

# Excel 2010

To start the application, do the following:

- Click the start button on the taskbar and then choose **All programs**.
- select **Microsoft office Excel 2010**. A blank workbook will appear with three worksheets. See Figure (1-1).

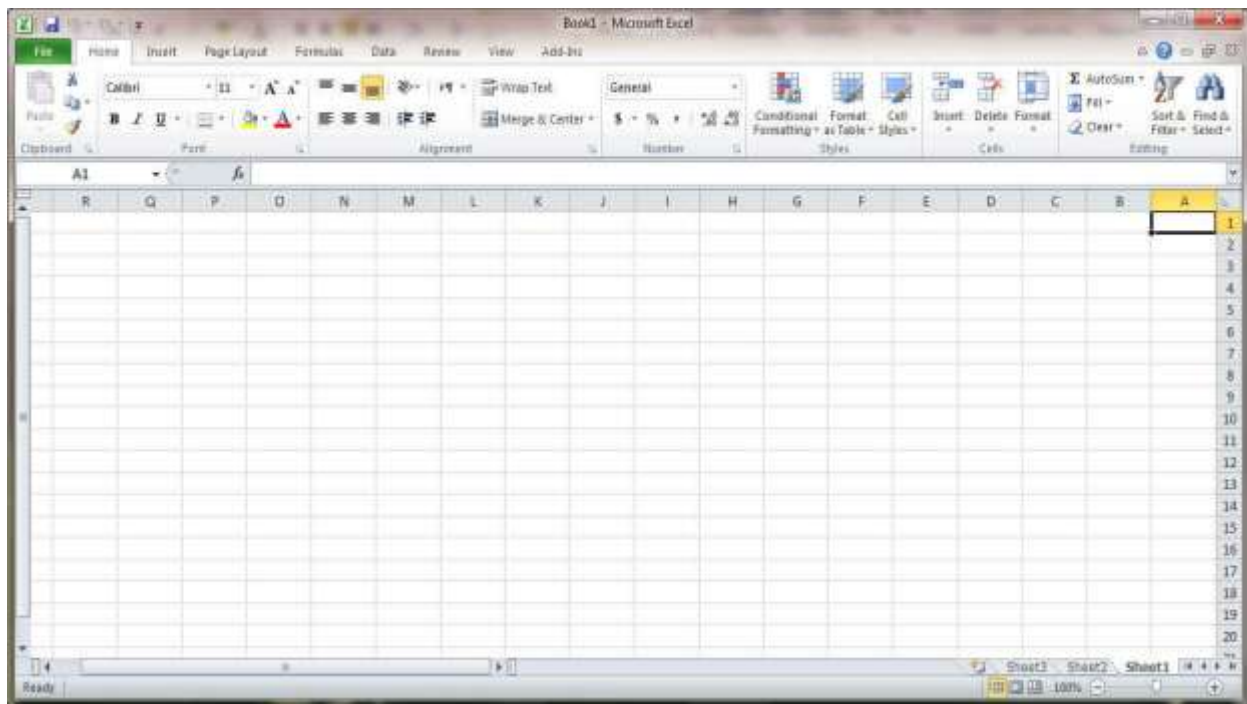


Figure (1-1)

## Worksheet:

It is the basic file type in Excel . workbooks can including worksheets and chart sheets.

1. **Row** is a horizontal series of cell labeled with numbers.
2. **Column** is a vertical series of cell labeled with the letters of alphabet.
3. **Cell** is the intersection of column and row is a holding place where you can store information.

**Cell reference:** A cell's address, usually expressed in terms of the cell's column and row on the worksheet.  
For example, the cell at the section of column **C** and has the reference **C7**, See Figure (1-2).

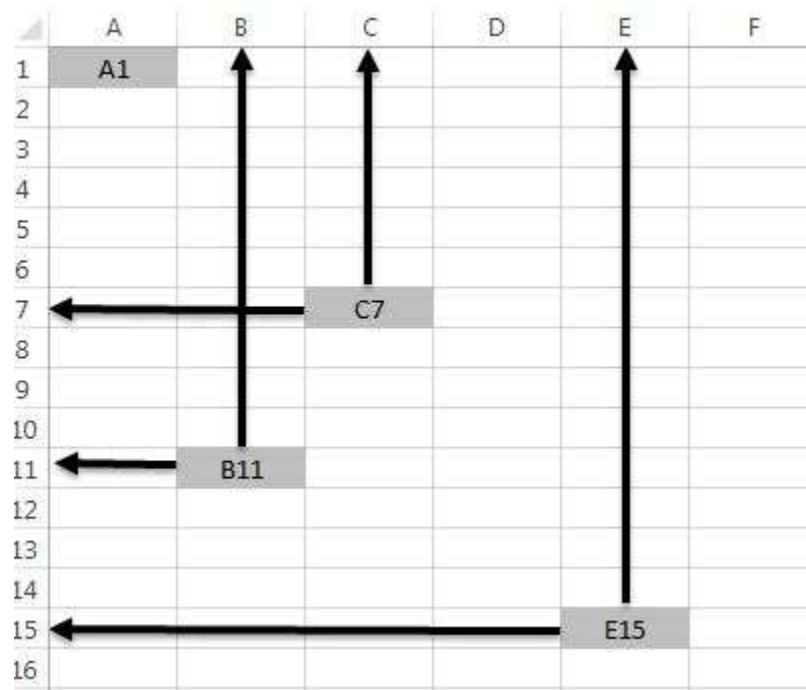


Figure (1-2)

## **Selection Cells**

The general rule in Excel (select and then do) most of the generations in Excel involve selecting cells and then do something with it.

- To select a single cell: click the cell, or press the arrow keys to move to the cell. See Figure(1-3)

	A	B	C	D	E	F
1	Salesperson	Dolls	Trucks	Puzzles		
2	ali	1327	1423	1193		
3	omar	1421	3863	2934		
4	Ghassan	2190	1278	1928		
5	Amr	1201	25228	1203		
6						
7						

Figure (1-3)

- To cancel a selection of cells, click any cell on the worksheet.
- To select all cells a worksheet: click the Select All button. See Figure(1-4)

	A	B	C	D	E	F
1	Salesperson	Dolls	Trucks	Puzzles		
2	ali	1327	1423	1193		
3	omar	1421	3863	2934		
4	Ghassan	2190	1278	1928		
5	Amr	1201	25228	1203		
6						
7						

Figure(1-4)

- To select a range of cells, select the cell by clicking in it. Hold down the mouse button. Drag down and across to the column you want to select.
- To select an entire row, click the row heading.
- To select nonadjacent rows, select the first row, and then hold down **Ctrl** and select the other rows. See Figure(1-5)

	A	B	C	D	E	F
1	Salesperson	Dolls	Trucks	Puzzles		
2	ali	1327	1423	1193		
3	omar	1421	3863	2934		
4	Ghassan	2190	1278	1928		
5	Amr	1201	25228	1203		
6						
7						

Figure (1-5)

- To select an entire column click the column heading.
- To select nonadjacent columns, select the first column, and then hold down **Ctrl** and select the other columns. See Figure(1-6)

	A	B	C	D	E	F
1	salesperson	dolls	trucks	puzzles		
2	ali	1327	1423	1193		
3	omar	1421	3863	2934		
4	ghassan	2190	1278	1928		
5	Amer	1201	25228	1203		
6						
7						

Figure (1-6)

- To select non-adjacent rows and columns, hold down **Ctrl** key and then click the column and row heading. See Figure(1-7)

	A	B	C	D	E	F
1	salesperson	dolls	trucks	puzzles		
2	ali	1327	1423	1193		
3	omar	1421	3863	2934		
4	ghassan	2190	1278	1928		
5	Amer	1201	25228	1203		
6						
7						

- To select a range of non-adjacent cells, select the first cell, hold down the Ctrl key and select another range of cells. See Figure (1-7)

	A	B	C	D	E	F
1	salesperson	dolls	trucks	puzzles		
2	ali	1327	1423	1193		
3	omar	1421	3863	2934		
4	ghassan	2190	1278	1928		
5	Amer	1201	25228	1203		
6						
7						
8						
9						

Figure (1-7)

## Inserting Rows into a worksheet

To insert a new row, do the following:

1. Click a cell in the row below where you want the new row to be inserted
2. Click on the **Home** tab. In the cells group, click the arrow next to **Insert**.
3. Click Insert sheet rows. The new row will appear before the selected row. See Figure (1-8).

	A	B	C	D	E	F
1	salesperson	dolls	trucks	puzzles		
2	ali	1327	1423	1193		
3	omar	1421	3863	2934		
4						
5	ghassan	2190	1278	1928		
6	Amer	1201	25228	1203		
7						
8						
9						

Figure (1-8)

4. Add the data shown in Figure (1-9)

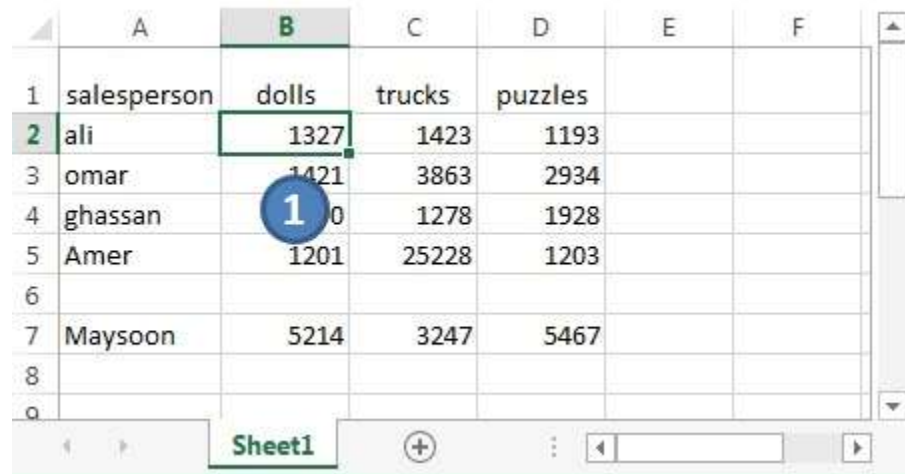
Maysoon	5214	3247	5467
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Figure (1-9)

## Inserting columns into a worksheet

To insert column, do the following:

1. Click a cell in the column to the right of where you want the new column to be inserted. See Figure (1-10)



	A	B	C	D	E	F
1	salesperson	dolls	trucks	puzzles		
2	ali	1327	1423	1193		
3	omar	1421	3863	2934		
4	ghassan	10	1278	1928		
5	Amer	1201	25228	1203		
6						
7	Maysoon	5214	3247	5467		
8						
9						

Figure (1-10)

2. Click on the **Home** tab. In the cell group, click the arrow next to **Insert**, and then click **Insert sheet columns**. A new column will appear before the selected column as shown in Figure (1-11).

	A	B	C	D	E	F
1	salesperson		dolls	trucks	puzzles	
2	ali		1327	1423	1193	
3	omar		1421	3863	2934	
4	ghassan		2190	1278	1928	
5	Amer		1201	25228	1203	
6						
7	Maysoon		5214	3247	5467	
8						
9						

Figure (1-11)

3. Add the information show in figure (1-12) to the new column.

	B
1	Region
	s
	n
	n
	s
	s

Figure (1-12)

## Deleting Rows or columns

Deleting rows will remove the row from the worksheet and shifts the surrounding cell to fill the space. To delete a row or a column, do the following:

1. Select the rows or columns that you want to delete.
2. Click on the Home tab. In the cells group, click the arrow next to delete and then do one of the following:
  - To delete the selected row, click the arrow next to Delete, and then click **Delete sheet rows**.

- to delete the selected columns, click the arrow next to delete, and then **click Delete sheet columns**

## Auto Fill

Auto fill is a tool that lets you select cells of interest and make relative copies of them on adjacent cells. Auto Fill can also be used to copy formulas.

1. Select the cells that contain the data that you want to fill into adjacent cells.
2. Drag the fill handle (the small black square in the bottom right-hand corner of the selected cell). Your pointer turns into a large plus sign. See Figure(1-13).



Figure(1-13)

3. Drag to the new range of cell you want.
4. Release the mouse button.

## Sorting Data

Using sort text, numbers, or dates or ascending order (A to Z, zero to 9 or earliest to latest date) or you can sort in descending order (Z to A, 9 to zero, or latest to earliest date). To sort a data within do the following:

1. Select any cell within the list range. Make sure that the active cell is in a table column running alphanumeric data
  2. Click on the **Home** tab. And then click sort & filter. Click **Sort A to Z** to sort in an ascending alphanumeric order.
- To sort numbers, select a column of numeric data in a range of cells. In the **Editing group**, click **Sort & Filter** and then click **Sort smallest to largest** to sort from low numbers to high numbers. Click sort Largest to smallest to sort from high numbers to low numbers



- To sort dates or times, select a column of dates or times in a range of cell or table. In the Editing group, **click Sort & filter**, and then click **Sort & oldest to Newest** to sort from an earlier to a later date or time. Click Sort Newest to Oldest to sort from a later to an earlier date or time.

To sort by more than column or row, do the following:

1. Select any cell within the list range.
2. Click on the **Home** tab. In the Editing group, click Sort & filter, and then click **Custom sort**. The Sort dialog box will appear.
3. Under column, in the **Sort** by box, select the first column that you want to sort. Under **Sort on**, select the type of sort you want. Under Order, select how you want to sort.
4. To add another column to sort by, click **Add level**, and then repeat steps three through five.
5. If your list contains a **Header Row**, but you clear the My data has headers check box, then the header will be sorted (and get mixed up) along with the rest of the information contained within the list.

## **Percentage**

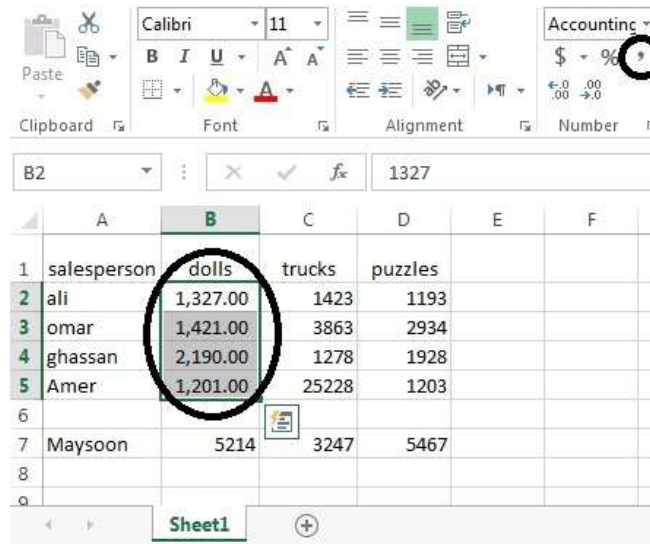
To display the value of the cell as percentage, do the following:

1. Select the cell to which you want to apply a format.
2. Click on the **Home** tab. In the number group, click percentage. If the cell contain numbers, percentage formats multiply the cell value by 100 and displays the result with a percent symbol.
3. If the numbers are type into the cells after you have apply the percentage formatting, the cell value will appear with a percent symbol

## Applying or Removing Comma style

To apply or remove style do the following:

1. Select the cell to which you want to apply a format.
2. Click on the **Home** tab. In the number group, click comma style. See Figure(1-14)



Figure(1-14)

3. To remove comma style formatting, click on the **number format** icon and then select **General** or number format option as shown in Figure(1-15)

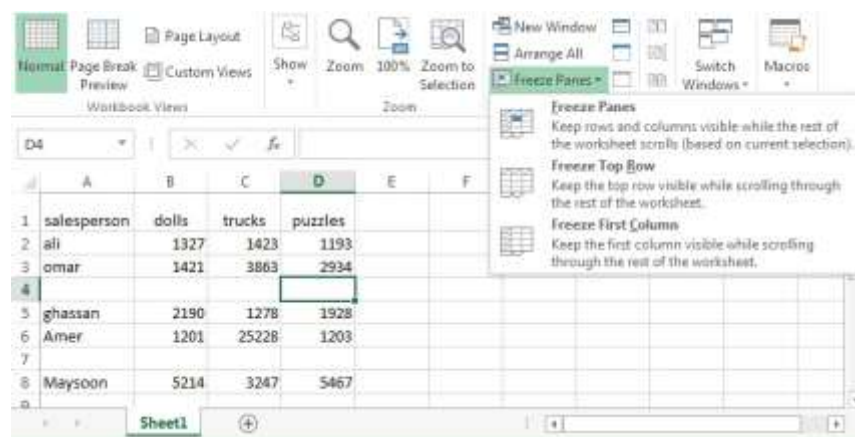


Figure(1-15)

## Freezing row and column titles

To freezing rows and columns titles do the same time, do the following:

1. Click the cell below and to the right of which you want the make to appear.
2. Click on the **view** tab. In the window group, click Freeze panes and then select Freeze panes. The column's titles, and a line to the right of the row titles.



3. If we now scroll to the right and also down the sheet, the row's and column's titles will remain visible.
4. To unfreeze rows and columns titles, on the **window** group, click **Freeze panes**, and then select **unfreeze panes**.
5. To freeze columns titles, click on the view tab. In the window group, click **freeze top row**.
6. To freeze rows titles, click on the **view** tab. In the window group, click Freeze **First Column**.

## Creating Formulas

A formula is a mathematical calculation that may contain numbers, cell references and mathematical operators.

Excel has several major operators:

Symbol	Description	Example
()	Parentheses	(3 + 4)
%	Percentage	5%
^	Exponentiation	3^3
*	Multiplication	5*3
/	Division	6/2
+	Addition	10+5
-	Subtraction	10-5 -7

Excel calculates what appears in parentheses first, multiplication and division operations second and lastly, addition and subtraction.

1. Create the table show in Figure

	A	B	C	D	E	F	G
1	Add		Subtract		Divide		multiplay
2	75		100		343		24.6
3	68		79		12.5		43.7
4							

2. Select cell A4. This cell should contain the formula to calculate the total. Type an equal (=) to tell Excel that you are about to enter a formula. Figure

	A
1	Add
2	75
3	68
4	=

3. Click the first cell that you want to use in the formula. See Figure

A screenshot of an Excel spreadsheet with column A selected. The cells contain the following text: A1: Add, A2: 75, A3: 68, A4: =A2. The cell A4 is highlighted with a dashed border, indicating it is the active cell.

4. Type in one of the mathematical operators. Type (+) as show in Figure. The formula is supposed to find the totle.

A screenshot of an Excel spreadsheet with column A selected. The cells contain the following text: A1: Add, A2: 75, A3: 68, A4: =A2+. The cell A4 is highlighted with a dashed border, indicating it is the active cell.

5. Click the second cell you want to use in the formula.

A screenshot of an Excel spreadsheet with column A selected. The cells contain the following text: A1: Add, A2: 75, A3: 68, A4: =A2+A3. The cell A4 is highlighted with a dashed border, indicating it is the active cell.

6. Press **Enter**. The results of the formula will be display in the first cell you selected.

A screenshot of an Excel spreadsheet with column A selected. The cells contain the following text: A1: Add, A2: 75, A3: 68, A4: 143. The cell A4 is highlighted with a dashed border, indicating it is the active cell.

Make the calculations for the cells shown in Figure

	A	B	C	D	E	F	G
1	Add		Subtract		Divide		multiplay
2	75		100		343		24.6
3	68		79		12.5		43.7
4	143		21		27.44		1075.02

## Error Value

You will see the following error value in cells. They always start with the pound sign #.

# NAME	The text been entered in a formula which is not slowed
#N/A	The value is not available
#####	The column is not wide enough to display the number
#VALUE	The test is been entered when the formula expects a number
#DV/0	The formula is trying to divide by which is not possible

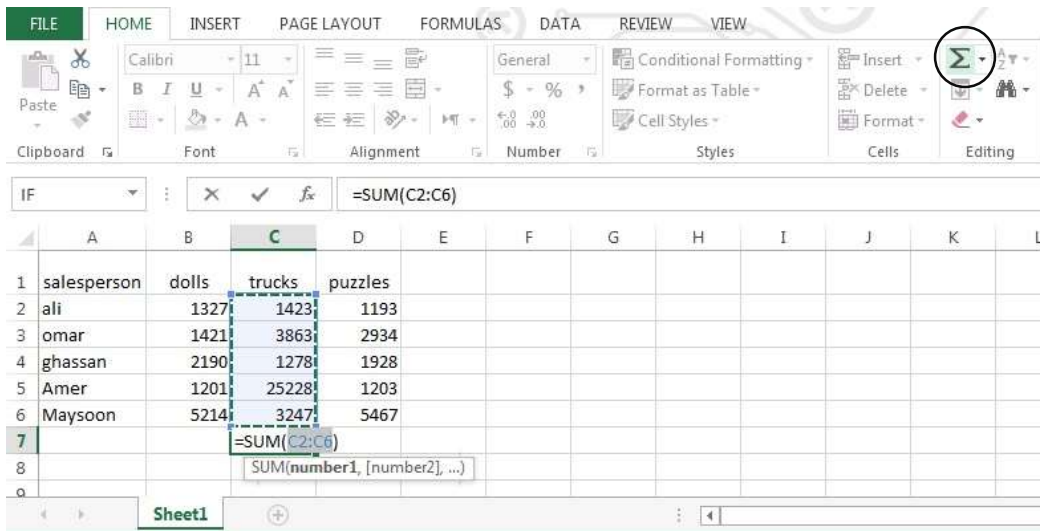
## Function

A function is an operation whose use simplified the formula building. When you enter a function, you must follow the function name with a pair of parentheses, and must use arguments.

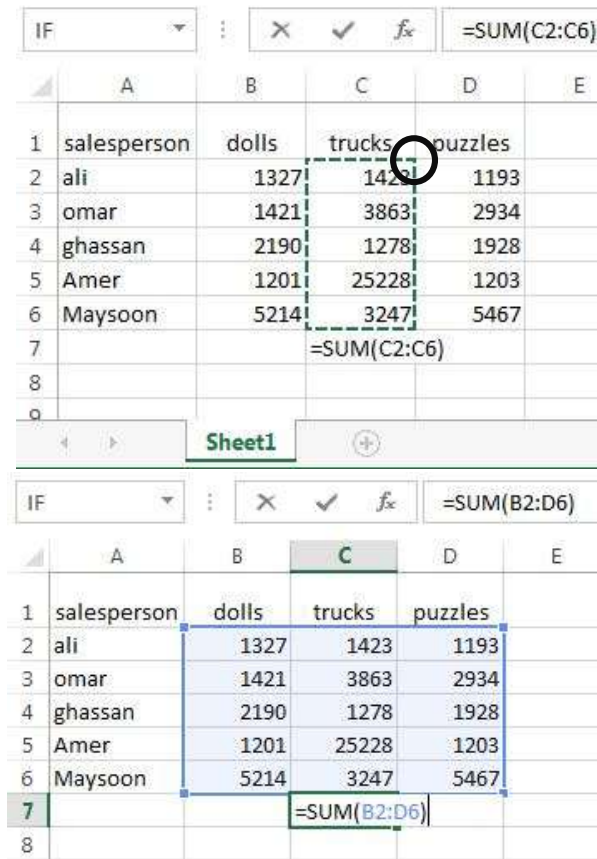
## Sum Functions

To add all contiguous numbers in a row or column, do the following:

1. Select the cell in which you want to total.
2. Click on **Home** tab. In the **Editing group**, click **AutoSum**. A **Sum** formula is entered automatically.
3. Press the **Enter** key on your keyboard. The total will appear in the selected cell. The formulas **=Sum (C3:C7)** tells Excel to add the figures in the range of cells C3 to C7 and determine the sum of these cells.



4. If the range is not correct, drag the mouse through different cells to select them. Press the Enter key. See Figure

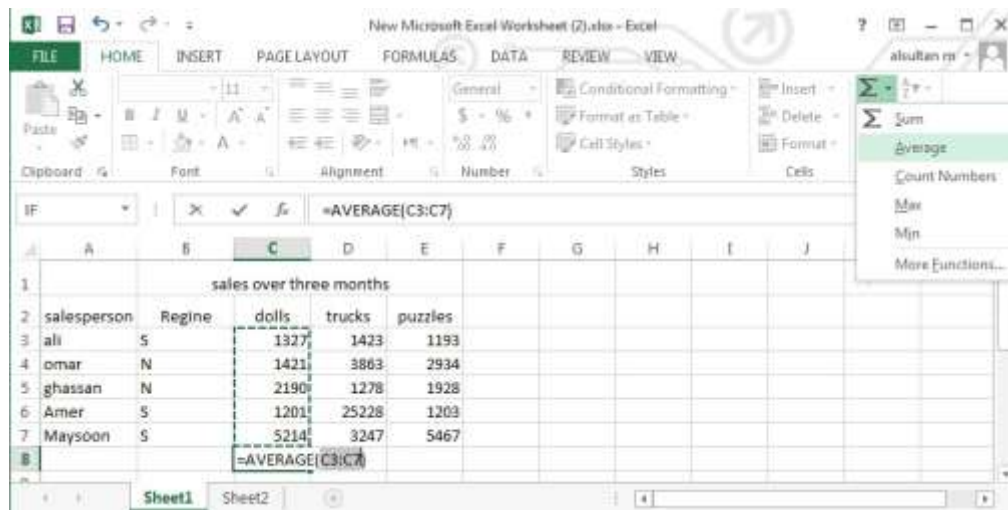


	A	B	C	D	E
1	salesperson	dolls	trucks	puzzles	
2	ali	1327	1423	1193	
3	omar	1421	3863	2934	
4	ghassan	2190	1278	1928	
5	Amer	1201	25228	1203	
6	Maysoon	5214	3247	5467	
7			59117		
8					
9					

## Average Function

The **Average** Function can be used to find the average number of select cells. To calculate the average.

1. Select the cell in which you want the average to appear.
2. Click on **Home** tab. In the **Editing** group, click the drop down arrow next to **AutoSum**. Click **Average**
3. A dotted line will appear around the selected cell. See Figure



4. Press the Enter key on your keyboard. The average value will appear in the selected cells, see Figure. The formula **=Average (C3:C7)** tells Excel to find the average in the range of cells **C3** to **C7**.



sales over three months					
salesperson	Regine	dolls	trucks	puzzles	
ali	S	1327	1423	1193	
omar	N	1421	3863	2934	
ghassan	N	2190	1278	1928	
Amer	S	1201	25228	1203	
Maysoon	S	5214	3247	5467	
		2270.6			

## Maximum and Minimum value

Use the maximum function to how the highest number within a selected range.

1. Select the cell in which you want the result to appear.
2. Click on the **Home** tab. In the **Editing** group, click the drop down arrow next to **AutoSum**. Click **Max**.
3. A dotted line will appear around the selected cells

salesperson	dolls	trucks	puzzles
ali	1327	1423	1193
omar	1421	3863	2934
ghassan	2190	1278	1928
Amer	1201	25228	1203
Maysoon	5214	3247	5467
		=MAX(C2:C6)	

4. Press the **Enter** key on your keyboard. The maximum value will appear in the selected cells. The formula `=MAX (C2:C6)` tells Excel to find the maximum value in the range of cells C2 to C6.

	A	B	C	D	E
1	salesperson	dolls	trucks	puzzles	
2	ali	1327	1423	1193	
3	omar	1421	3863	2934	
4	ghassan	2190	1278	1928	
5	Amer	1201	25228	1203	
6	Maysoon	5214	3247	5467	
7			25228		
8					

Formula bar: C7 : =MAX(C2:C6)

5. Use the **Minimum** function to show the lowest number within a selected range.

	A	B	C	D	E
1	salesperson	dolls	trucks	puzzles	
2	ali	1327	1423	1193	
3	omar	1421	3863	2934	
4	ghassan	2190	1278	1928	
5	Amer	1201	25228	1203	
6	Maysoon	5214	3247	5467	
7		1201			
8					

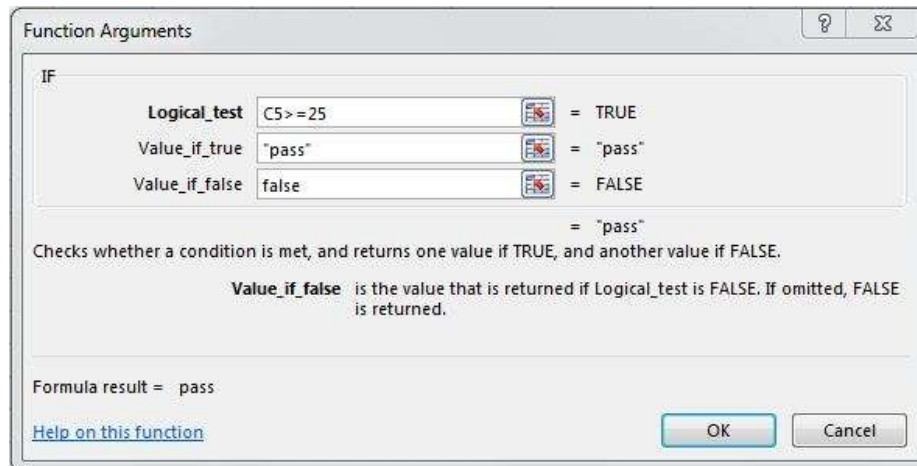
Formula bar: B7 : =MIN(B2:B6)

## IF Function

The IF function checks a condition that must be either true or false. If the condition is true, the function returns on value, if the condition is false, the function returns another value.

For example: Use the IF function we will use the IF function to type **pass** for student who get the grade 24 or more, and to type **Fail** for students who get less than 24.

1. Position the cursor in the cell where you want the result to be displayed. Click on the **Home** tab. In the **Editing** group, click the drop down arrow next to **AutoSum**. Click **More Functions**.
2. The Insert Function dialog box will appear. Select **IF** and then **OK**. The **Function Arguments** dialog box will appear.
3. In the **Logical test**, type the condition.
4. In the **Value\_if\_true** box, type the value Excel will put in a cell if the test is **true**.
5. In the **Value\_if\_false** box, type the value Excel put in a cell if the test is **false**.



6. Click **OK**. The result will appear in the selected cell as shown in Figure

	A	B	C	D	E	F
1						
2						
3						
4	NO.	Name	Mark	pass/fail		
5	1	Ahmed	26	Pass		
6	2	Fatima	24	FALSE		
7	3	Ali	23.5	FALSE		
8	4	Qasim	27	Pass		
9	5	maysaa	30	Pass		
10	6	Luma	26	Pass		
11	7	Haider	18	FALSE		
12	8	Saja	21	FALSE		
13	9	Bara	15	FALSE		
14	10	Mohammed	19.5	FALSE		
15	11	Shada	22	FALSE		
16	12	Alaa	28	Pass		
17	13	Zainab	29	Pass		
18	14	Rash	16.5	FALSE		
19	15	Zahraa	19	FALSE		
20	16	Zuna	20	FALSE		
21	17	Bilal	28	Pass		
22						

