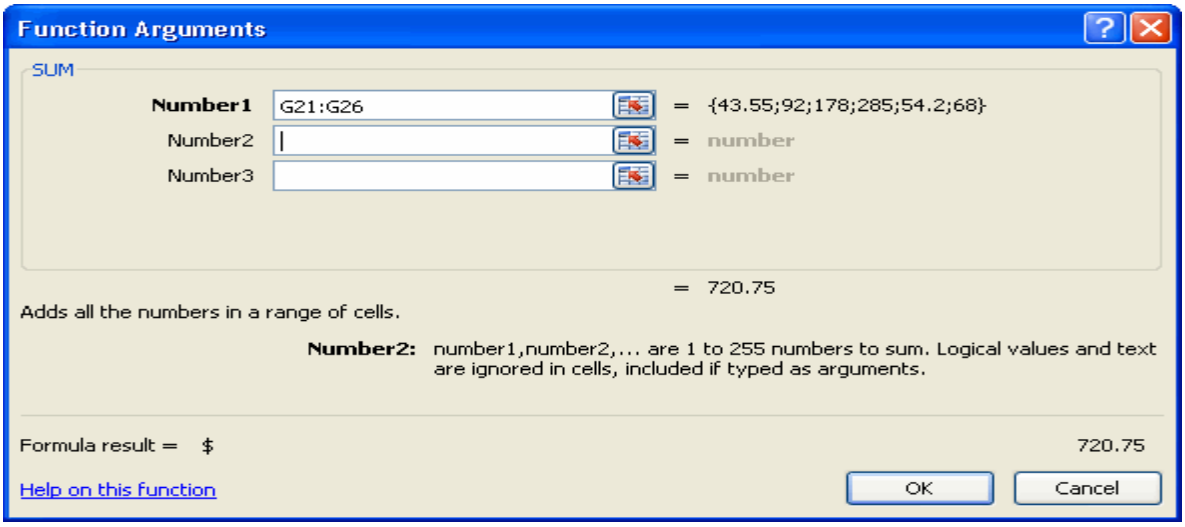
- Click the **Enter** icon.

To calculate the sum of two arguments:

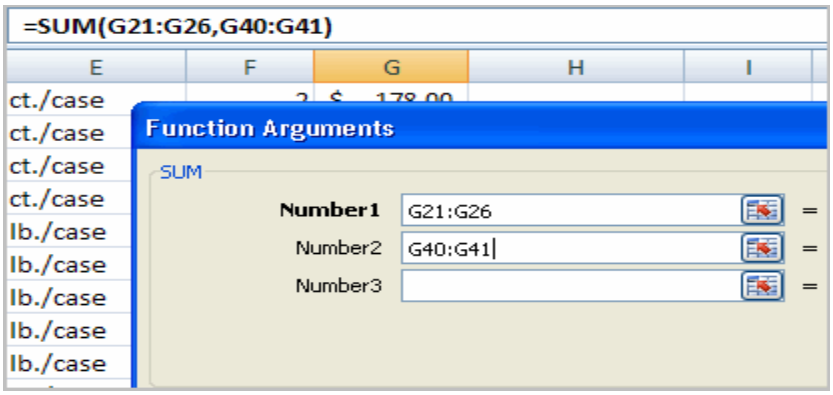
- Select the **cell** where you want the **function to appear**—in this example, G44.
- Click the **Insert Function** command on the Formulas tab. A dialog box appears.
- SUM is selected by default.



- Click **OK**, and the **Function Arguments** dialog box appears so 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, G21 through G26. The argument appears in the Number 1 field.
  - To select the cells, **left-click cell G21** and **drag the cursor** to G26, 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, G40 through G41. The argument appears in the Number 2 field.
- Notice that both arguments appear in the function in cell G44 and the formula bar when G44 is selected.



- 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.

Test your Self

Multiple Choice Questions

1. Which software lets you enter, calculate and manipulate numeric data?
   a. MS Excel c. MS PowerPoint
   b. MS Word d. All of these
2. Which symbol in a range separates the address of the starting cell address from the ending cell address?
   a. Semicolon c. Full stop
   b. Colon d. None of these
3. What is the default name of a workbook in MS Excel?
   a. Book 1 c. Untitled 1
   b. Sheet 1 d. All of these
4. Which shortcut key combination is used to save a workbook in MS Excel?
   a. Ctrl +S c. Ctrl + C
   b. Ctrl + Z d. Ctrl + S
5. Which pair of brackets are used to denote a negative value in MS Excel?
   a. Parenthesis c. Brackets
   b. Curly Bracket d. All of these

6. Name the expression which includes numbers, cell addresses, operators and parenthesis.
   a. Symbol c. Formula
   b. Equation d. None of these
7. Which data entry is neither a number nor a formula?
   a. Date c. Text
   b. Character d. None of these
8. In order to perform a calculation in a spreadsheet, you need to use a:
   a. Table c. Field
   b. Formula d. Variable
9. What do you call the element in a spreadsheet where a row and column meet?
   a. A cell c. A box
   b. A block d. None of these
10. Formulas in Excel starts with …….
   a. % c. +
   b. = d. -

State True or False

1. If we type the apostrophe symbol before a number, Excel assumes it as a text entry.( )
2. The date entries in Excel are separated by the colon symbol.( )
3. The F3 function key is used to edit the contents of the active cell.( )
4. A group of contiguous cells, which forms the shape of a rectangle, is called a range.( )
5. The combination of Copy and Paste commands are used to move a range a cells.( )
6. The shortcut key combination to cut a specific range of cells is Ctrl+X.( )
7. The number of blanks cells inserted in a worksheet will be the same as the number of cells selected initially.( )
8. The other name of cell reference in MS Excel is cell address.( )
9. In Excel, each worksheet consists of 1048576 rows and 16384 columns.( )
10. Alphanumeric data cannot be entered in an Excel worksheet.( )

Fill in the blanks

1. ……..is the last valid column header in MS Excel.
2. By default, an Excel workbook displays…….worksheets.
3. The default alignment for numbers in MS Excel is …….
4. The small black square present in the lower right of the active cell is called the …….
5. Functions are made up of …….and …….
6. …….is a powerful tool for consolidating, summarizing and presenting data.

SUBJECTIVE TYPE QUESTIONS

1. What is spreadsheet?
2. What is cell? What does it contain\Holds?

3. Define a range. How do we specify a range in MS Excel?
4. What do you understand by the terms: Row Header and Column Header?
5. Explain the difference between a worksheet and a workbook with the help of an example.
6. What are Sheet tabs?
7. How can we change the part of data in a cell using the mouse in MS Excel?
8. What are the four different options present in the Insert dialog box? Briefly explain these options.
9. What is the difference between the basic formulas and the compound formulas?
10. What is significance of using ranges in a formula?