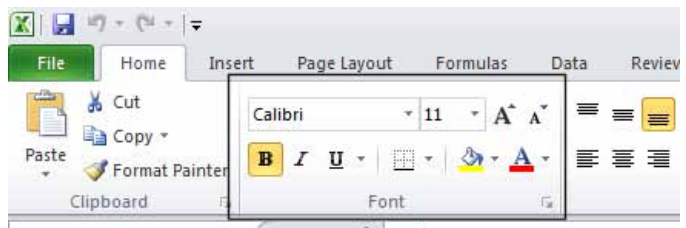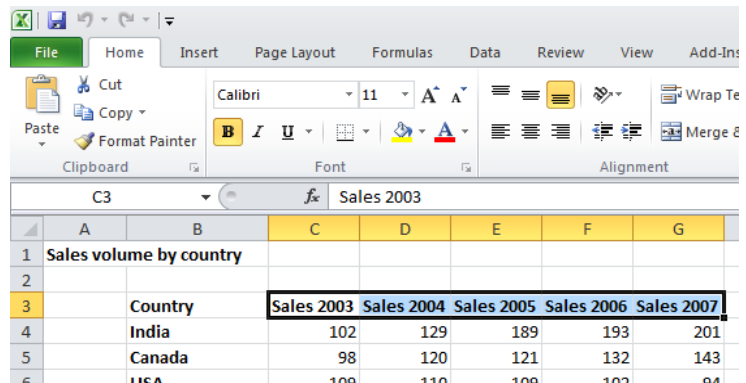# Formatting

Font formatting

Font formatting options
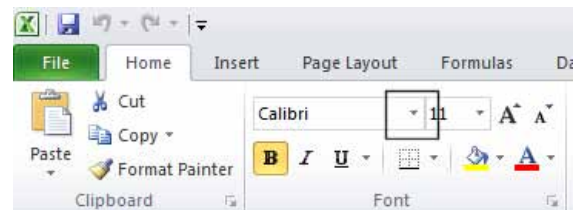The font formatting options are located on the
Home tab within the Font group.
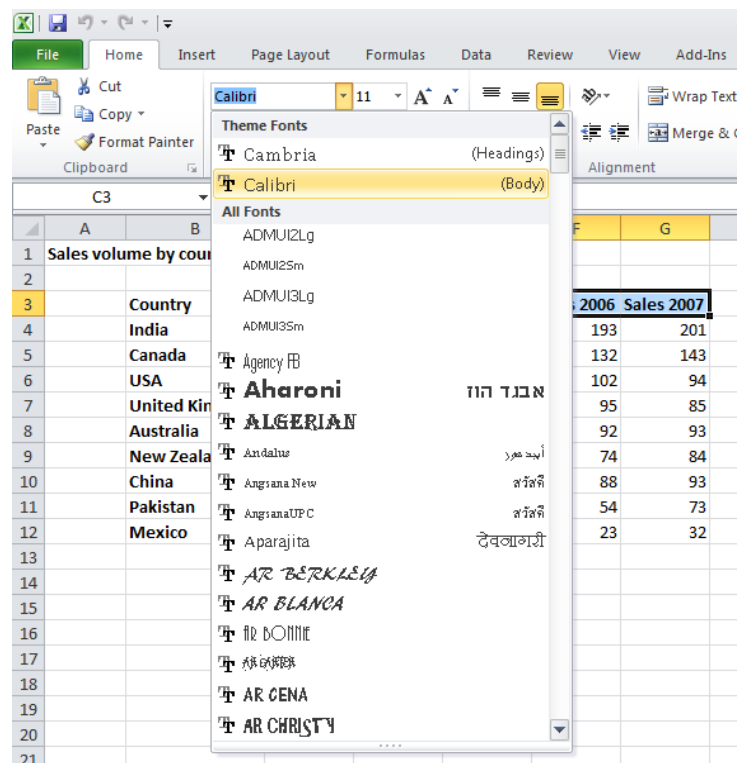
Font type

Open a workbook called **Font formatting**. Select
the range **C3:G3**.

Under the **Home** tab, click on the **down arrow**
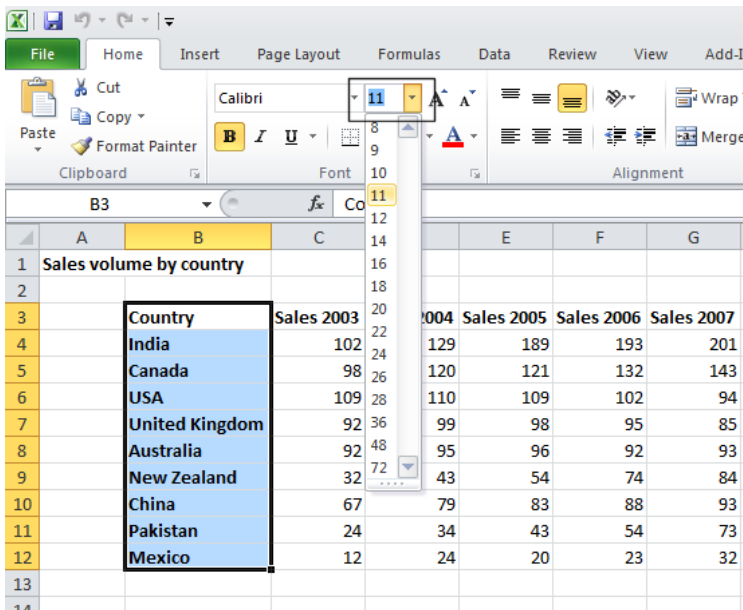next to the Font section.

From the drop down list displayed, select a
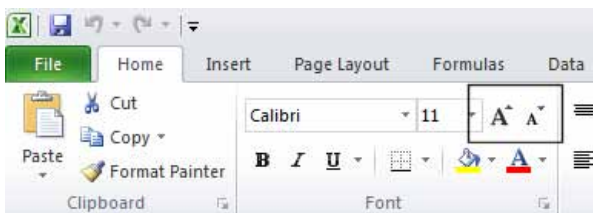different font type, such as **Arial**.

Experiment with applying different fonts to your data.

Font size

Select the range B3:B12. Click on the down arrow within the Font Size section and select a different font size.
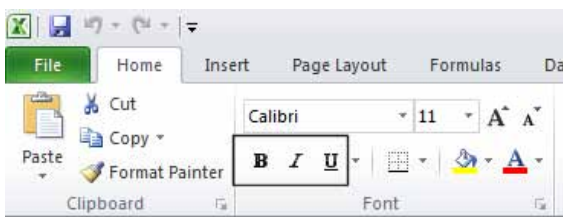

TIP: You can also select a range and use the **Increase Font Size** and **Decrease Font Size icons**.

## Bold, italic, underline formatting

Select the range C4:G12 and experiment with applying bold, italic and underline formatting using the icons illustrated below.

TIP: You can easily apply double underline formatting. To do this click on the **down arrow** next to the **Underline** icon. Select the **Double Underline** command.
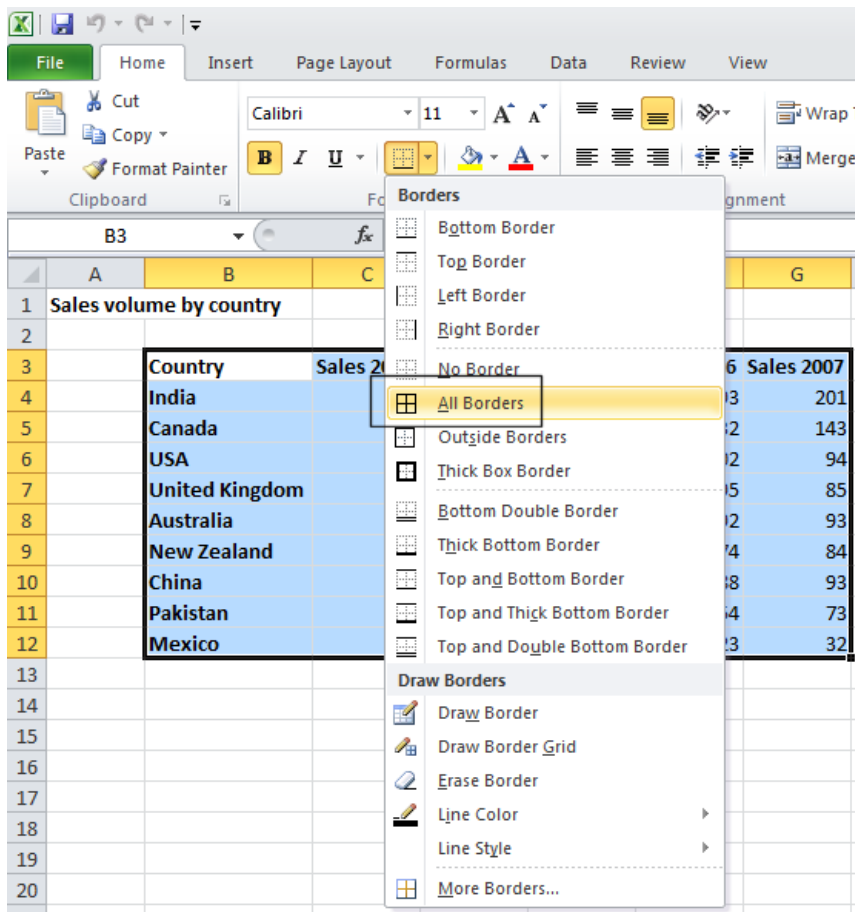
Cell border formatting

Select the range **B3:G12**. Click on the down arrow next to the **Border** icon.
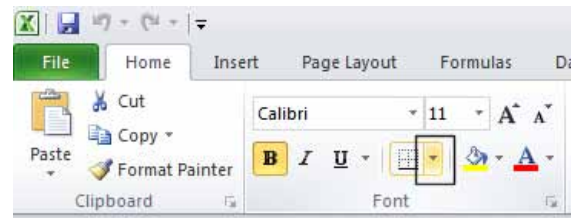
A drop down list is displayed from which you can select the required border. Select **All Borders**.

Your data will now look like this.

Country	Sales 2003	Sales 2004	Sales 2005	Sales 2006	Sales 2007
India	102	129	189	193	201
Canada	98	120	121	132	143
USA	109	110	109	102	94
United Kingdom	92	99	98	95	85
Australia	92	95	96	92	93
New Zealand	32	43	54	74	84
China	67	79	83	88	93
Pakistan	24	34	43	54	73
Mexico	12	24	20	23	32

Click on the **Undo** icon (top-left of your screen) to undo this formatting.
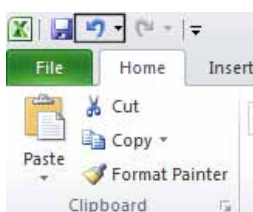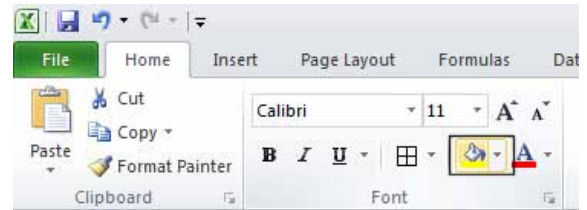
Spend a little time experimenting with applying different types of borders. Remember that you can use the **Undo** icon to **undo** any formatting that you apply.

TIP: Experiment with applying border formatting effects, such a thick or double edged border effects.

Formatting the background colour

Select the range **B3:G3**. Click on the down arrow next to the **Fill Colour** icon.

Move the mouse over a colour and you will see the colour formatting previewed within your data. Click on a colour to apply it.

TIP: Be careful when applying background fill colours as it may make any text within the range difficult to see. Avoid using similar text colours and background fill colours.
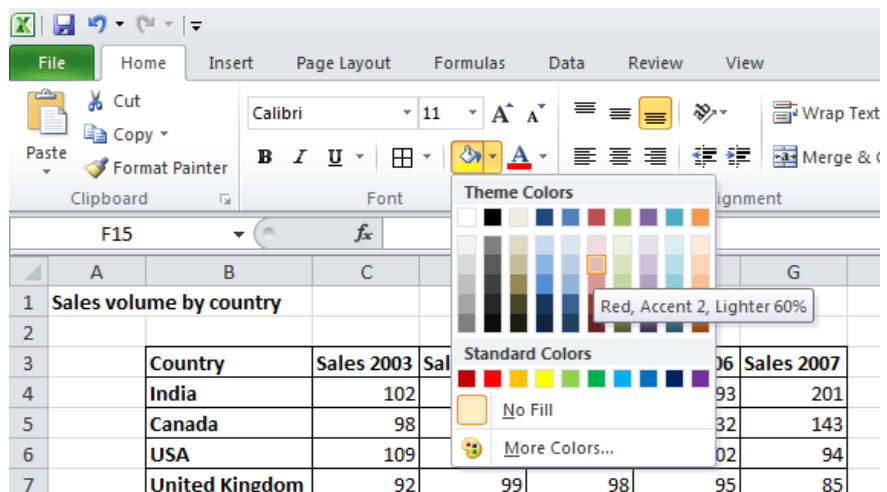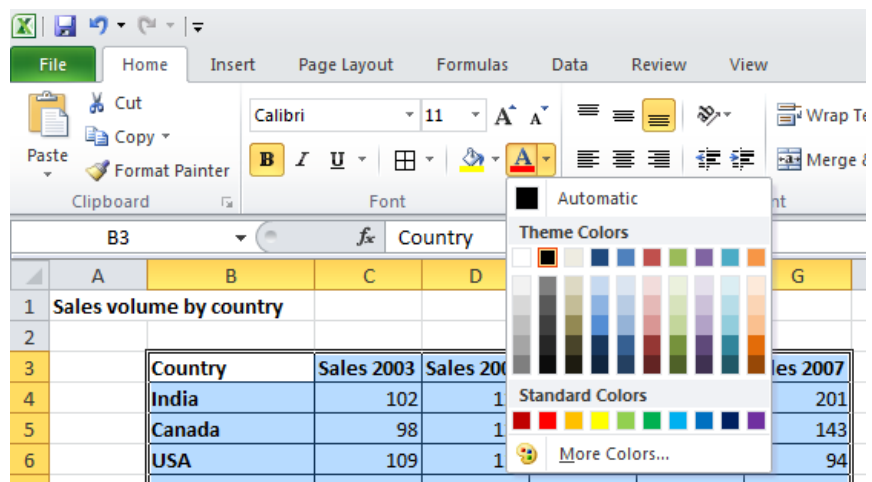
Formatting the font colour

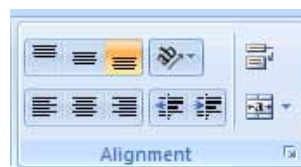Select the range **B3:B12**. Click on the **down arrow** next to the **Font Colour** icon.
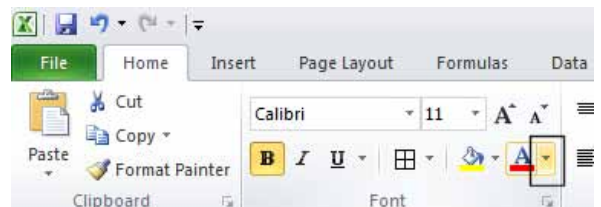
This will display a drop down from which you can select the required colour. Experiment with applying different font colours.

Save your changes and close the workbook.

Alignment formatting

The alignment options are contained within the Alignment group on the Home tab.

Horizontally aligning contents in a cell range

Open a workbook called Alignment. Select the range **C3:G12**. Click on the Centre icon to **centre** the cell contents in this range. Try applying **left** and then **right** alignment formatting. Use the alignment icons illustrated below.
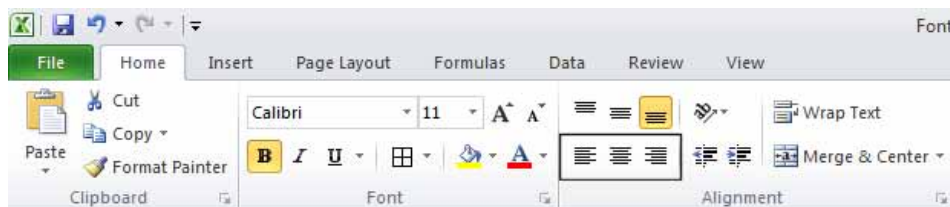
Centring a title over a cell range

Click on cell **C2** and type in the word **'Sales'**.

	A	B	C	D	E	F	G
1							
2			Sales				
3		Country	2003	2004	2005	2006	2007
4		India	102	129	189	193	201
5		Canada	98	120	121	132	143
6		USA	109	110	109	102	94
7		United Kingdom	92	99	98	95	85
8		Australia	92	95	96	92	93
		New Zealand					

We want to centre this within the range **C2:G2**. To do this, select the range **C2:G2**.

	A	B	C	D	E	F	G
1							
2			Sales				
3		Country	2003	2004	2005	2006	2007
4		India	102	129	189	193	201

Click on the Merge and Centre icon.
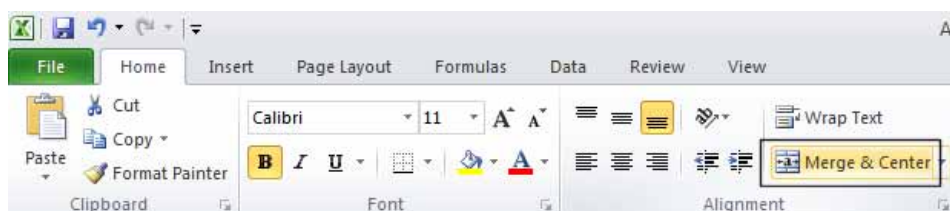
Your screen will now look like this.

	A	B	C	D	E	F	G
1							
2					Sales		
3		Country	2003	2004	2005	2006	2007
4		India	102	129	189	193	201
5		Canada	98	120	121	132	143
6		USA	109	110	109	102	94
7		United Kingdom	92	99	98	95	85
8		Australia	92	95	96	92	93

Cell orientation

Select the range **C3:G3**.

	A	B	C	D	E	F	G
1							
2					Sales		
3		Country	2003	2004	2005	2006	2007
4		India	102	129	189	193	201
5		Canada	98	120	121	132	143
6		USA	109	110	109	102	94

Click on the **Orientation** icon.
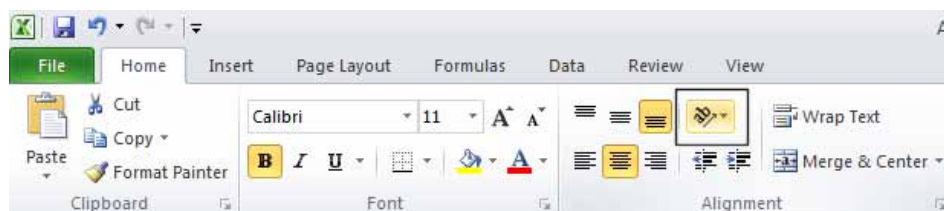
You will see a drop down menu allowing you to format the cell orientation.
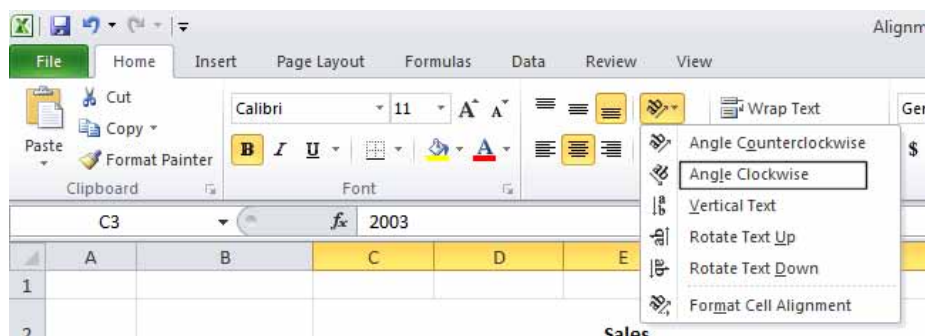
Select the **Angle Clockwise** command. Your data will now look like this.

	A	B	C	D	E	F	G
1							
2					Sales		
3		Country	2003	2004	2005	2006	2007
4		India	102	129	189	193	201
5		Canada	98	120	121	132	143
6		USA	109	110	109	102	94
7		United Kingdom	92	99	98	95	85
8		Australia	92	95	96	92	93

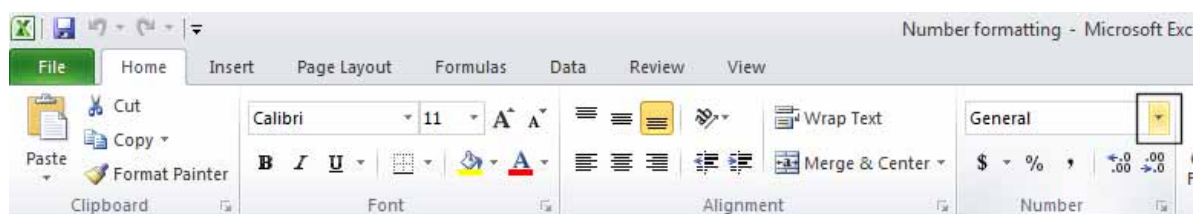Experiment with applying some of the other orientation effects.

Save your changes and close the workbook.
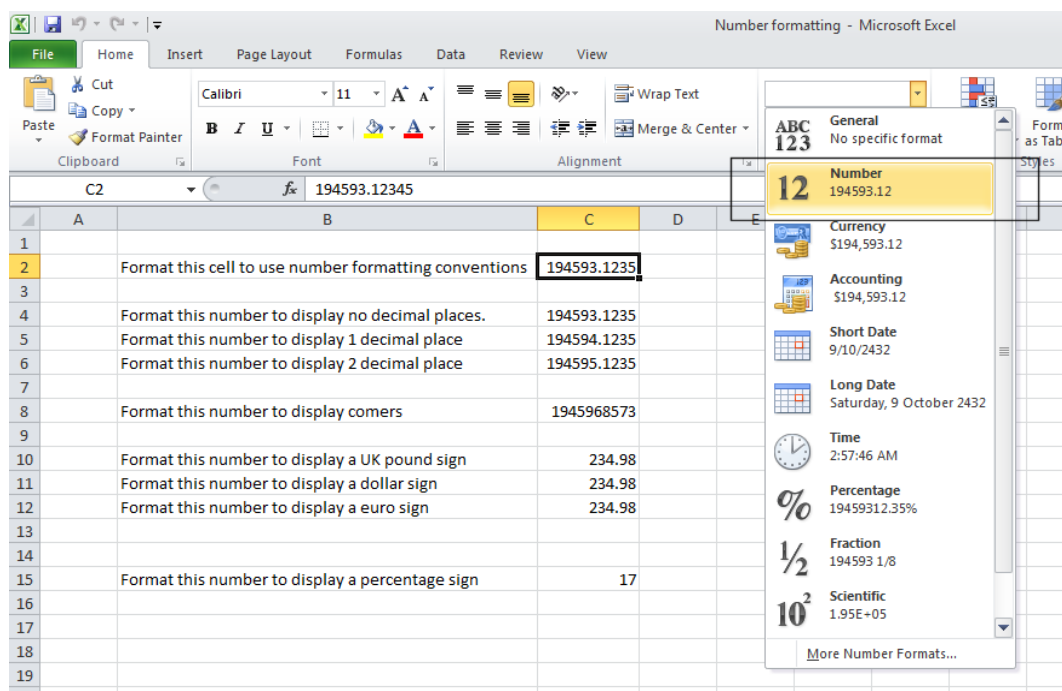
Number formatting

Open a workbook called **Number formatting**. Click on cell **C2**.
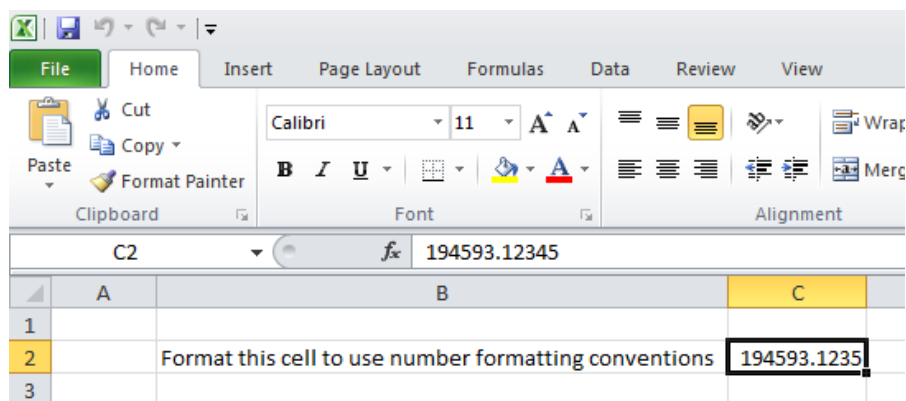
Click on the **down arrow** next to the **Number Format** control.

You will see a drop down menu from which you can select the format. In this case select **Number**.

This tells Excel that the data contained within this cell should always now be treated as a number, rather than say text or a date.
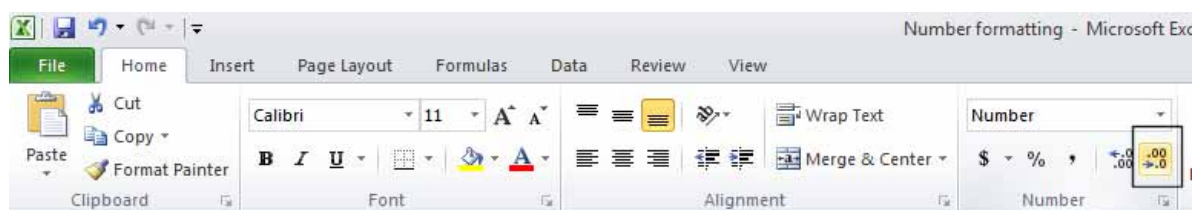
Decimal point display

Click on cell **C4**.

	A	B	C
1			
2		Format this cell to use number formatting conventions	194593.12
3			
4		Format this number to display no decimal places.	194593.1235
5		Format this number to display 1 decimal place	194594.1235
6		Format this number to display 2 decimal place	194595.1235

Click on the **Decrease Decimal** icon a few times, so that no decimal places are displayed.

The cell contents should now look like this.

Format this number to display no decimal places.	194593

Set the contents of cell **C5** to display **1** decimal point.

	A	B	C	
1				
2		Format this cell to use number formatting conventions	194593.12	
3				
4		Format this number to display no decimal places.	194593	
5		Format this number to display 1 decimal place	194594.1	
6		Format this number to display 2 decimal place	194595.1235	
7				

Set the contents of cell **C6** to display **2** decimal points.

	A	B	C	D
1				
2		Format this cell to use number formatting conventions	194593.12	
3				
4		Format this number to display no decimal places.	194593	
5		Format this number to display 1 decimal place	194594.1	
6		Format this number to display 2 decimal place	194595.12	
7				

**TIP**: To increase the number of decimal points displayed, click on the **Increase Decimal** icon.

Applying and removing comma style formatting (to indicate thousands)

Click on cell **C8**.

	A	B	C
1			
2		Format this cell to use number formatting conventions	194593.12
3			
4		Format this number to display no decimal places.	194593
5		Format this number to display 1 decimal place	194594.1
6		Format this number to display 2 decimal place	194595.12
7			
8		Format this number to display comers	1945968573
9			

Click on the **Comma** Style icon (within the **Number** group under the **Home** tab) to format the number using commas.
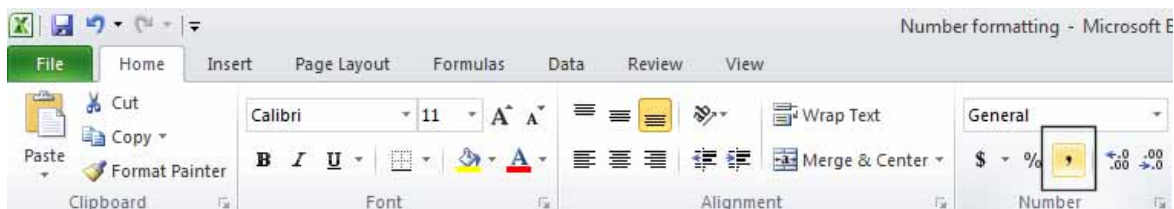
Your number should now look like this.

1,945,968,573.00

NOTE: To remove comma style formatting, click on the down arrow next to the **Number format** icon (within the **Number** section of the **Home** tab).
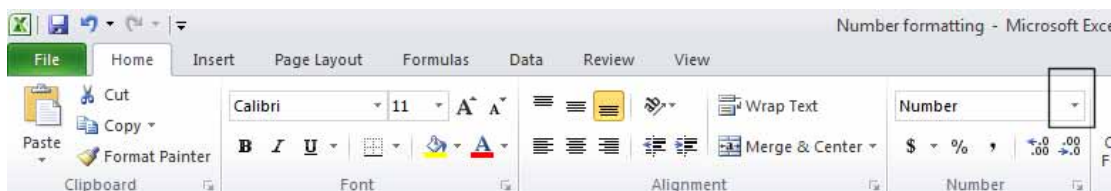
Select the General or Number format option, as illustrated.
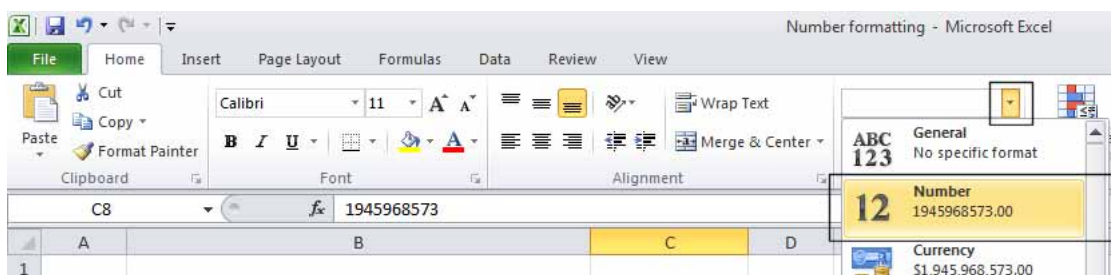
The cell contents will now be displayed without comma style formatting.

Currency symbol

Select cell **C10**.

	A	B	C
1			
2		Format this cell to use number formatting conventions	194593.12
3			
4		Format this number to display no decimal places.	194593
5		Format this number to display 1 decimal place	194594.1
6		Format this number to display 2 decimal place	194595.12
7			
8		Format this number to display comers	1945968573.00
9			
10		Format this number to display a UK pound sign	234.98
11		Format this number to display a dollar sign	234.98

Format it to display the British Pound symbol. To do this click on the down arrow next to the Currency icon.

From the list displayed, select the £ option.
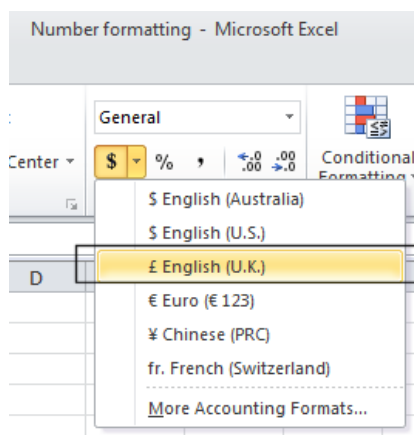
Select cell C11 and format it to display the Dollar symbol.
Select cell C12 and format it to display the Euro symbol. Your data will now look like this.

£	234.98
$	234.98
€	234.98

Date styles

Click on cell **B17** and type in the text **'The date today is'.**
Click on cell **C17** and type in today's date. When you press the **Enter** key you may find that the style of the date changes automatically.
Right click over cell **C17** and from the popup menu displayed select the **Format Cells** command.
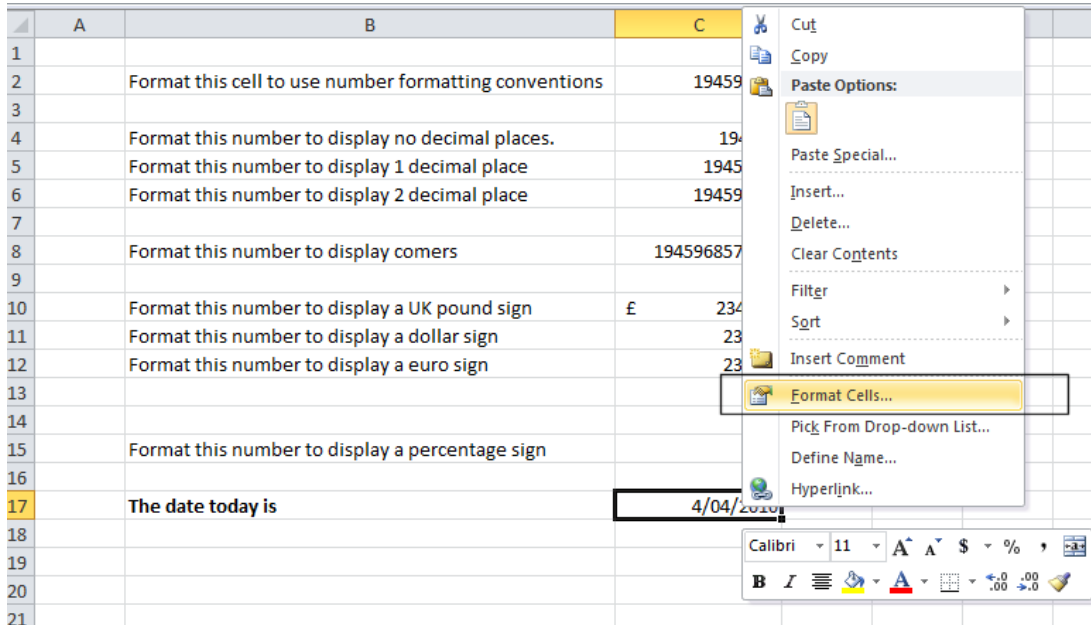
This will display the **Format Cells** dialog box.
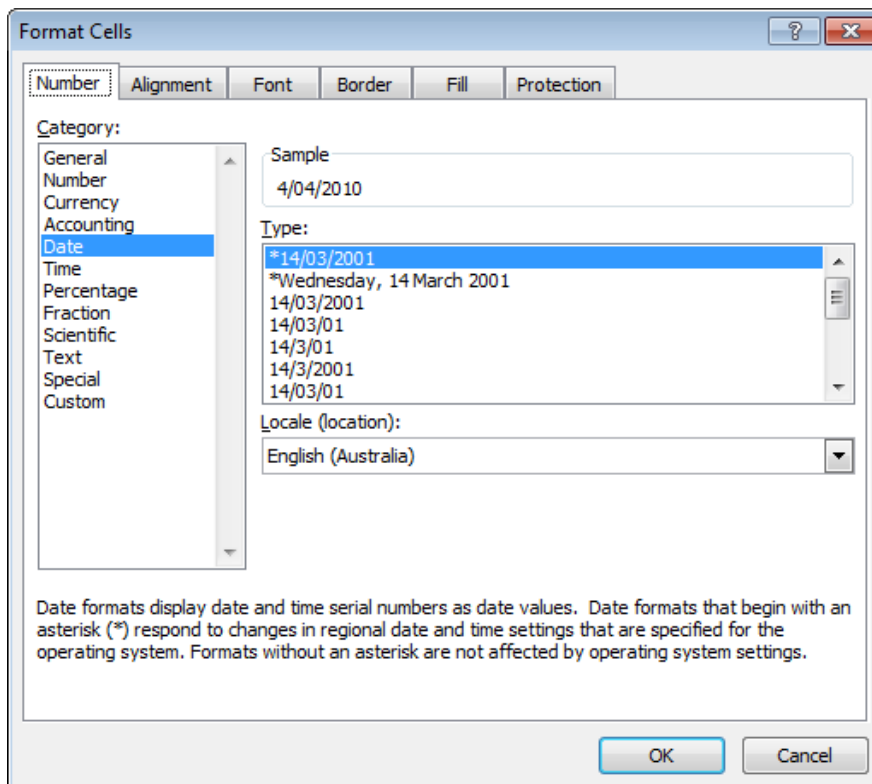
If necessary, within the **Category** section of the dialog box, select the **Date** category.
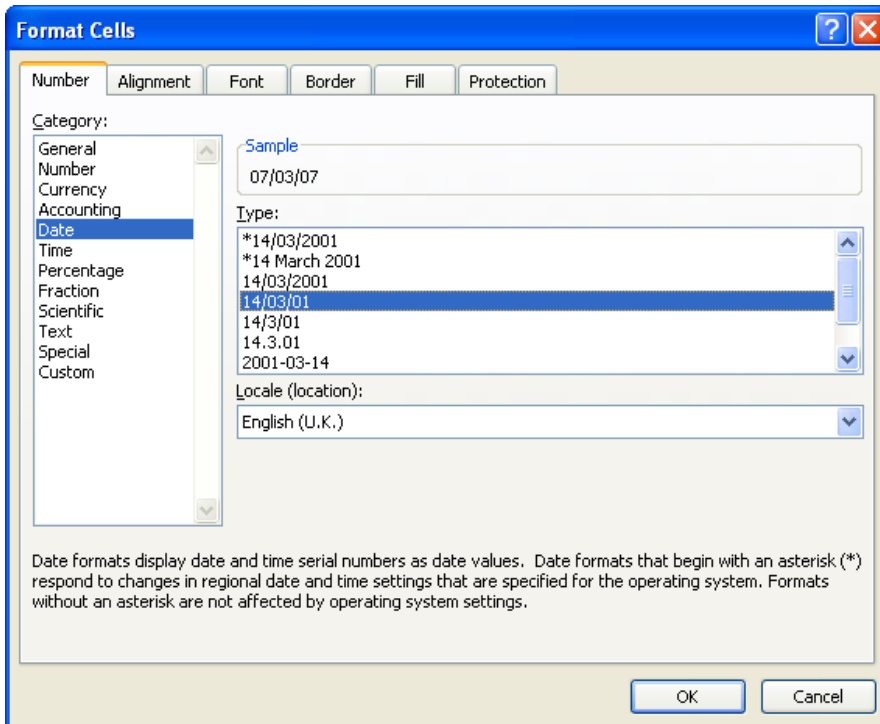
Select the required format from the **Type** section of the dialog box.
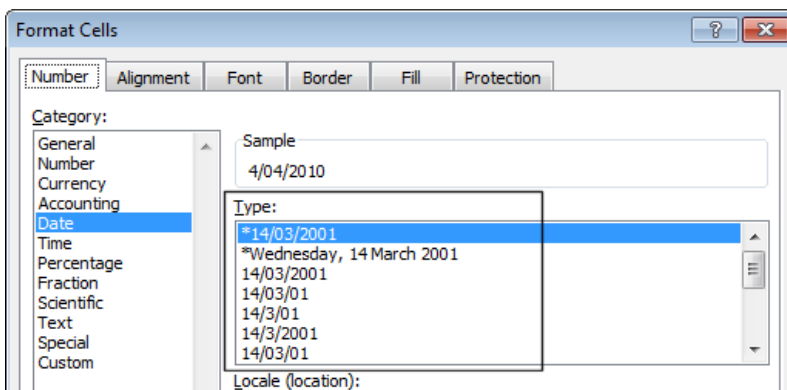
Click on the **OK** button to apply the date format. Experiment with applying different types of date format to the cell.

Formulas

Creating formulas

Open a workbook called **Formulas**. Click on cell **E3**.

In cell **E3** we need to create a formula that will calculate the value of the stock for that particular component. To do this we need to multiply the contents of cell **C3** by the content of cell **D3**.

All formulas within Excel start with the 'equals' symbol.

Type in the following formula.

=C3*D3

TIP: the * symbol means 'times'.

Press the **Enter** key and you will see the result of the calculation in cell **E3**.

Click on cell **E3** and you will see the formula displayed in the bar above the worksheet.
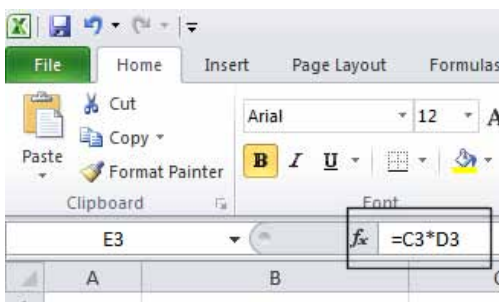
The easy way to create formulas

Click on cell **E4** and type in the equals sign.

Click on cell **C4** and you see this.

Type in the * symbol, you see this.

	A	B	C	D	E
			IF	▾ ⊙ ✕ ✓ fx	=C4*
1					
2		Component Code Number	Number in stock	Value of each item	Total value in stock
3		100847	2	22.99	45.98
4		100846	4	34.99 =C4*	
5		100645	9	12.95	
6		100837	1	13.59	
7		100846	0	9.25	
8		100243	2	5.24	
9		100773	5	40.5	

Click on cell **D4** and you will see this.

	A	B	C	D	E
1					
2		Component Code Number	Number in stock	Value of each item	Total value in stock
3		100847	2	22.99	45.98
4		100846	4	34.99 =C4*D4	
5		100645	9	12.95	
6		100837	1	13.59	
7		100846	0	9.25	
8		100243	2	5.24	
9		100773	5	40.5	
10					

Press the **Enter** key and you see the result of the calculation. This method may seem more complicated at first but when you are creating complex formulas, you will find this method is actually easier and helps to reduce errors, such as typing incorrect cell references.

Using operators in formulas

Open a workbook called Formula operators.

Click on cell C3 and enter the following which will add the number **3** and **7**:
=3+7

Press the **Enter** key and you will see the result displayed in the cell.

Click on cell **C4** and enter the following which will subtract the number **4** from the number **18**:
=18-4

Press the **Enter** key and you will see the result displayed in the cell.

Click on cell **C5** and enter the following which will divide the number **20** by the number **4**:
=20/4

Press the **Enter** key and you will see the result displayed in the cell.

Click on cell C6 and enter the following which will multiply the number **4** by the number **9**:
=4*9

Press the **Enter** key and you will see the result displayed in the cell.

Save your changes and close the workbook.

Formula error messages

When writing formulas it is easy to make a mistake: listed below are some common error messages.

######
The contents of the cell cannot be displayed correctly as the column is too narrow.

#REF!
Indicates that a cell reference is invalid. This is often displayed when you delete cells which are involved in a formula.

#NAME?
Excel does not recognise text contained within a formula.

#DIV/0!
This indicates that you have tried to divide a number by zero (0).

Relative cell referencing within formulas

Open a workbook called **Cell referencing**.
The first worksheet within the workbook lets us look at relative addressing.
Click on cell **E4**. We need to insert the formula for multiplying items in column C by the items in columns D.

Type in the following formula:
=C4*D4

Press the **Enter** key and you will see the result of the calculation in cell **E4**.
Click on cell **E4**, and move the mouse pointer to the bottom-right corner of cell **E4**, and when the pointer changes to the shape of a small black cross, press the mouse button, and keep it pressed down. Drag down the page to cell **E12** and then release the mouse button.

If you click on cell **E5** you will see the following **=C5*D5**
If you click on cell **E6** you will see the following **=C6*D6**
If you click on cell **E7** you will see the following **=C7*D7**
If you click on cell **E8** you will see the following **=C8*D8**
If you click on cell **E9** you will see the following **=C9*D9**
If you click on cell **E10** you will see the following **=C10*D10**
If you click on cell **E11** you will see the following **=C11*D11**
If you click on cell **E12** you will see the following **=C12*D12**

As you can see the referencing is completely relative. This will become clearer when you have worked through the rest of this section.

Absolute cell referencing within formulas

Click on the **Absolute** tab at the bottom of the worksheet.
Click on cell **D4**. We need to enter a formula that will take the price and then add 5% to the price to give a total value.

The 5% figure has been entered into cell **C15**.

Type in the following formula into cell **D4**.
=C4*C15

If you do the sums, you will find that this formula displays the correct delivery charge price in cell **D4**.

Click on cell **D4**, and move the mouse pointer to the bottom-right corner of cell **D4**, and when the pointer changes to the shape of a small black cross, press the mouse button, and keep it pressed down. Drag down the page to cell **D12** and then release the mouse button. The data will look something like this.

Part Number	Price (excluding delivery)	Cost of delivery
100837	22.99	1.15
100263	10.95	0.00
100937	20.50	0.00
100234	10.50	0.00
100375	12.95	0.00
100746	29.84	0.00
100387	23.43	0.00
100883	9.48	0.00
100338	20.50	0.00

As you can see something has gone very wrong, as the 5% delivery charge appears to be 0 for most of the items.

Click on cell **D5** and you can see what the problem is. The formula contained within this cell is:
=C5*C16

Part of the cell reference points to cell **C16** (which if you check is empty). The problem is that because of the relative nature of the formula, the component that should always refer to the contents of the cell in **C15** (i.e. the delivery charge percentage), in fact moves down as you drag down the screen to extend your calculations.

Select the range **D4:D12** and press the **Del** key to delete the cell contents.

Click on cell **D4** and we will try again. This time type in the following formula.
=C4*C15

The dollar signs make the reference to cell **C15** absolute.

Try extending the formula to fill the range down to **D12**. This time you should find that the delivery charges are calculated correctly.

Part Number	Price (excluding delivery)	Cost of delivery
100837	22.99	1.15
100263	10.95	0.55
100937	20.50	1.03
100234	10.50	0.53
100375	12.95	0.65
100746	29.84	1.49
100387	23.43	1.17
100883	9.48	0.47
100338	20.50	1.03

TIP: You have seen relative and absolute referencing. You can also have mixed references, which contain an absolute and a relative reference.

Save your changes and close the workbook.

Functions

What are functions ?

A function allows you to calculate a result such as adding numbers together, or finding the average of a range of numbers. Functions are located under the **Formulas** tab.
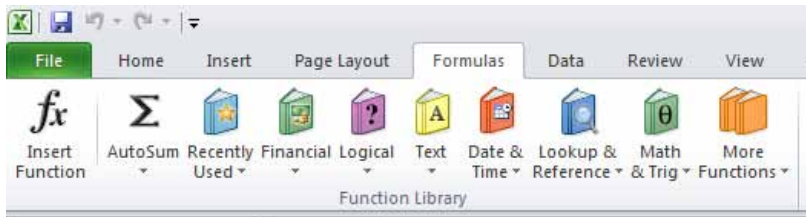
Common functions

Some commonly used functions include:
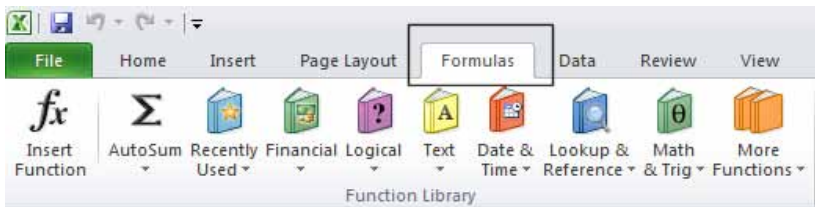
AVERAGE: Used to determine the average value of the selected cells contents.

COUNT: Used to count how many numbers are in the list.
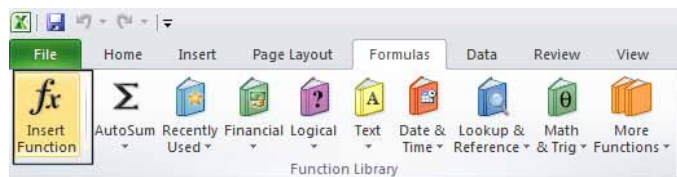
MAX: Used to return the maximum number from a list.

MIN: Used to return the minimum number from a list.

SUM: Used to add the contents of selected cells.

This will display the **Insert Function** dialog box.
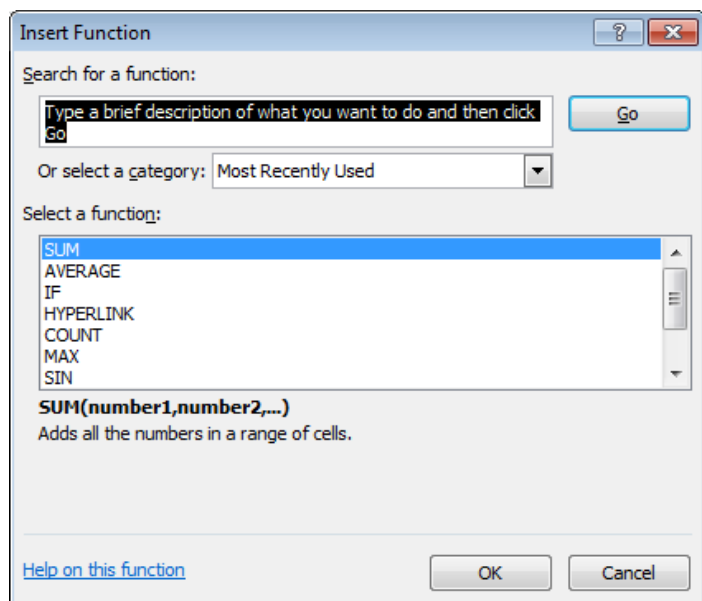
Scroll down the list which as you will see is extensive.

Sum function

Open a workbook called **Functions**.
If necessary, click on the **Sum** worksheet tab.
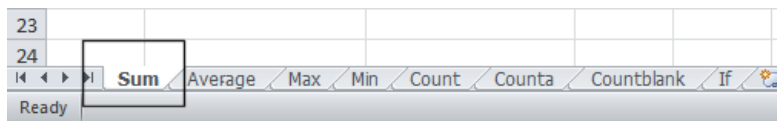
Click on cell **C8**.

◢	A	B	C	D
1				
2				
3		Sales Region	No of sales	
4		North	34	
5		South	11	
6		East	84	
7		West	38	
8		TOTAL		
9				

In this cell we need to sum the values in the column above.

Click on the Formulas tab and within the Function Library group click on the AutoSum icon.
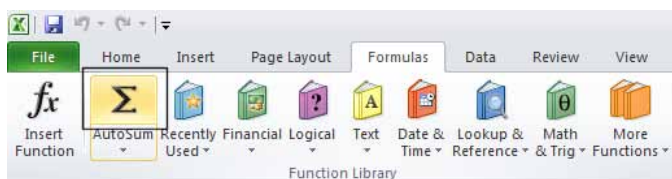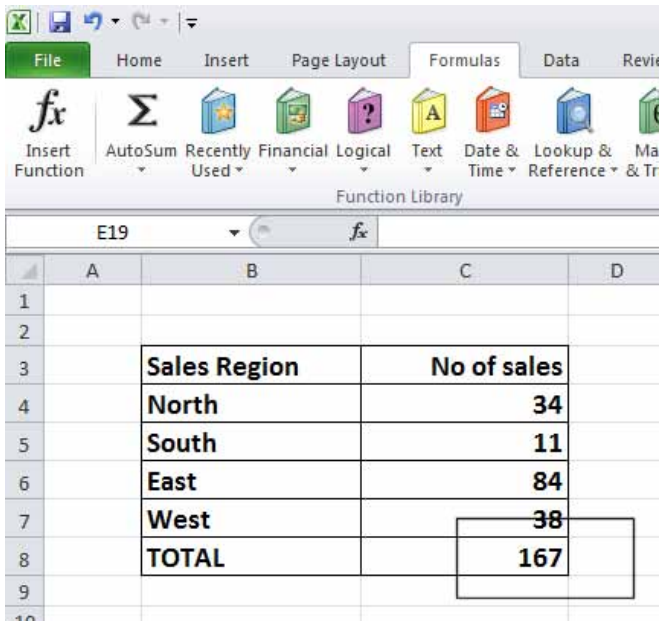
TIP: Click on the **AutoSum** icon, not the **down arrow** under or beside the icon.

You will see the following displayed on your screen.
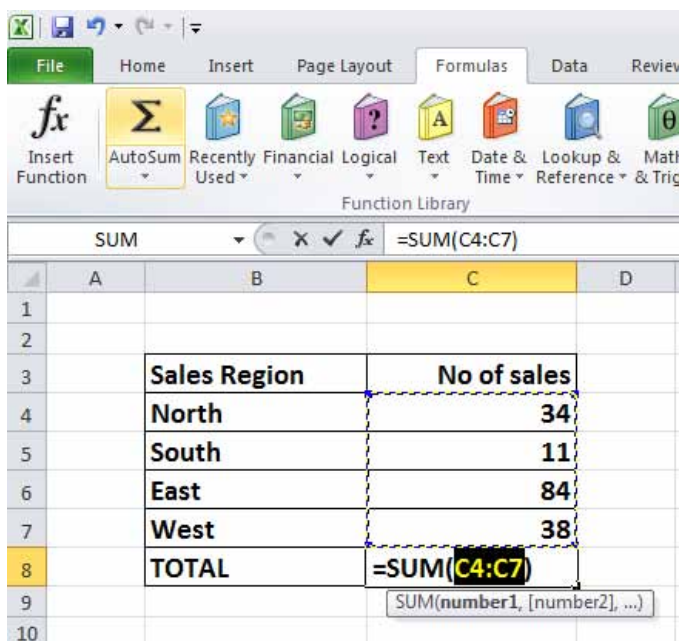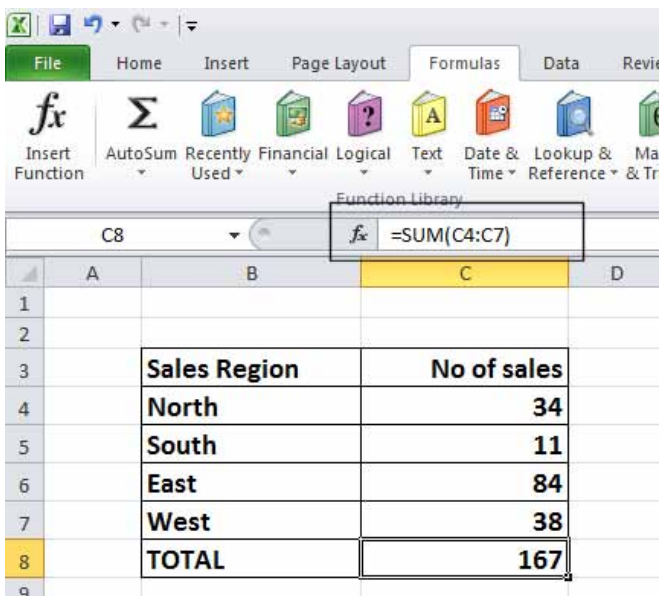
Press the **Enter** key and you will see the AutoSum result in cell **C8**.

Click on cell **C8,** and you will see the function displayed in the bar just above your worksheet.

As you can see the function is:

=SUM(C4:C7)

This function tells Excel to sum the values in the range **C4:C7.**

Average function

Click on the **Average** worksheet tab.

Click on cell **C8**.

In this cell we want to display the average number of sales within the regions.
Click on **the Formulas** tab and within the **Function Library** group click on the **arrow** under (or next to) the **AutoSum** icon.
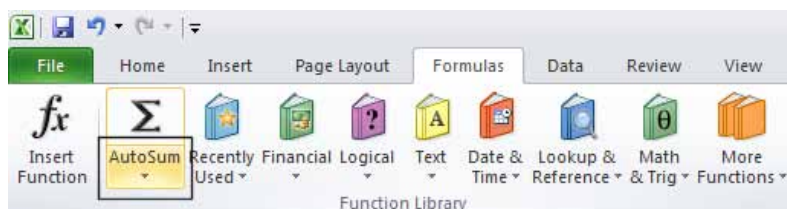
You will see a drop down list displayed.
Click on the **Average** command.
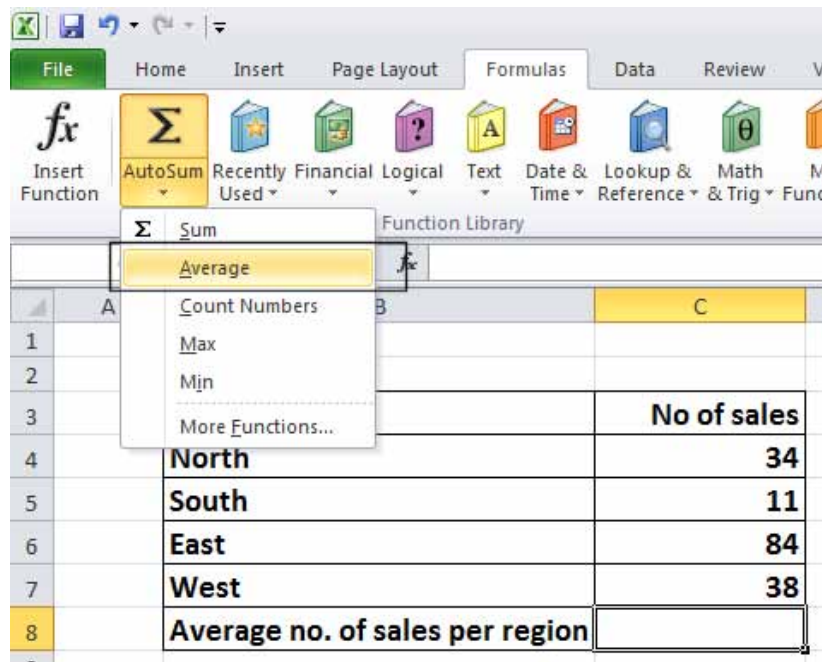
You will see the following displayed on your screen.
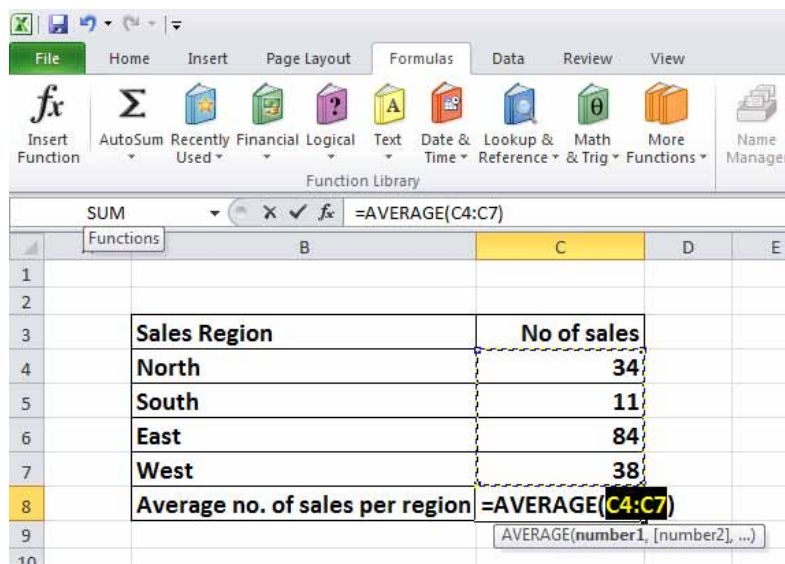
Press the **Enter** key and you will see the average value displayed in cell **C8**.
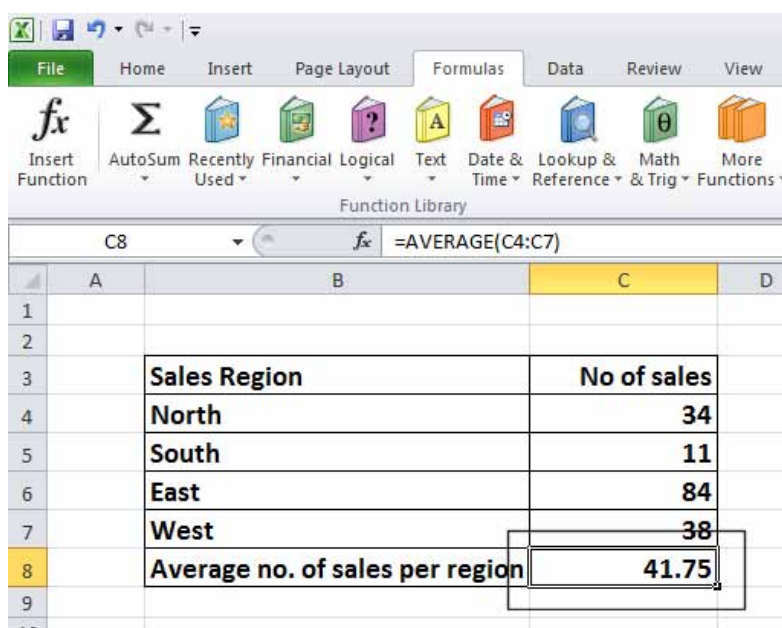
Click on cell **C8**, and you will see the function displayed in the bar just above your worksheet.
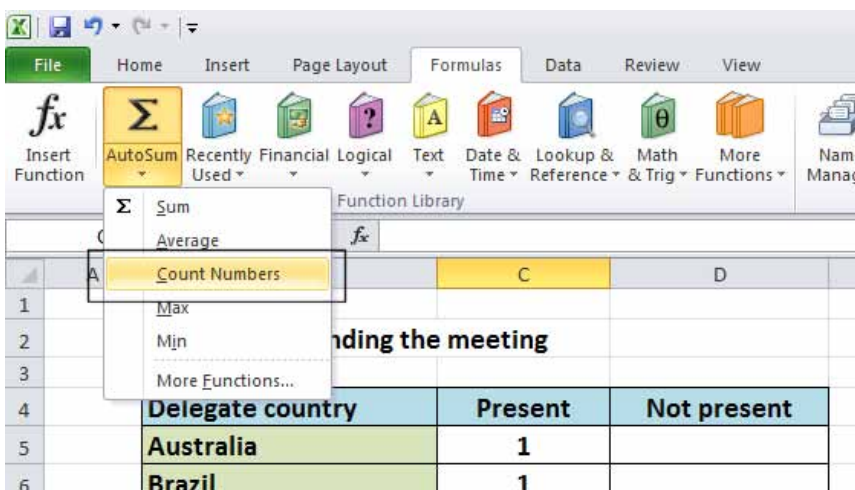
As you can see the function is:

=AVERAGE(C4:C7)

This function tells Excel to sum the average in the range **C4:C7**.
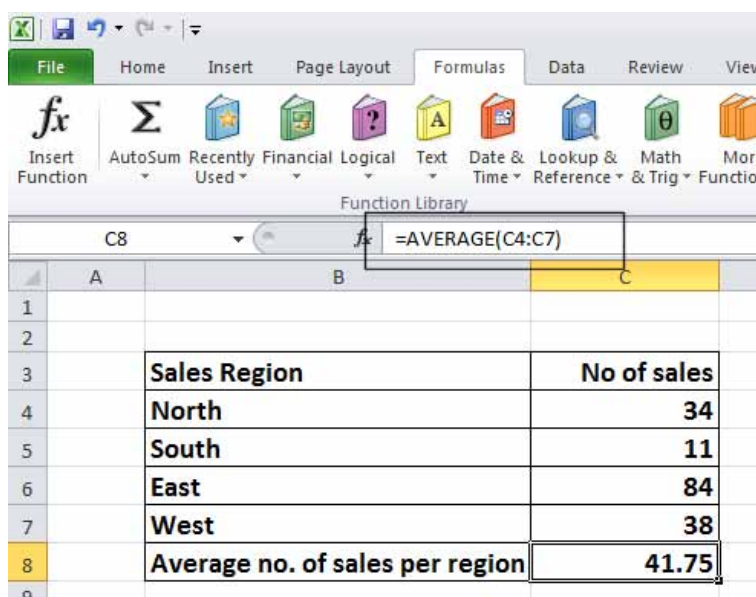
Max function

Click on the **Max** worksheet tab.

| 25 |
| 24 |

H ◀ ▶ H | Sum / Average | **Max** / Min / Count / Counta / Countblank / If

Ready

Click on cell **C8**. In this cell we want to display the highest number of sales within a region.
Click on the **Formulas** tab and within the **Function Library** group click on the **down arrow** under (or next to) the **AutoSum** icon. You will see a drop down list displayed. Click on the **Max** command.
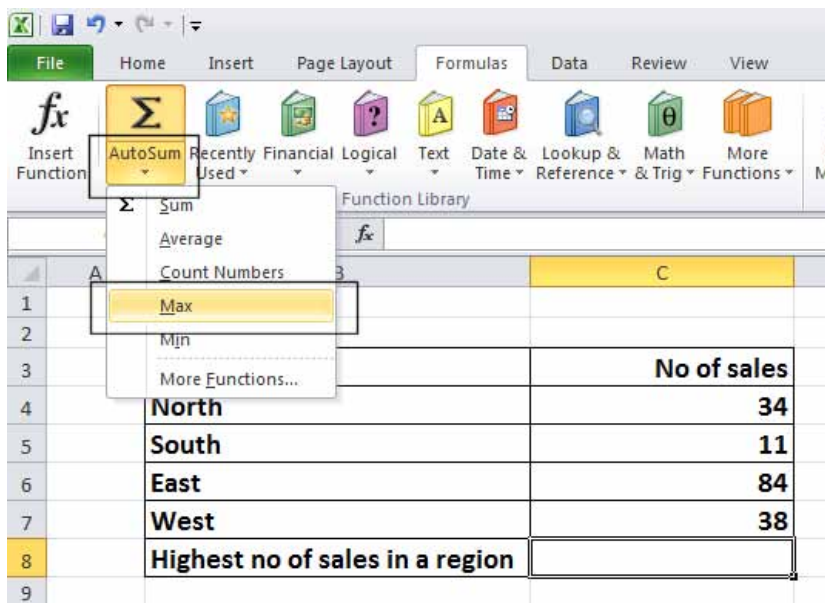
		B	C
1			
2			
3			No of sales
4		North	34
5		South	11
6		East	84
7		West	38
8		Highest no of sales in a region	
9			

Drop down list:
Σ Sum
Average
Count Numbers
Max
Min
More Functions...

You will see the following displayed on your screen.

SUM ▼ × ✓ fx =MAX(C4:C7)

	A	B	C
1			
2			
3		Sales Region	No of sales
4		North	34
5		South	11
6		East	84
7		West	38
8		Highest no of sales in a region	=MAX(C4:C7)
9			MAX(**number1**, [number2], ...)
10			
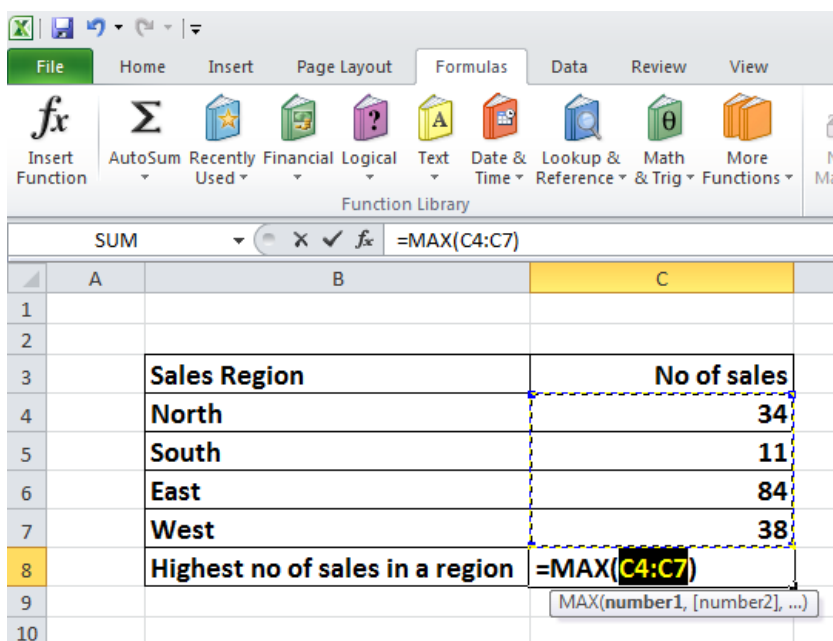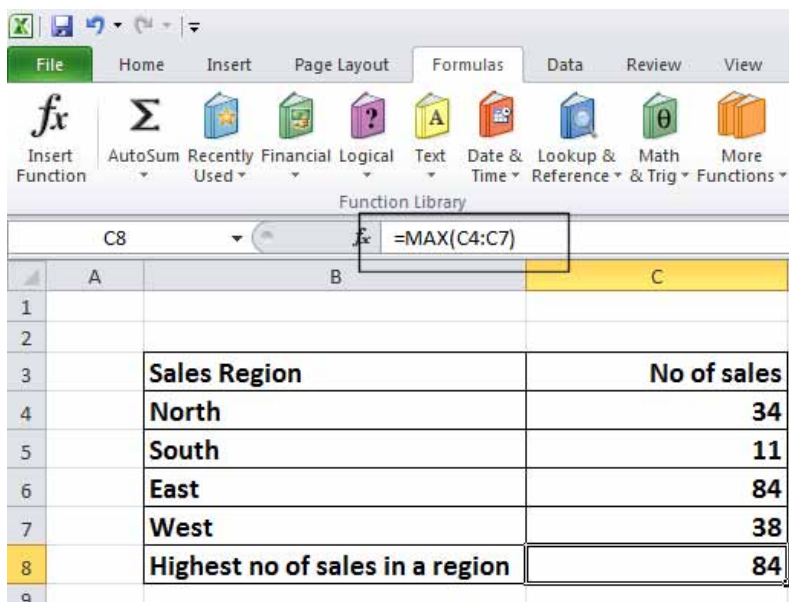
Press the **Enter** key and you will see the maximum value displayed in cell **C8.**

	A	B	C
1			
2			
3		Sales Region	No of sales
4		North	34
5		South	11
6		East	84
7		West	38
8		Highest no of sales in a region	84

Click on cell **C8,** and you will see the function displayed in the bar just above your worksheet.

C8 f_x =MAX(C4:C7)

	A	B	C
1			
2			
3		Sales Region	No of sales
4		North	34
5		South	11
6		East	84
7		West	38
8		Highest no of sales in a region	84
9			

As you can see the function is:

=MAX(C4:C7)

This function tells Excel to display the maximum value within the range **C4:C7.**

Min function

The MIN function will display the minimum number within a range.
Click on the **Min** worksheet tab.

Click on cell **C8**. In this cell we want to display the lowest number of sales within a region.
Click on the Formulas tab and within the **Function Library** group click on the **down arrow** under (or next to) the **AutoSum** icon. You will see a drop down list displayed. Click on the **Min** command.

You will see the following displayed on your screen.

Press the **Enter** key and you will see the minimum value displayed in cell **C8**.

Click on cell **C8,** and you will see the function displayed in the bar just above your worksheet.

As you can see the function is:

=MIN(C4:C7)

This function tells Excel to display the minimum value within the range **C4:C7.**

Count function
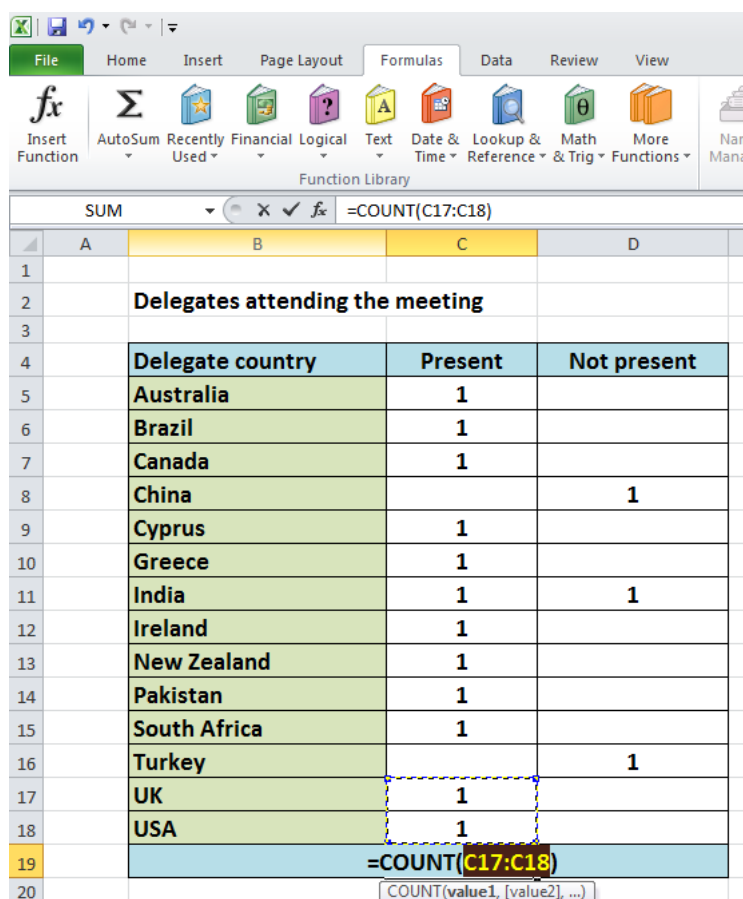
The **Count** function will count up the number of cells which contain numbers.
Click on the **Count** worksheet tab.
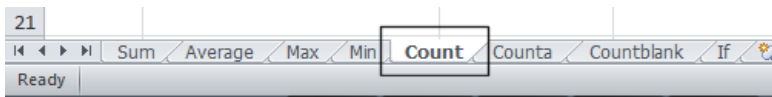
Click on cell **C19.** In this cell we want to display the number of cells in the column above that contain a number.
Click on the **Formulas** tab and within the **Function Library** group click on the **down arrow** under (or next to) the **AutoSum** icon. You will see a drop down list displayed. Click on the **Count Numbers** command.

You will see the following displayed on your screen.

Setup & Printing Issues

In all the previous examples, there was a column containing values immediately above the cell into which we inserted the function. In this case some of the cells within the column are empty and Excel, as you can see, has only applied the Count function to the range C17:C18. The reason for this is that the next cell up, i.e. cell C16 is empty.

We need to tell Excel that the range we are interested in actually extends from C5:C18.

To do this, click on cell C18 and while holding down the mouse button drag up to cell C5. Then release the mouse button. Your screen should now look like this.

Press the **Enter** key and you will see the count value displayed in cell **C19**.

	A	B	C	D	
1					
2		Delegates attending the meeting			
3					
4		Delegate country	Present	Not present	
5		Australia	1		
6		Brazil	1		
7		Canada	1		
8		China		1	
9		Cyprus	1		
10		Greece	1		
11		India	1	1	
12		Ireland	1		
13		New Zealand	1		
14		Pakistan	1		
15		South Africa	1		
16		Turkey		1	
17		UK	1		
18		USA	1		
19		Totals	12		
20					
21					

Click on cell **C19**, and you will see the function displayed in the bar just above your worksheet.

As you can see the function is:

=COUNT(C5:C18)

This function tells Excel to display the number of cells containing a value within the range **C5:C18**.

NOTE: If you made a mistake, click on cell **C19** and press the **Del** key. Then try again.

Use the same technique to count up the number of people who could not attend, and display the value in cell **D19**.

The COUNTA function

Used to count the number of cells within a range that are not empty.
Click on the **Counta** worksheet tab.
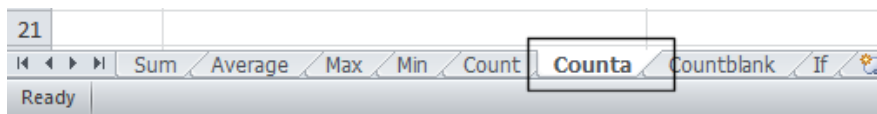
You will see data that contains a mixture of numbers (1) and letters (x).

The Count function would only count up the number of cells containing numbers, whereas Counta will count the number of cells containing numbers and letters.
Click on cell **C19**.Click on the **More Functions** icon (contained within the **Function Library** section of the **Formulas** tab).
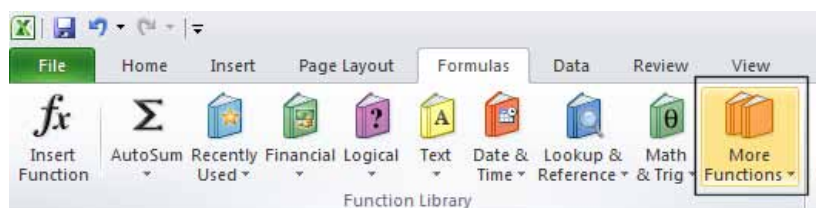
From the drop down displayed, select **Statistical**. From the submenu select **Counta**.
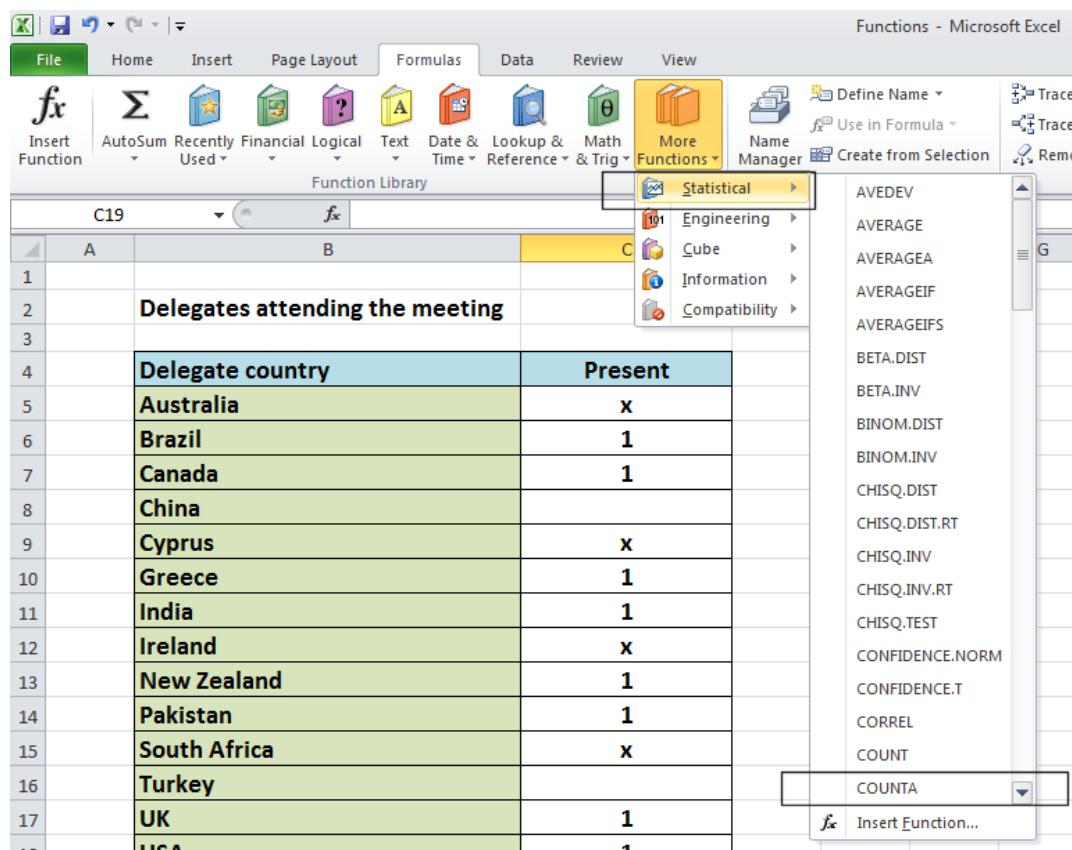
This will display the **Function Arguments** dialog box, as illustrated.
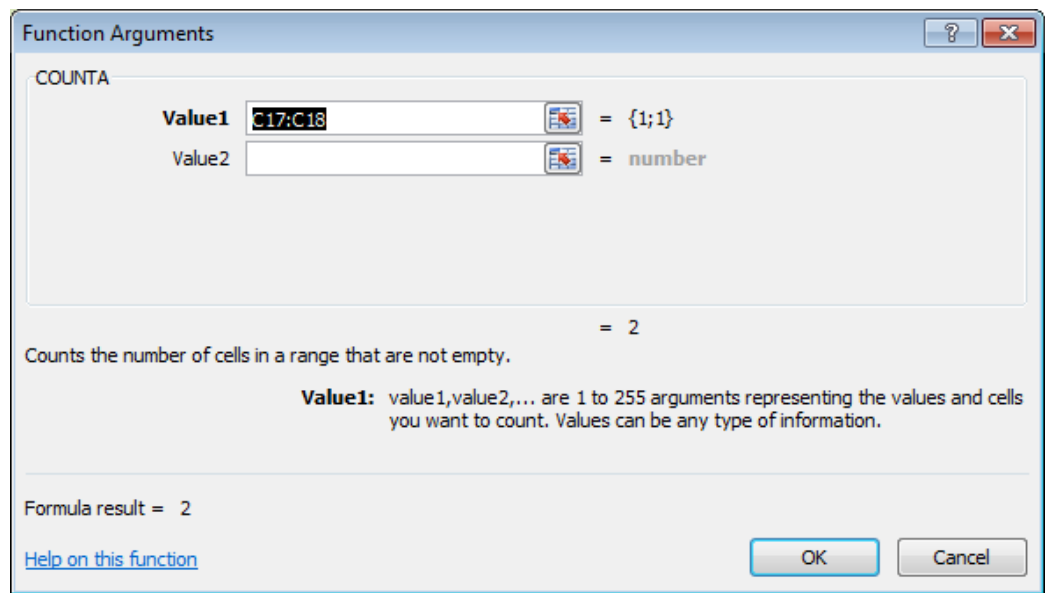
If necessary move the dialog box to one side and then select the cell range **C5:C18,** as illustrated.
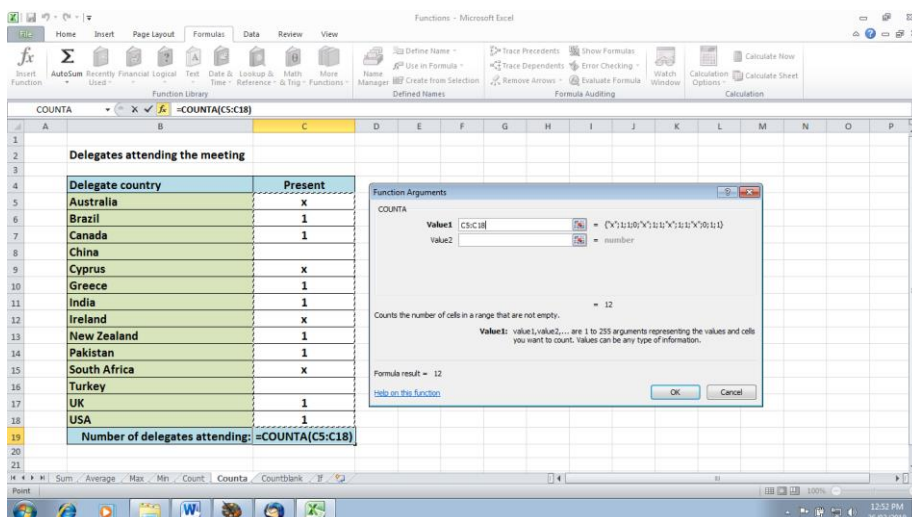
The **Function Argument** dialog box will look like this.
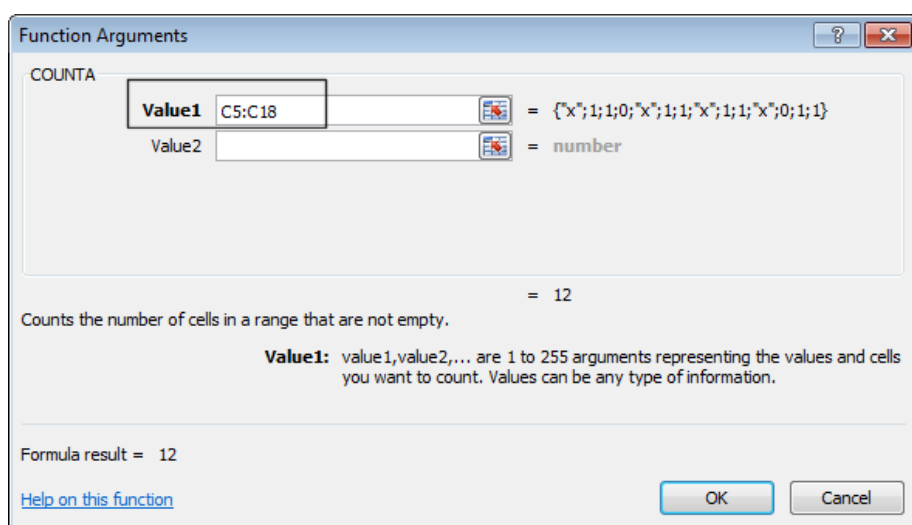
Click on the **OK** button and you will see the following.

As you can see the function has counted every instance of a number or letter within the specified cell range.

What are 'IF functions'?

Excel has a number of functions which allow us to evaluate values and make decisions based on the result of the evaluation. The **IF( ) FUNCTION** is one of these.

IF( ) SYNTAX
The format (Syntax) of the IF( ) function is as follows:
IF(LOGICAL_TEST, ACTION_IF_TRUE, ACTION_IF_FALSE)

LOGICAL_TEST
The logical_test evaluates an expression to see if it passes the test, i.e. is TRUE or does not pass the test, i.e. is FALSE

Logical operators		Values for Evaluation A=10 B=5 C=15 D=10	Result
	= (Equal to)	A=B	FALSE
		A=D	TRUE
	> (Greater than)	A>B	TRUE
		A>C	FALSE
	< (Less than)	A<B	FALSE
		A<C	TRUE
	>= (Greater than or Equal to)	A>=B	TRUE
		A>=D	TRUE
		A>=C	FALSE
	<= (Less than or Equal to)	A<=B	FALSE
		A<=C	TRUE
		A<=D	TRUE

ACTION_IF_TRUE
Action_if_true can be a value or an operation. Whichever, the result is placed in the cell which contains the IF( ) Function if the logical_test is true.

ACTION_IF_FALSE
Action_if_false can be a value or an operation. Whichever, the result is placed in the cell which contains the IF( ) Function if the logical_test is false.

Using the IF function

Click on the If worksheet tab.
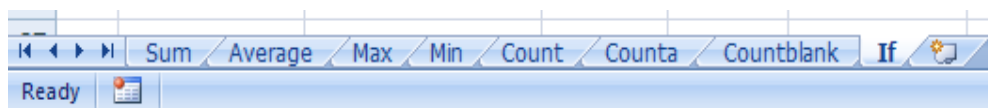
In cells **J8:J13** we need to display the word **PASS** or **FAIL**, depending on whether the average is over **70%**.

Click on the cell **J8**.
Click on the **Logical** icon within the **Function Library** group of the **Formulas** tab.
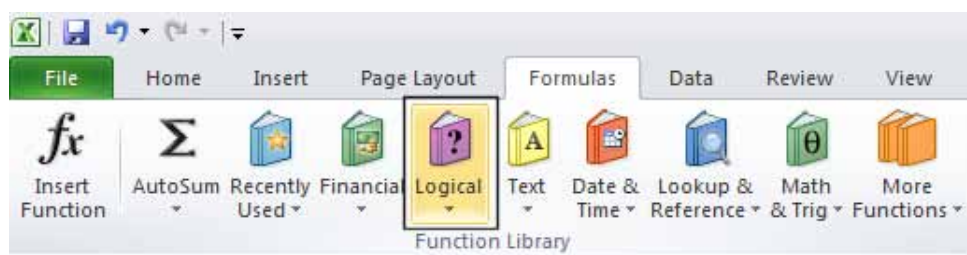
This will display a drop down list. Select the **IF** command.
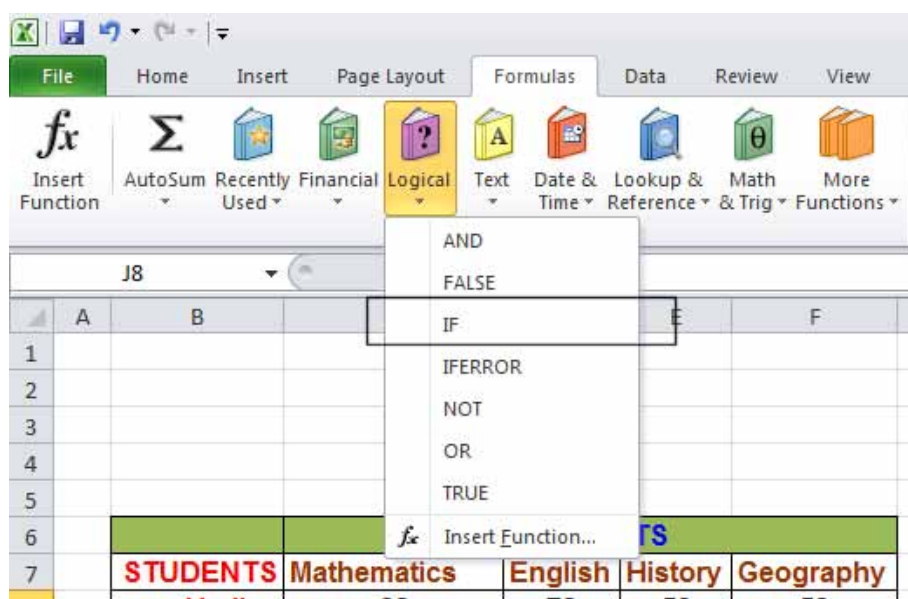
This will display the **Function Arguments** dialog box.
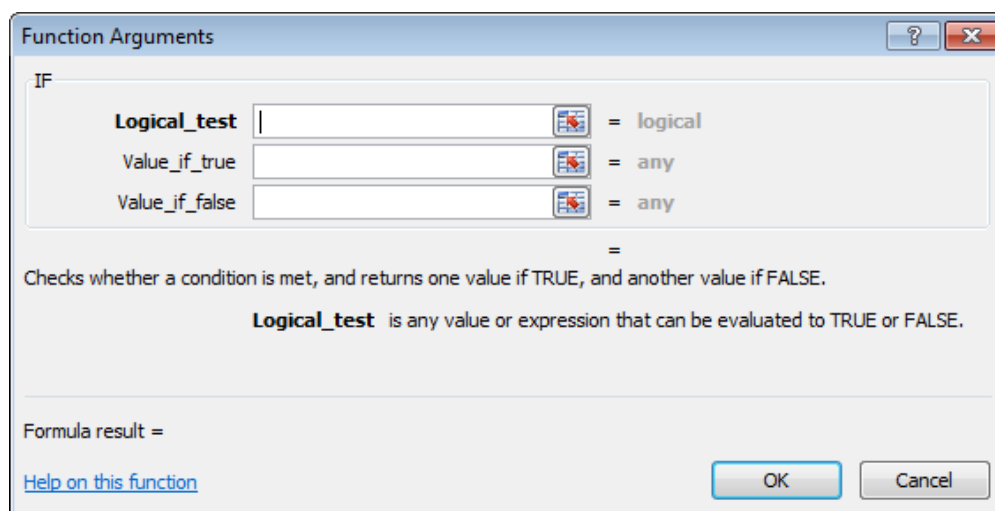
In the **LOGICAL_TEST** section of the dialog box, we enter the logical test, i.e. **I8>70**

In the **VALUE_IF_TRUE** section of the dialog box, we enter the word **PASS**.

In the **VALUE_IF_FALSE** section of the dialog box, we enter the word **FAIL.**

Your dialog box will now look like this.

Click on the **OK** button to continue. Your screen will now look like this.

STUDENTS	Mathematics	English	History	Geography		Average grades	Passed?
Hadiya	68	78	59	59		66	FAIL
Dai	69	69	69	67		69	
Aaron	76	78	79	87		80	
Rowan	67	86	58	65		69	
Aaliyah	85	77	87	78		82	
Gabriela	59	68	78	89		74	

To pass a student needs an average grade of over 70%

Use the normal Excel drag techniques to extend this function to the cells I9:J13. Your screen will now look like this.

STUDENTS	Mathematics	English	History	Geography		Average grades	Passed?
Hadiya	68	78	59	59		66	FAIL
Dai	69	69	69	67		69	FAIL
Aaron	76	78	79	87		80	PASS
Rowan	67	86	58	65		69	FAIL
Aaliyah	85	77	87	78		82	PASS
Gabriela	59	68	78	89		74	PASS

To pass a student needs an average grade of over 70%

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Charts

Inserting a column chart

Open a workbook called **Chart**.
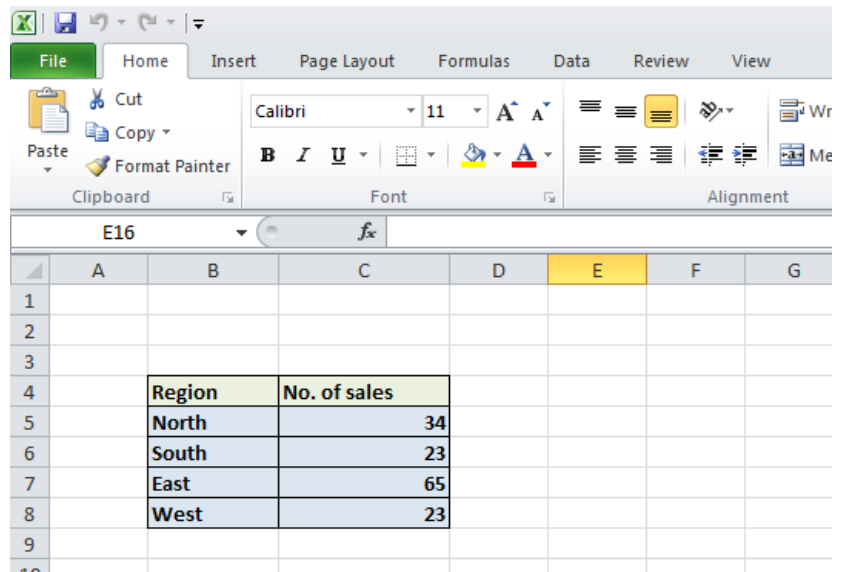
If necessary, click on the **Column Chart** worksheet tab (at the bottom-left of your screen).
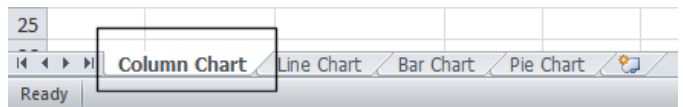
Click within the table of data.
Click on the **Insert** tab and you will see the **Charts** group displayed within the Ribbon.
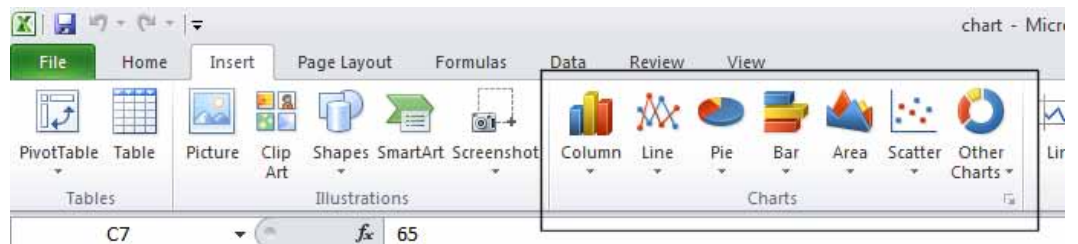
Click on the **Column** icon and you will see a drop down displaying a range of column chart options.
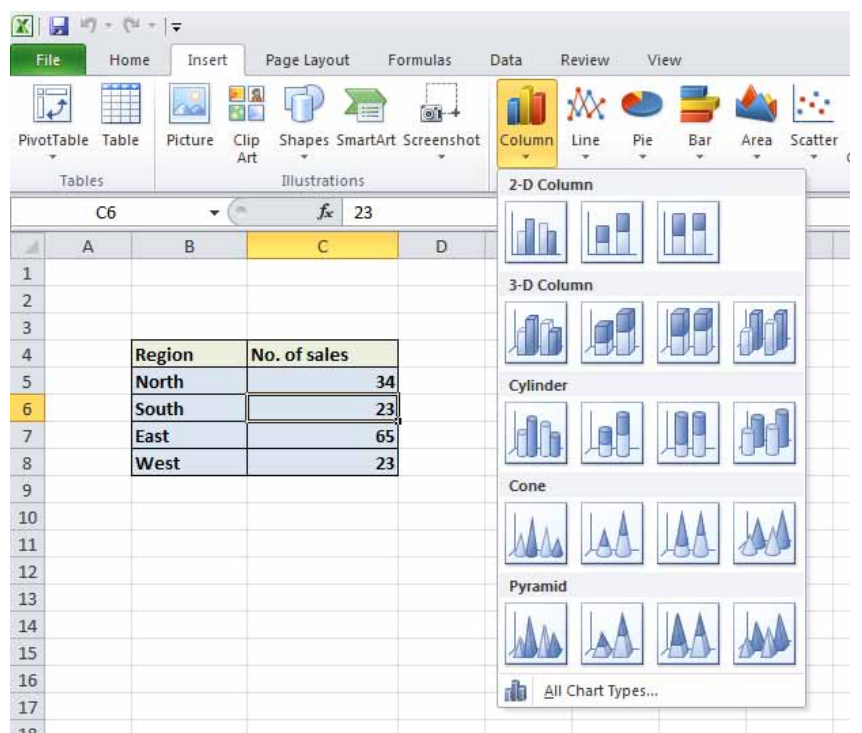
Click on the first option, the **2-D Clustered** format, as illustrated.
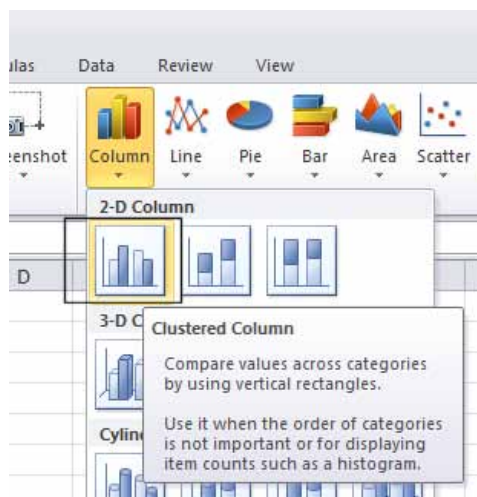
You will see the following chart inserted into your worksheet.
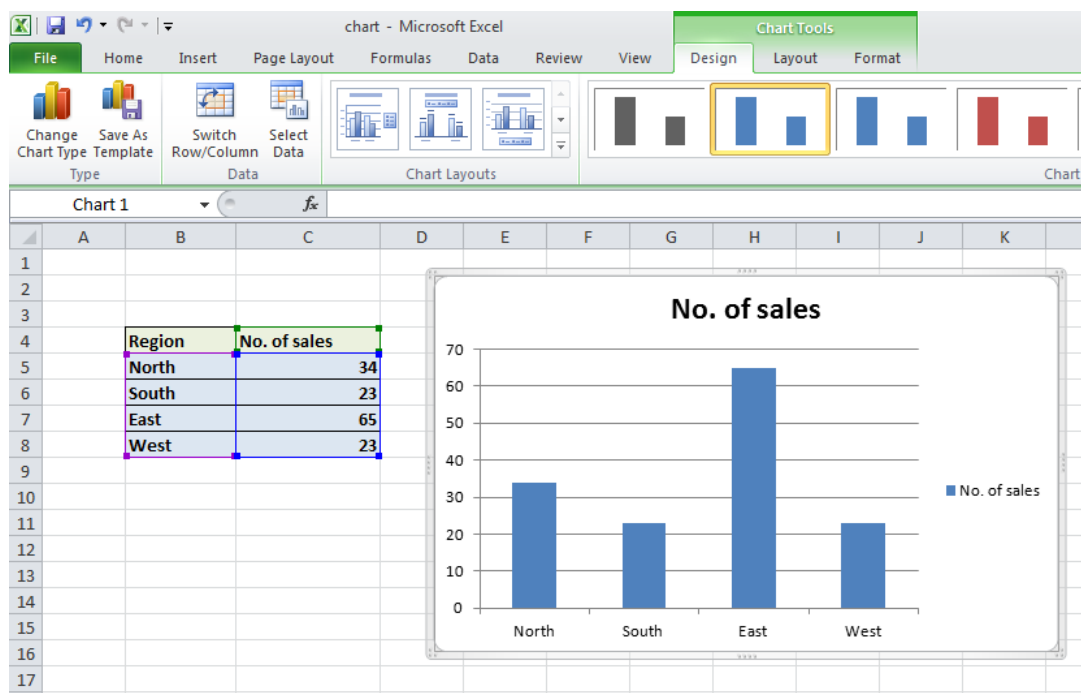
Click on the Undo icon (top-left of your screen), and experiment with inserting other types of column chart such as a 3-D chart, as illustrated below.
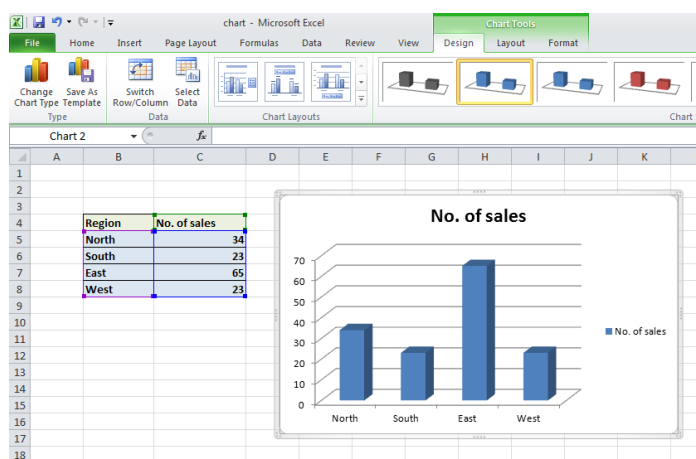
NOTICE:
Do not use 3-D chart unless it is required.

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Inserting a line chart

Click on the **Line Chart** worksheet tab at the bottom of your screen.
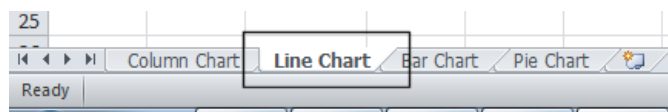
Click within the data and then click on the **Insert** tab. Experiment with inserting different types of line chart, by clicking on the **Line** button.
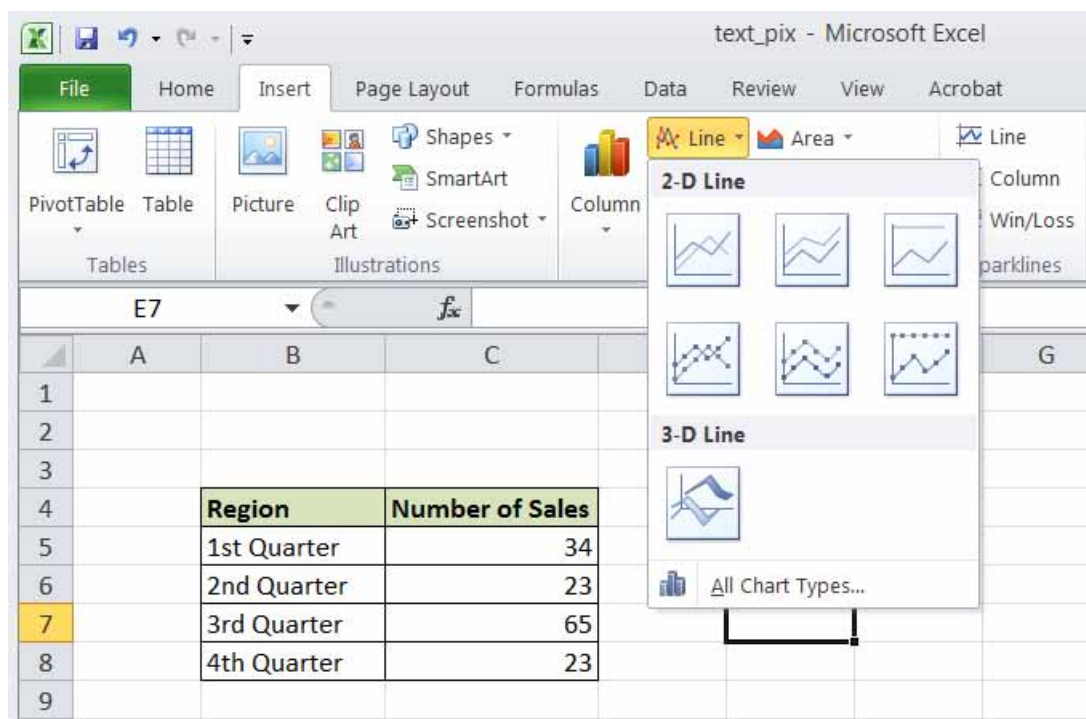
An example is illustrated below.
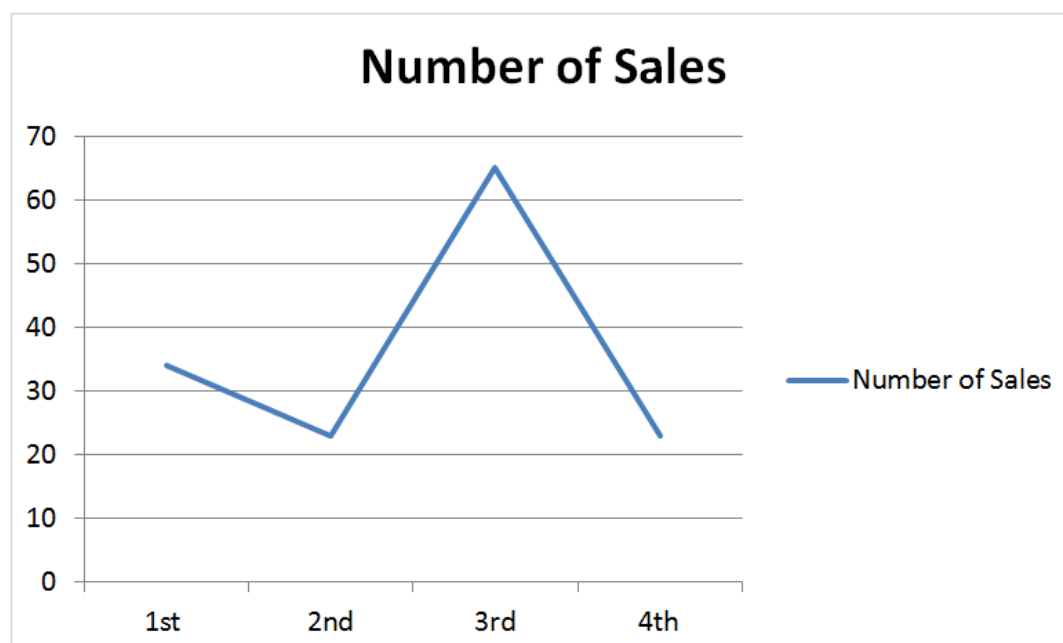
Inserting a bar chart

Click on the **Bar Chart** worksheet tab at the bottom of your screen.
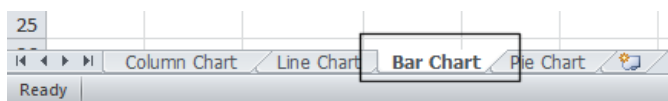
Click within the data and experiment with inserting different types of bar chart, by clicking on the **Bar** button (under the **Insert** tab).
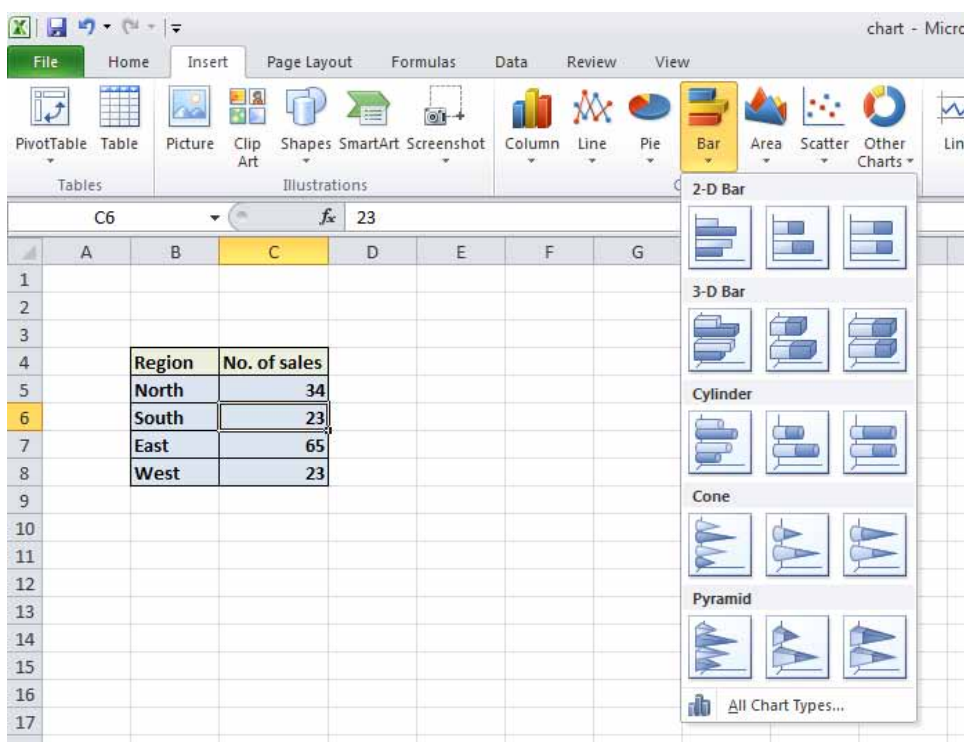
An example is illustrated below.
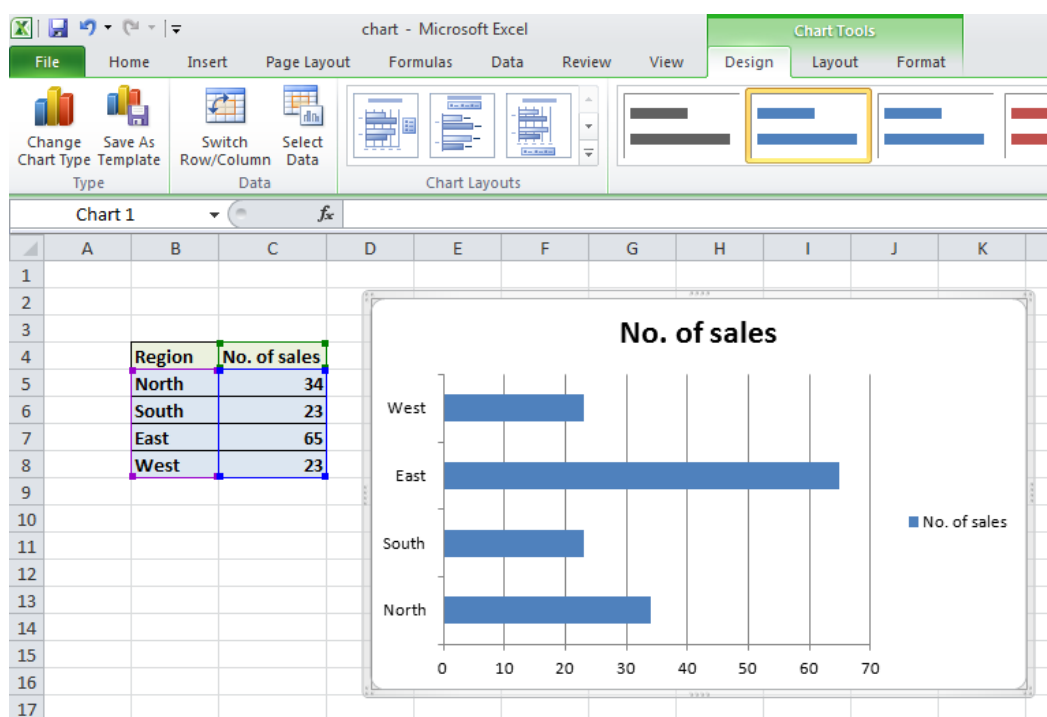
Inserting a Pie Chart

Click on the **Pie Chart** worksheet tab at the bottom of your screen.
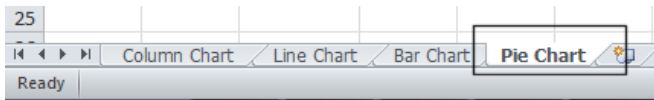
Click within the table of data.
Experiment with inserting different types of pie chart.
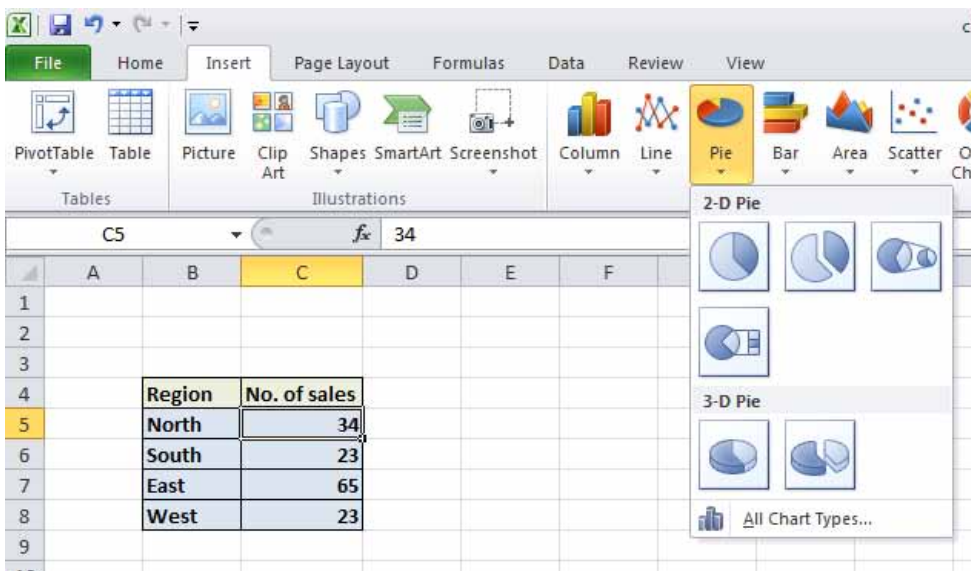
An example is illustrated below.
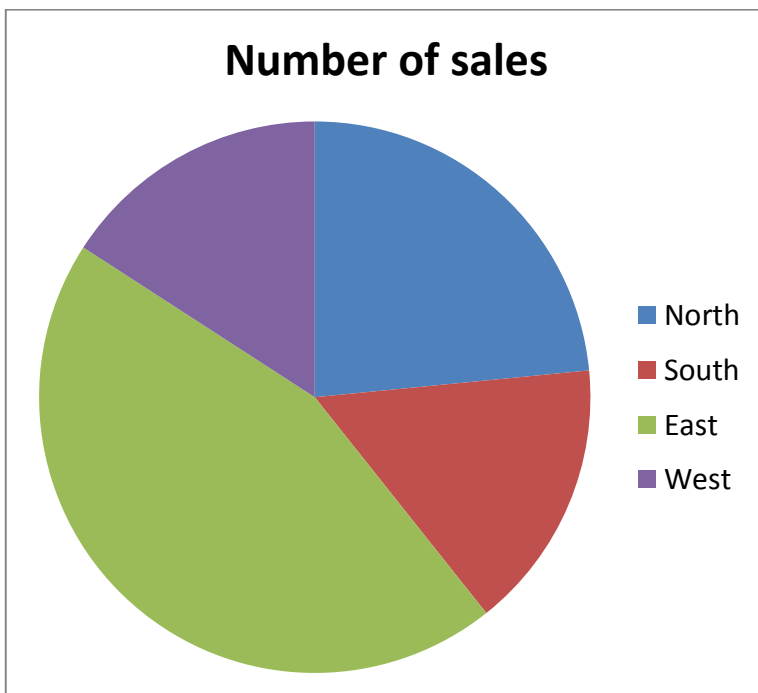
Resizing a chart

Open a workbook called **Chart Manipulation**.
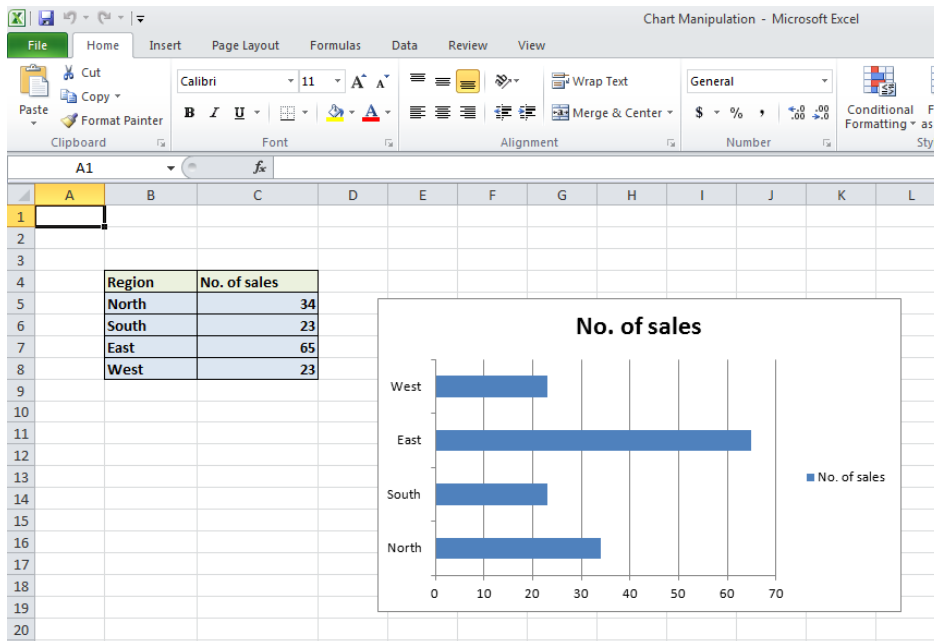
Click on it to select it.

Move the mouse pointer to one of the four corners of the chart.   You will notice that the mouse pointer changes to the shape of a diagonal line with an arrow at each end. When you see the mouse pointer change, press the mouse button and while keeping the button pressed move diagonally across the screen. Move away from the centre of the chart to make the chart larger and toward the centre of the chart to make the chart smaller. When you release the mouse button the chart will be resized.
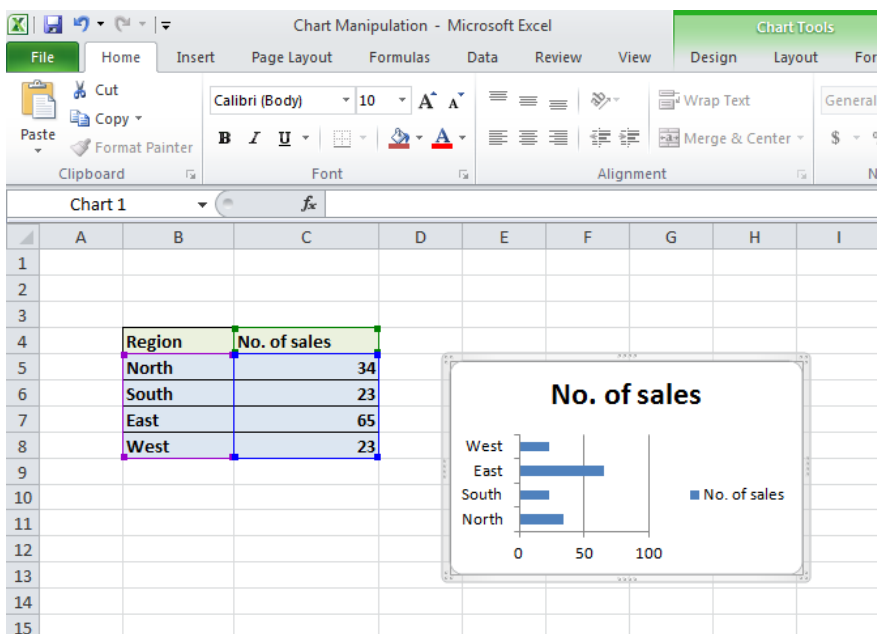
Deleting a chart

Select the chart and press the **Del** key.

Save your changes and close the workbook.

Chart title or labels

Open a workbook called **Modifying charts**.
If necessary, click on the **Modifying a Chart** worksheet tab (at the bottom-left of your screen).
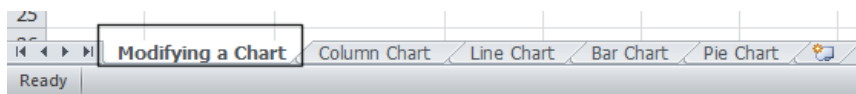
You can see a column chart displayed within the workbook. Click on the chart title, as seen below.
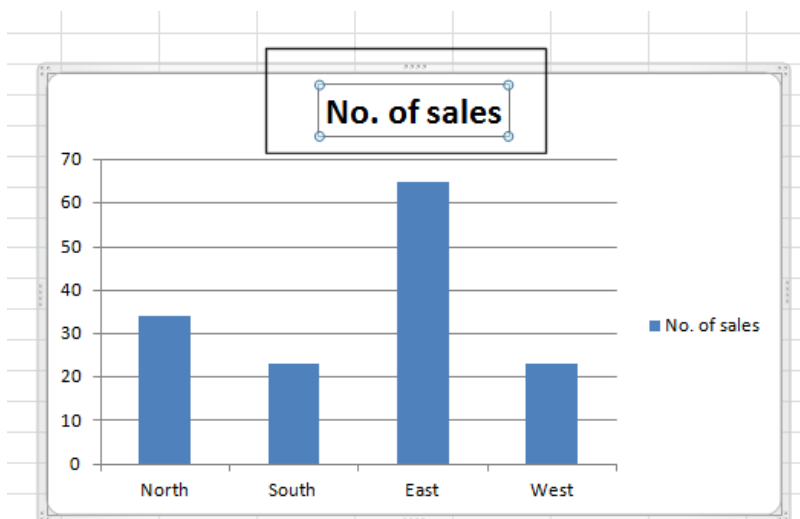
Press the Del key to remove the chart title. Your chart will now look like this.
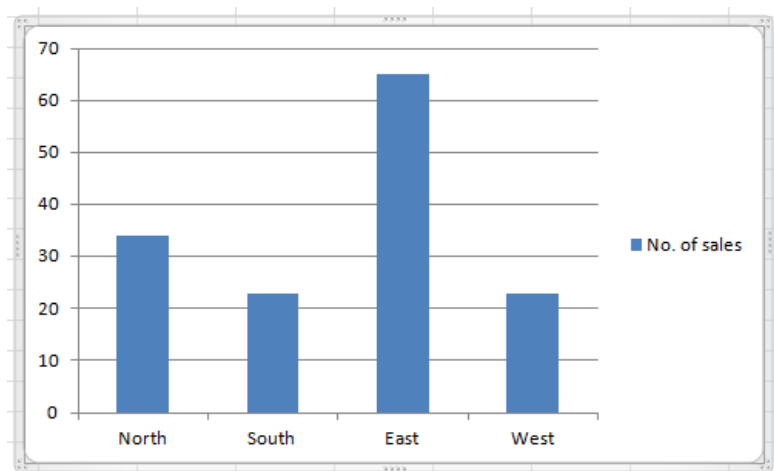
To insert a chart title, click on chart and then click on the **Layout** tab. Click on the **Chart Title** icon within the **Layout** Ribbon.
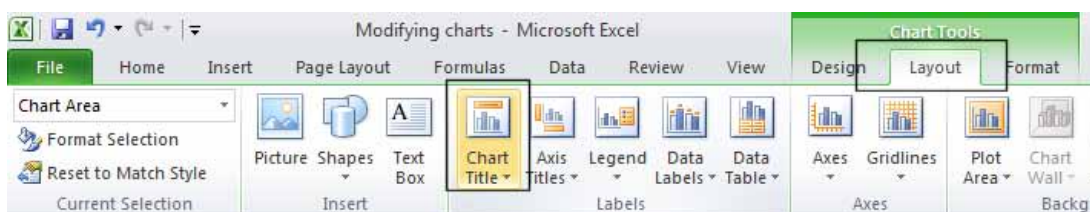
Select the required option from the drop down list displayed, such as **Above Chart**.
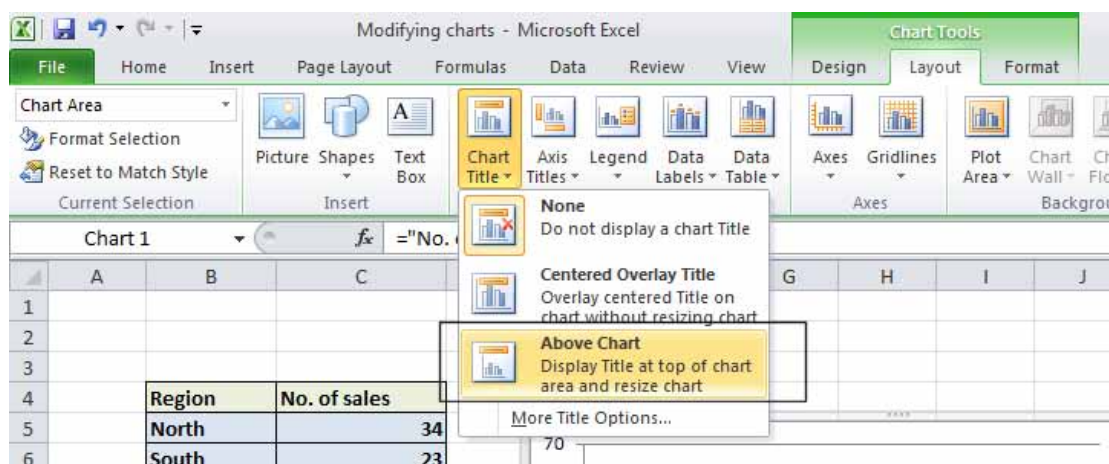
Your chart title is once again displayed, as illustrated.
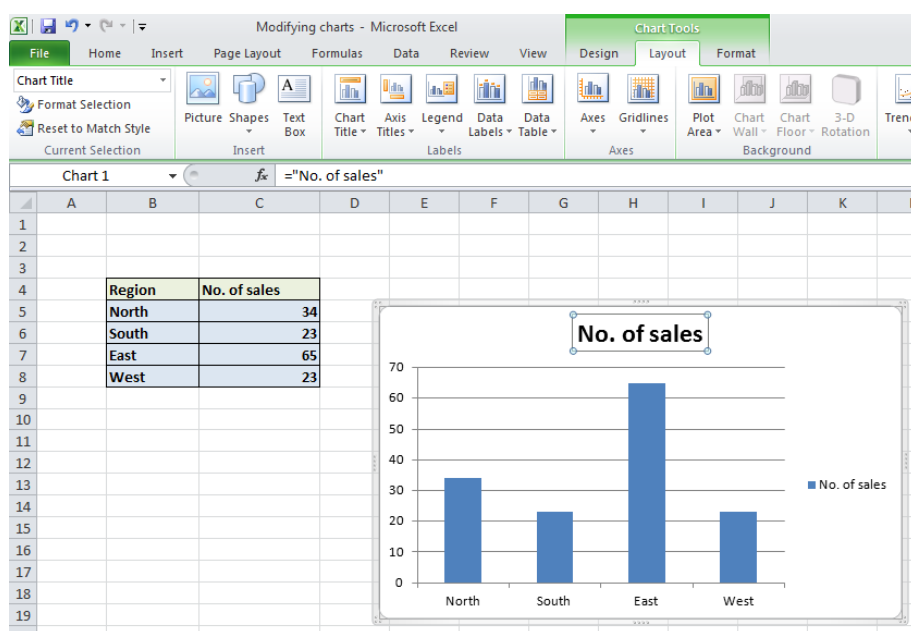
TIP: To modify the chart title text, click within the **Chart Title** and simply edit the text in the normal way. You can also apply text formatting to the Chart Title as required. An example is shown below.
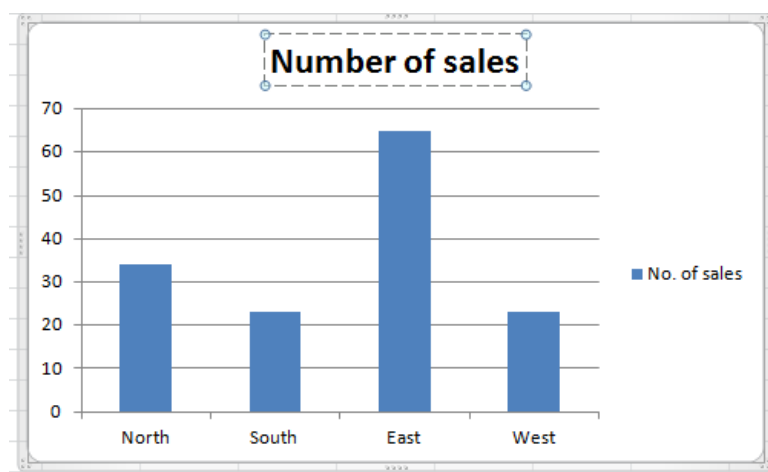
Changing the chart background colour

Click on the chart to select it. Right click over an empty part of the chart background, and you will see a popup menu displayed.
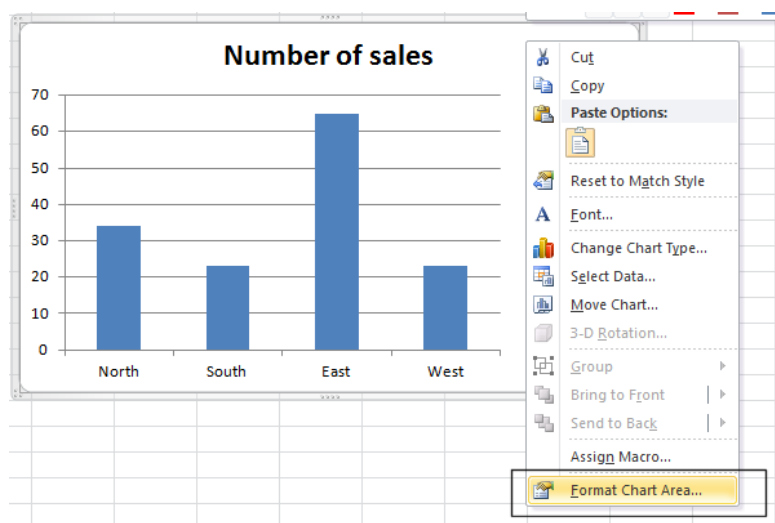
Click on the **Format Chart Area** command.

TIP: If you do not see this command, right click on a different, empty part of the chart, until you do see this command.

You will see the **Format Chart Area** dialog box displayed.
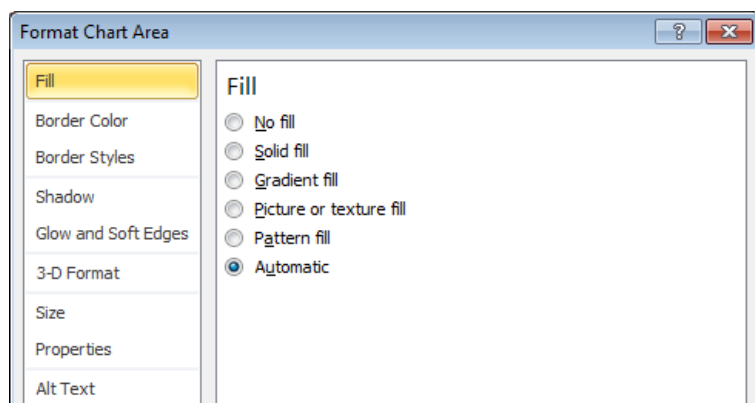
If necessary, click on the **Solid fill** button and you will see extra controls displayed within the dialog box.
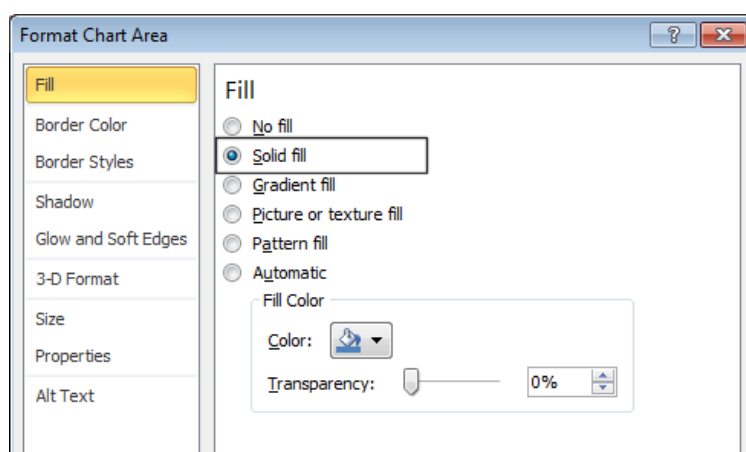
Click on the **down arrow** next to the **Colour** control and select a light colour from the options displayed.
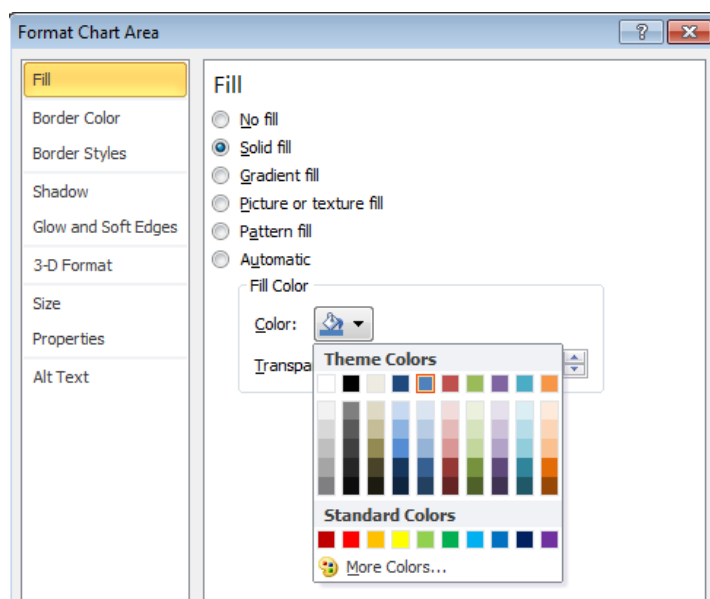
Click on the **Close** button to apply the colour, as illustrated below.
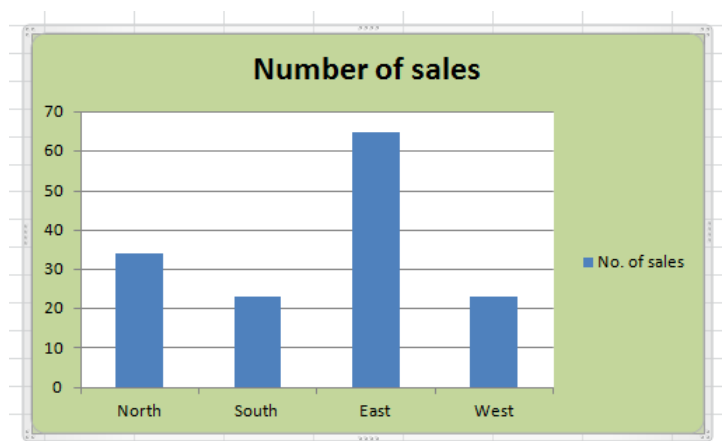
Changing the column, bar, line or pie slice colours in a chart

Click on the second worksheet tab, called Column Chart.

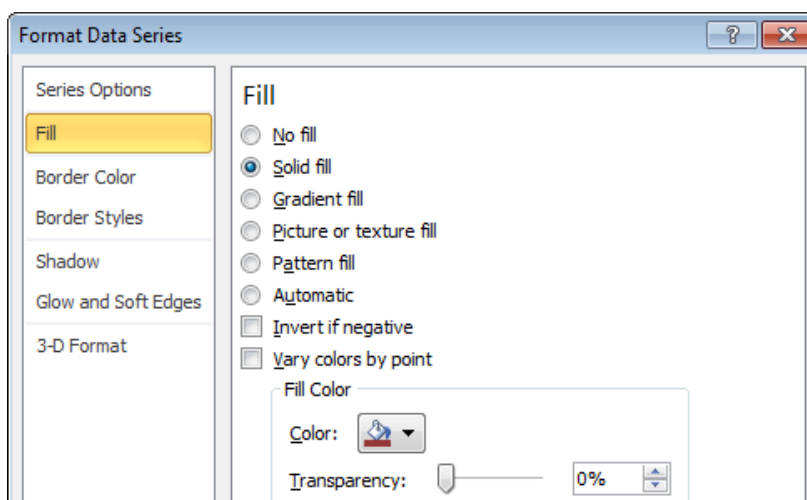Click on one of the columns within the chart. You should see all the columns are selected, as seen below.
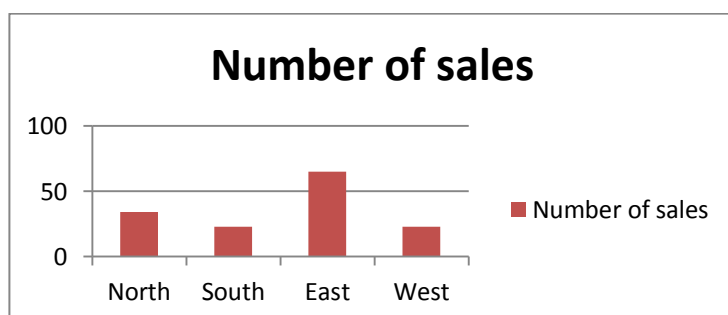
Right click over one of the selected columns and from the popup menu displayed select the **Format Data Series** command.
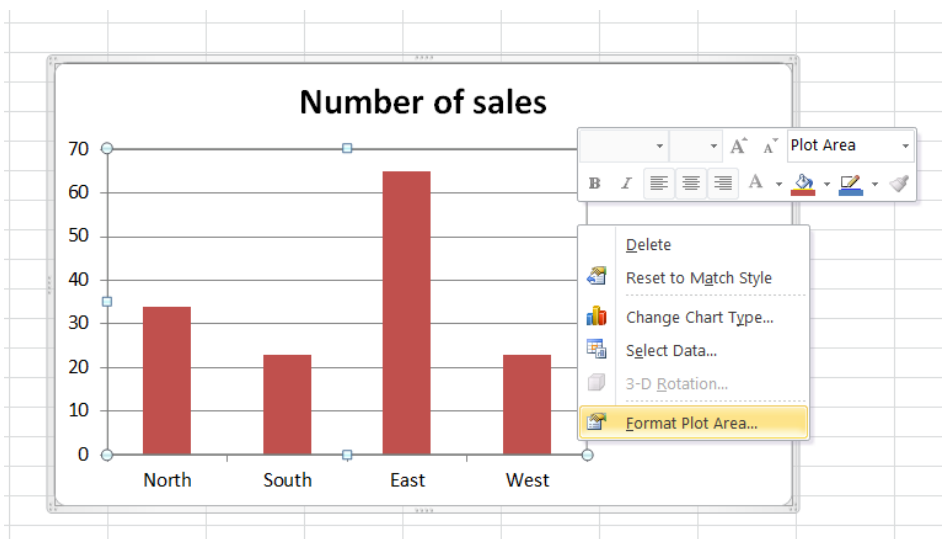
This will display the **Format Data Series** dialog box.
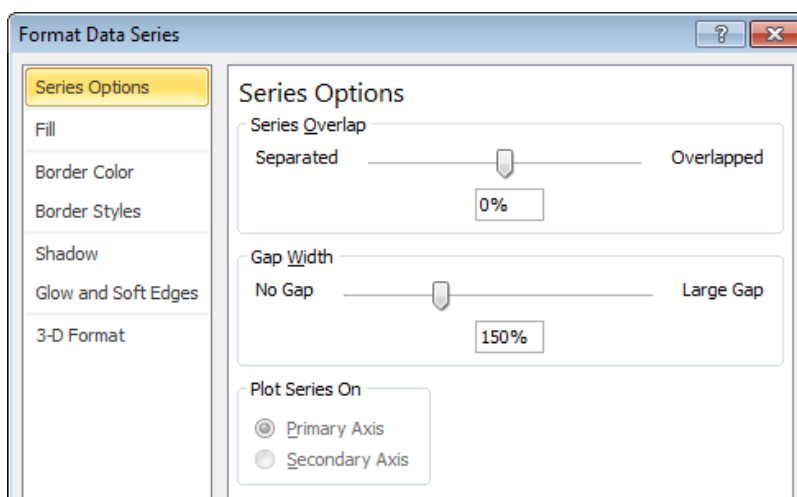
Click on the **Fill** side tab within the dialog box, as illustrated.

If necessary, click on the **Solid fill** button.
Click on the **down arrow** in the **Colour** section and select a colour for your columns.
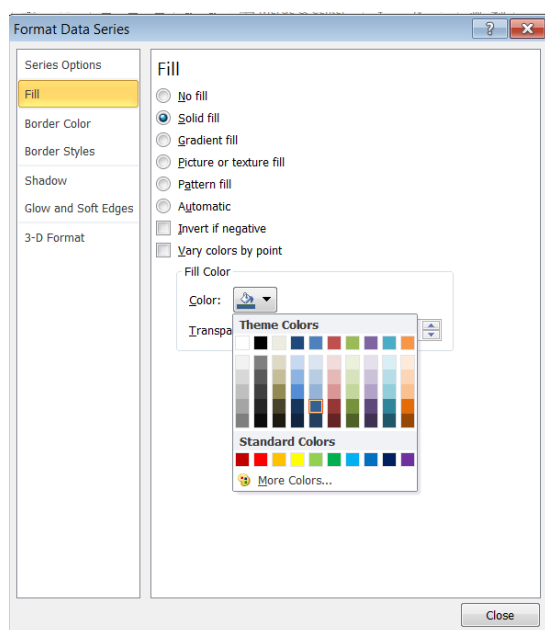
When you click on the **Close** icon the selected colour will be applied, as seen below.
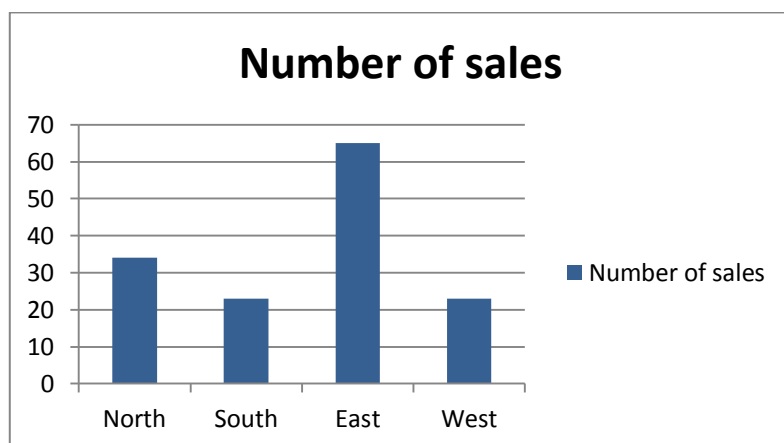
Click on the **Line Chart** worksheet tab and change the colour of the line.

Click on the **Bar Chart** worksheet tab and change the colour of the bars.

Click on the **Pie Chart** worksheet tab to display the pie chart. The whole point of a pie chart is that each segment of the pie chart should be a different colour. Bearing this is mind click once on the pie chart to select all the segments within the pie chart. Then click again on a particular segment to select just that segment. At this point you can then right click and change the colour of just that segment. An example is seen below.
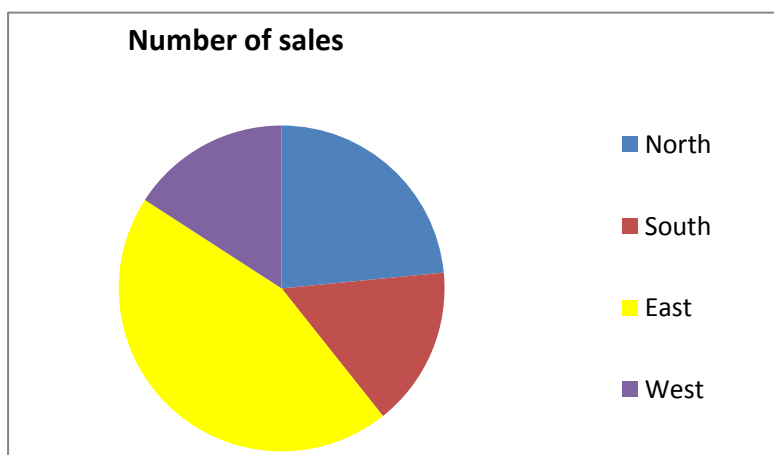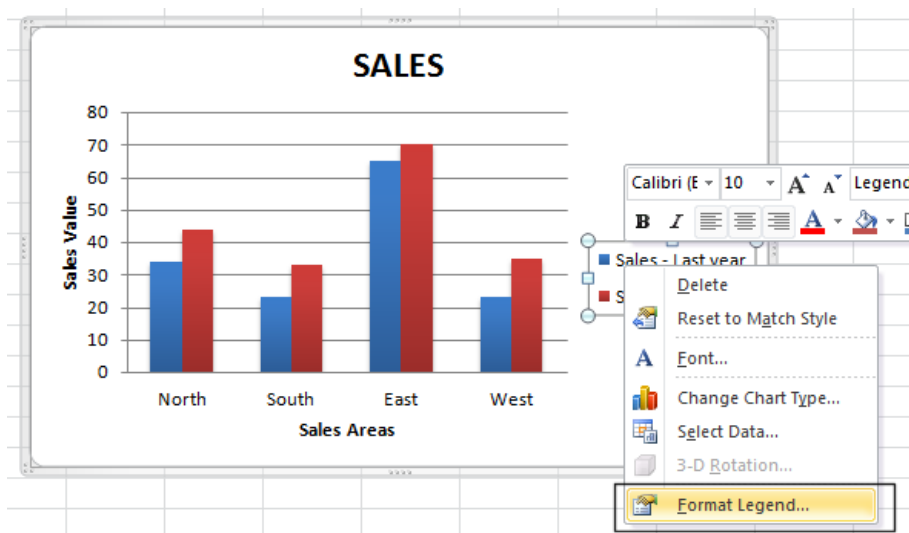
Modifying the legend fill colour
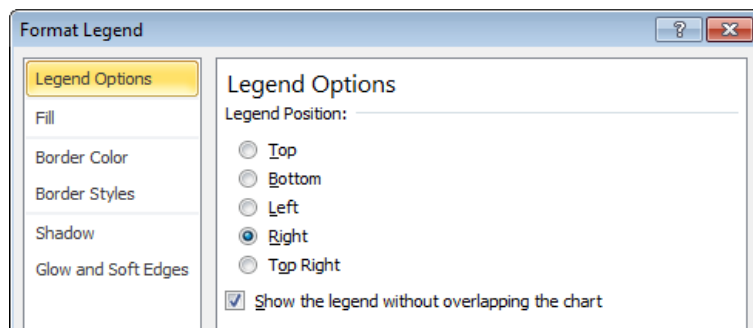
Open a workbook called **Legend**.
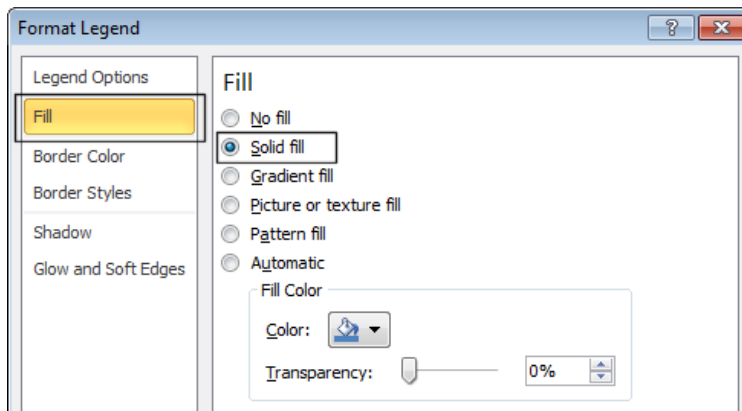Select the legend within the chart, as illustrated.
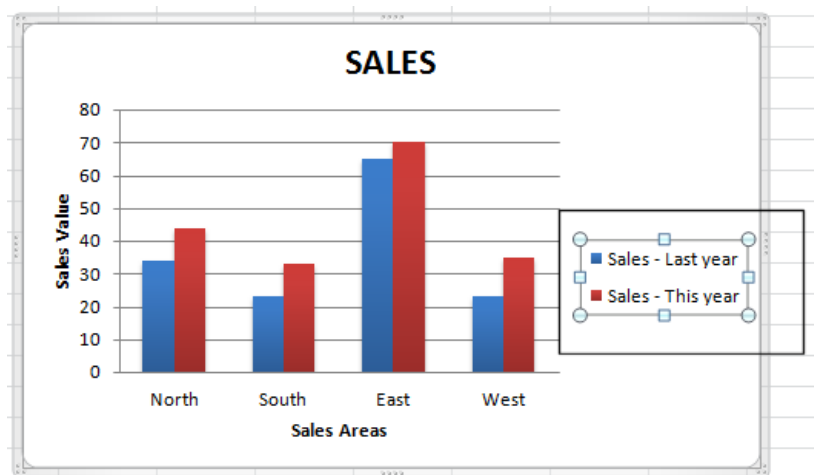
Right click over the selected legend and from the popup menu displayed select the **Format Legend** command.
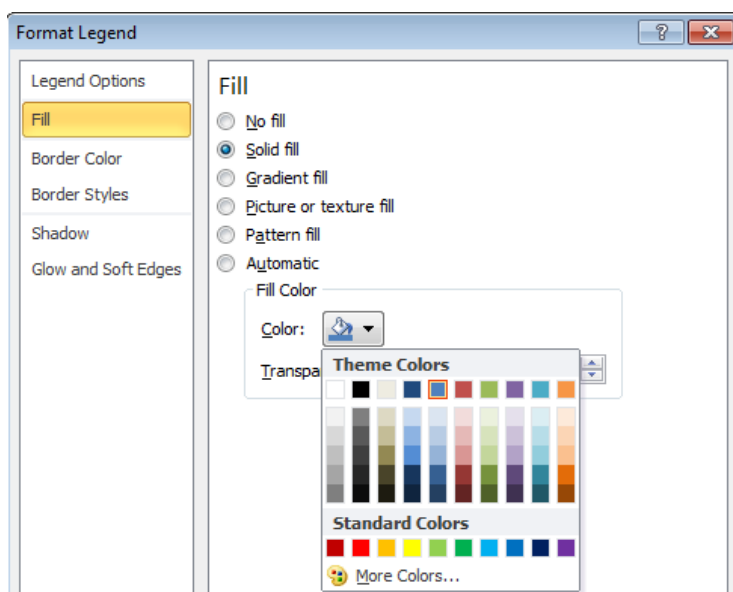

This will display the **Format Legend** dialog box, as illustrated.

Select the **Fill** side tab. Select the **Solid fill** button and you will see the following.

Click on the **down arrow** in the **Colour** control and select a colour as illustrated below.

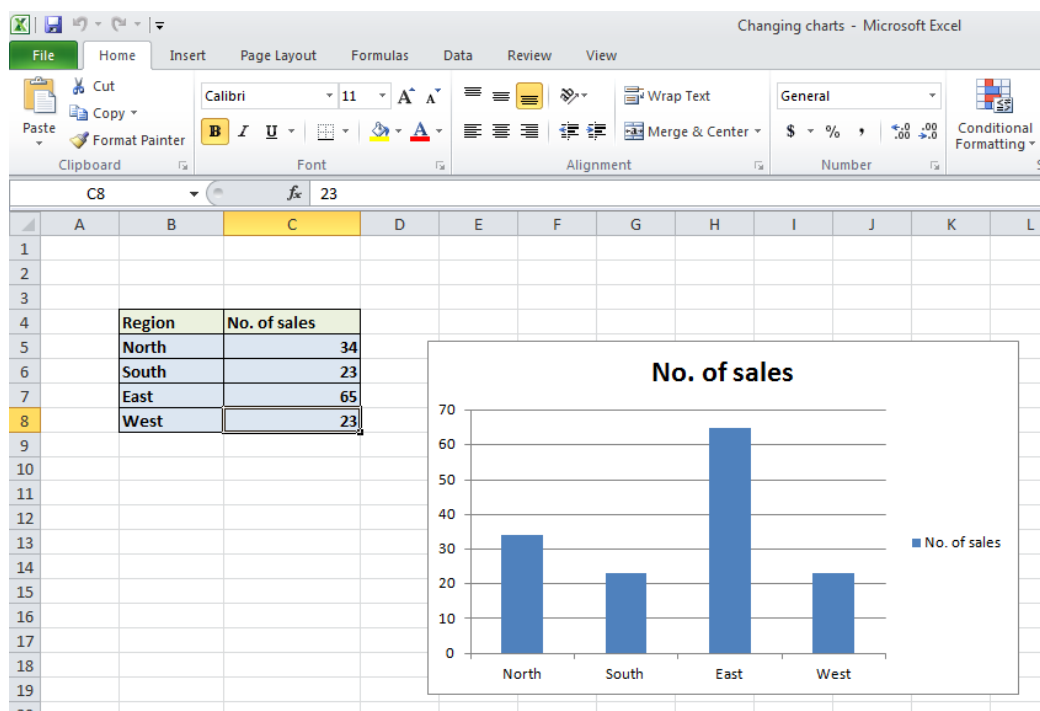Click on the **Close** button to apply the formatting and close the dialog box.
If you have time try experimenting with some of the other options within the Fill section of the **Format Legend** dialog box, such as **Gradient Fills** or adjusting the fill transparency.
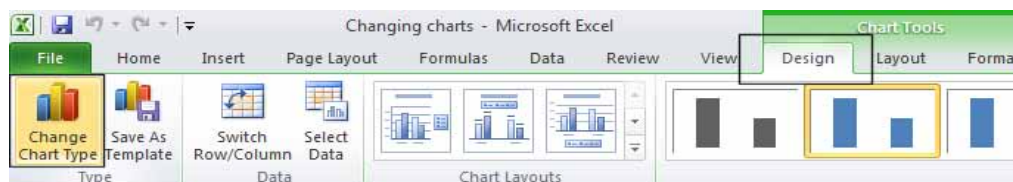

Save your changes and close the workbook.
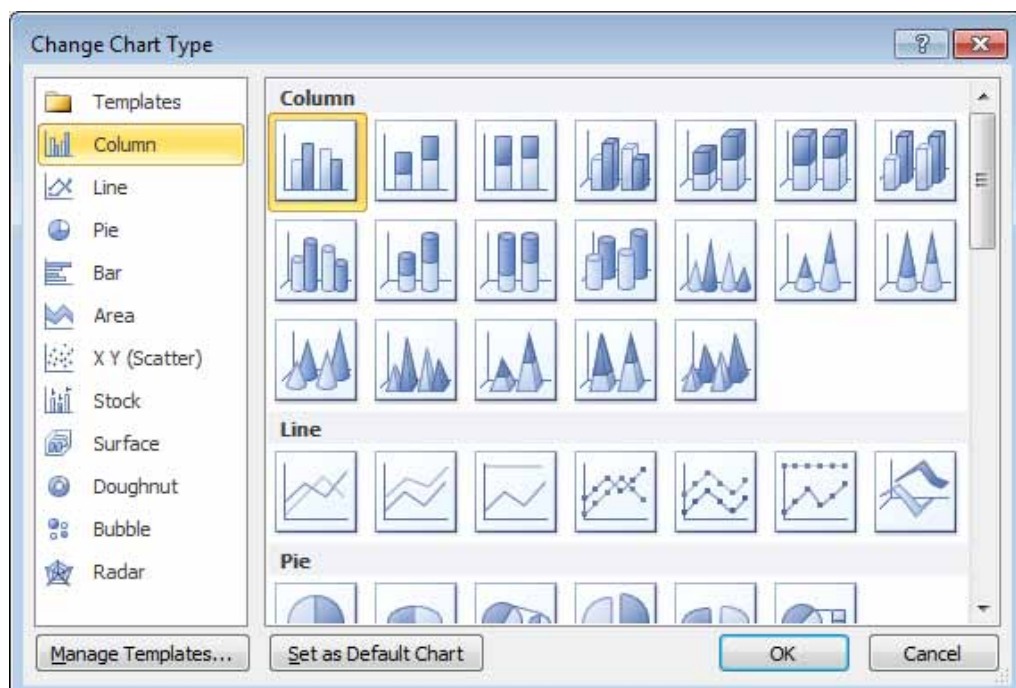
Changing the Chart type
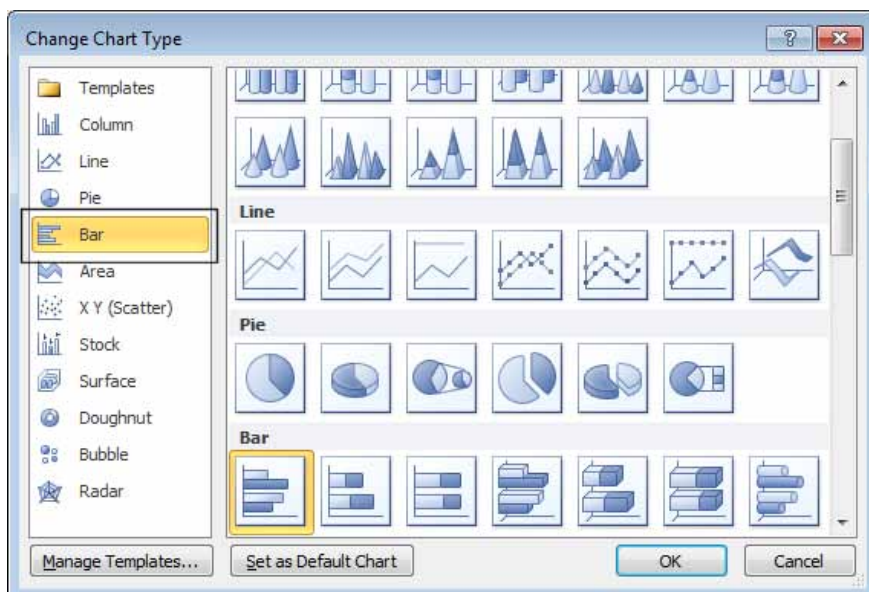
Open a workbook called Changing charts.

This workbook contains a column chart. Click on the chart to select it. Click on the **Design** tab. Click on the **Change Chart Type** icon displayed within the **Type** group of the **Design** Ribbon.
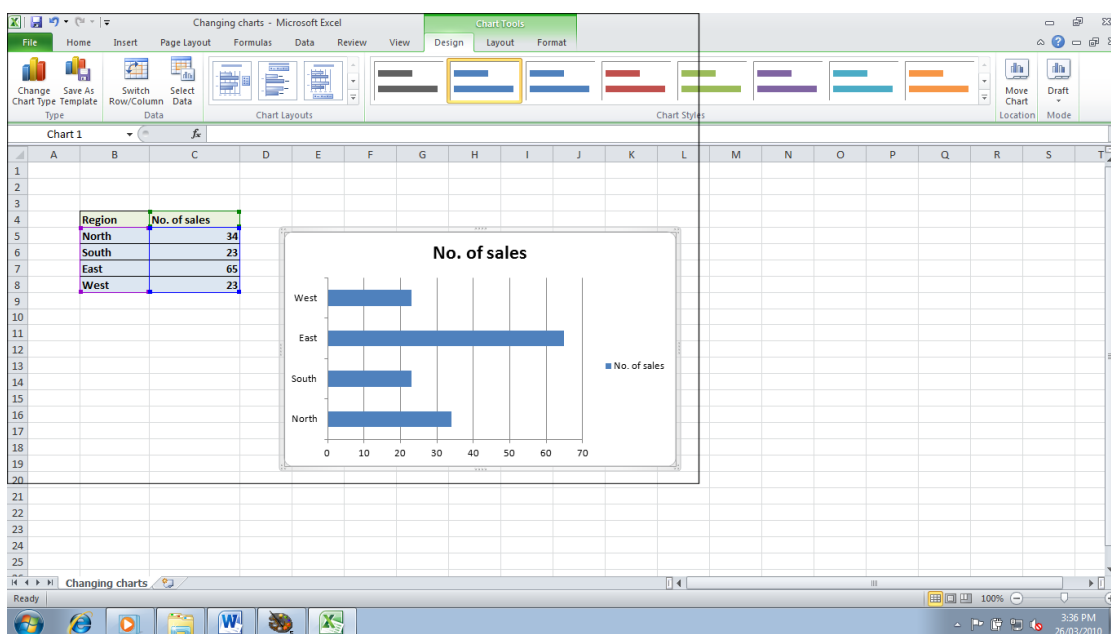

This will display the **Change Chart Type** dialog box.

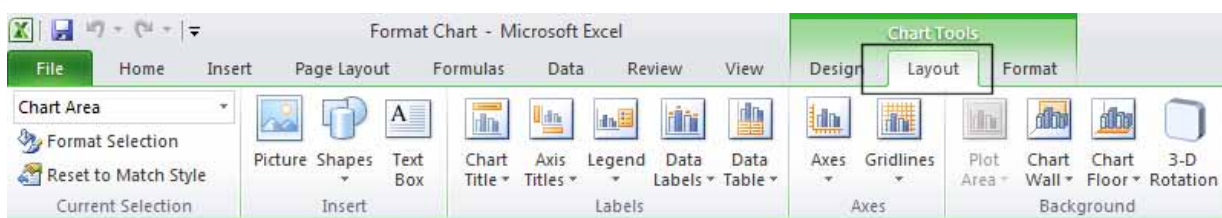Select a different type of chart, such as a **Bar** chart.


Click on the **OK** button.

Experiment with applying different types of chart.
Save your changes and close the workbook.

**Modifying charts using the Layout tab**

Open a workbook called **Format Chart**.
Select the chart and then click on the **Layout** tab.

The **Layout** tab includes many options for controlling how the various chart elements are displayed. Click on the **Chart Title** button in the **Labels** group.
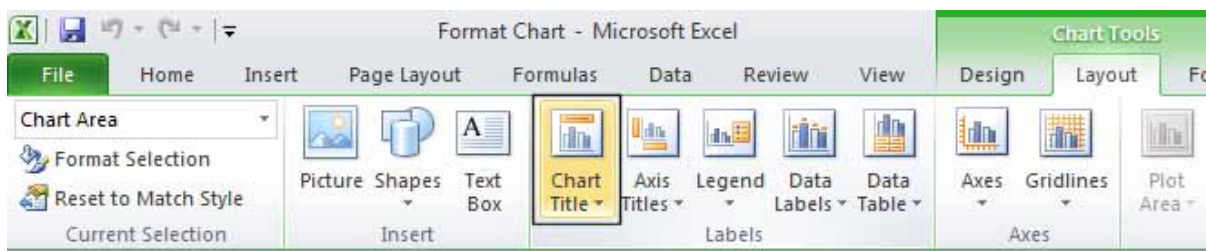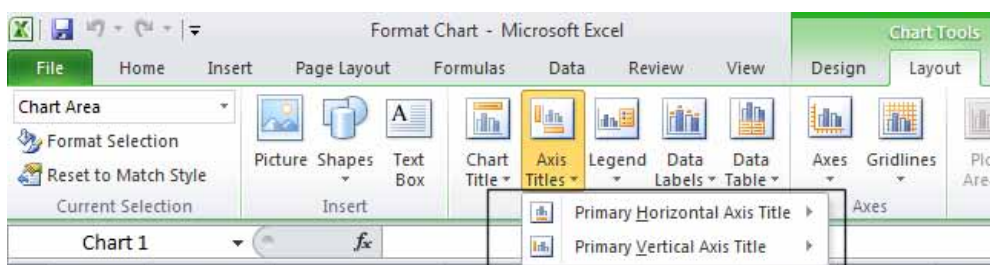

A menu will be display allowing you to control where or if the chart title is displayed. The default is **Above Chart,** try selecting the other options and observe the effect on the chart.
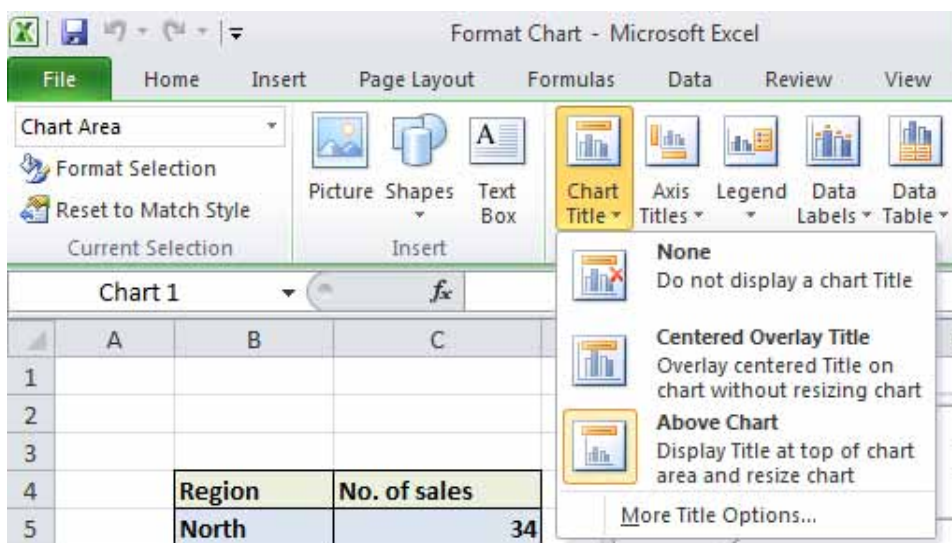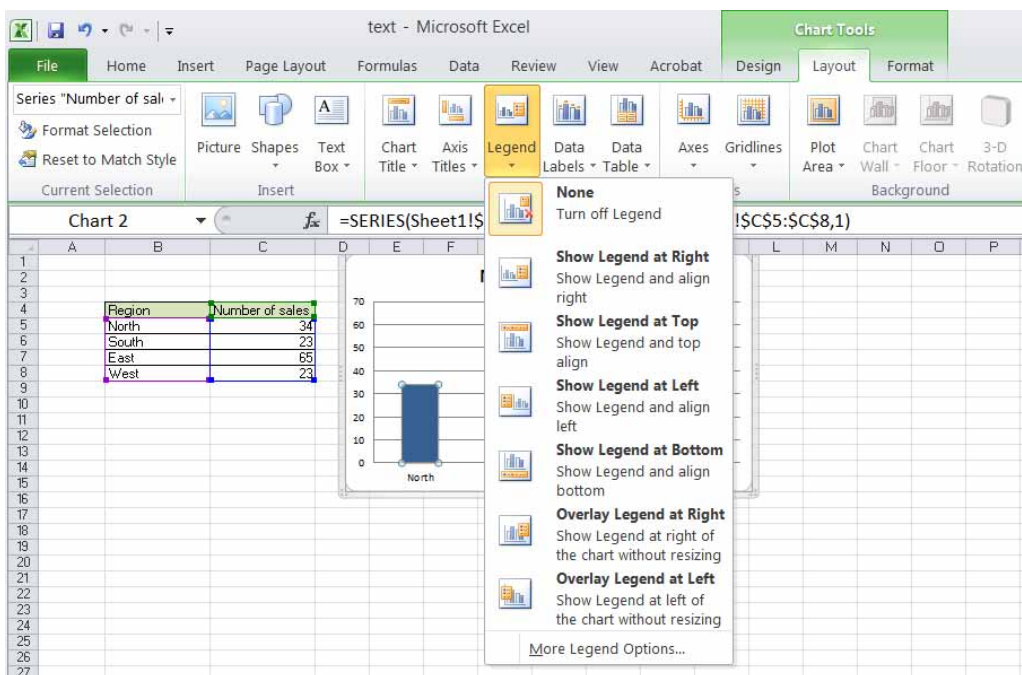

NOTICE:
A title of chart is placed at rhea bottom of chart. See p.118 for examples.

Click on the **Axis Titles** button in the **Labels** group. A menu will be displayed allowing you to control how the labels for each axis are displayed. Experiment with some of the available options and view their effect on the chart.
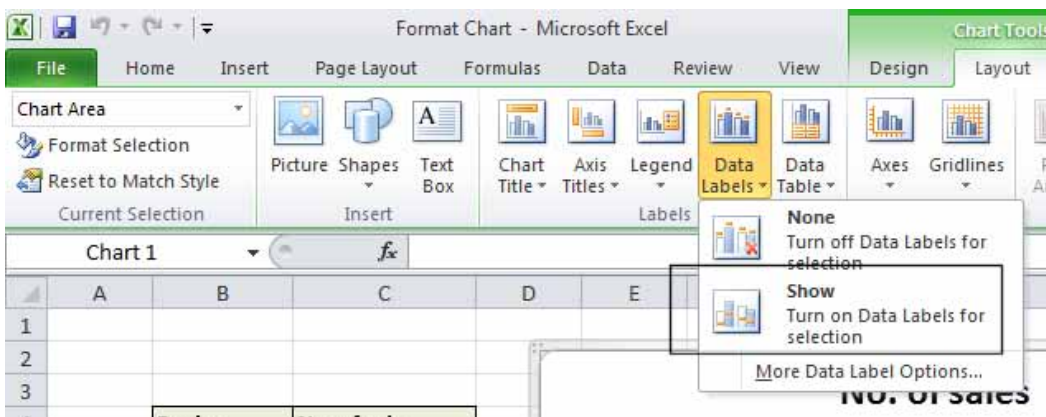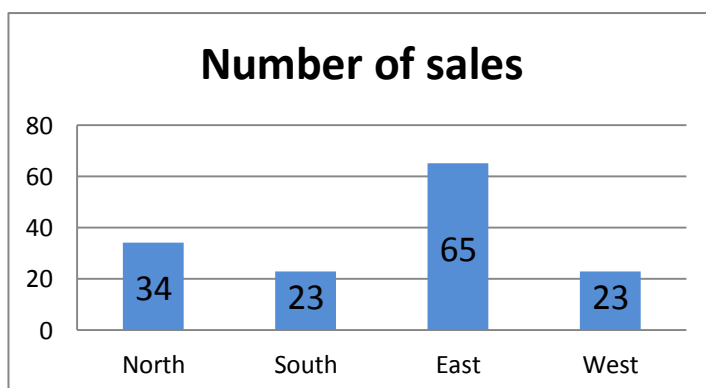
Click on the **Legend** button in the **Labels** group. A menu will be displayed allowing you to control where the chart legend is displayed. Experiment with some of the available options and view their effect on the chart.

Click on the **Data Labels** button in the **Labels** group. A menu will be displayed allowing you to choose if labels should be applied to data in the chart. Click on the **Show** option.
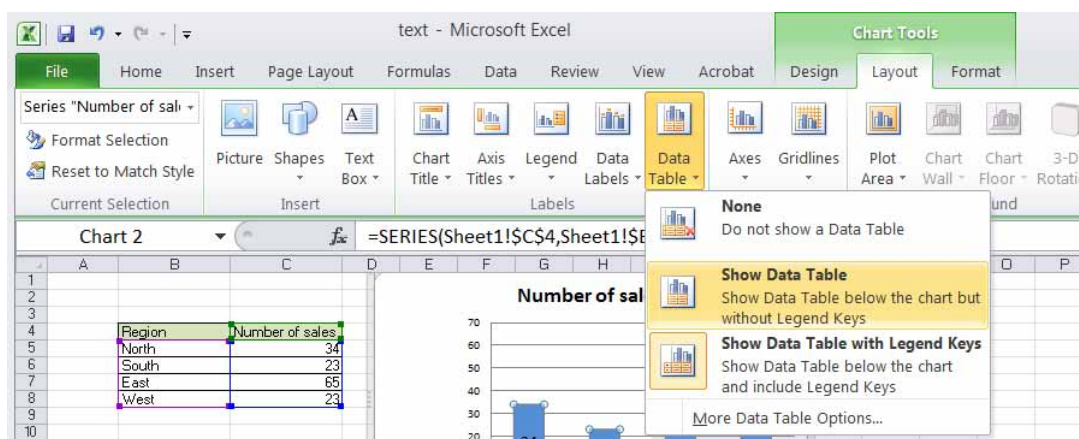
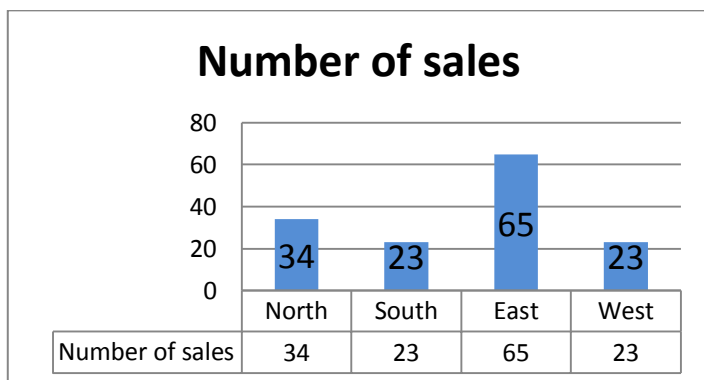

The chart should now look like this.

Notice that each column is now labelled with its value.

Click on the **Data Table** button in the **Labels** group. A menu will be displayed allowing you to show the data used to create the chart. Click on the **Show Data Table** option.

A small table will be displayed below the chart containing the relevant data.

Click on the **Gridlines** button in the **Axes** group. A menu will be displayed allowing you to control how the gridlines for each axis are displayed. Experiment with some of the available options and view their effect on the chart.