

Excel 2013 Core: Advanced

Shelley Fishel



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Shelley Fishel

Excel 2013 Core

Advanced

Excel 2013 Core: Advanced

1st edition

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ISBN 978-87-403-0718-4

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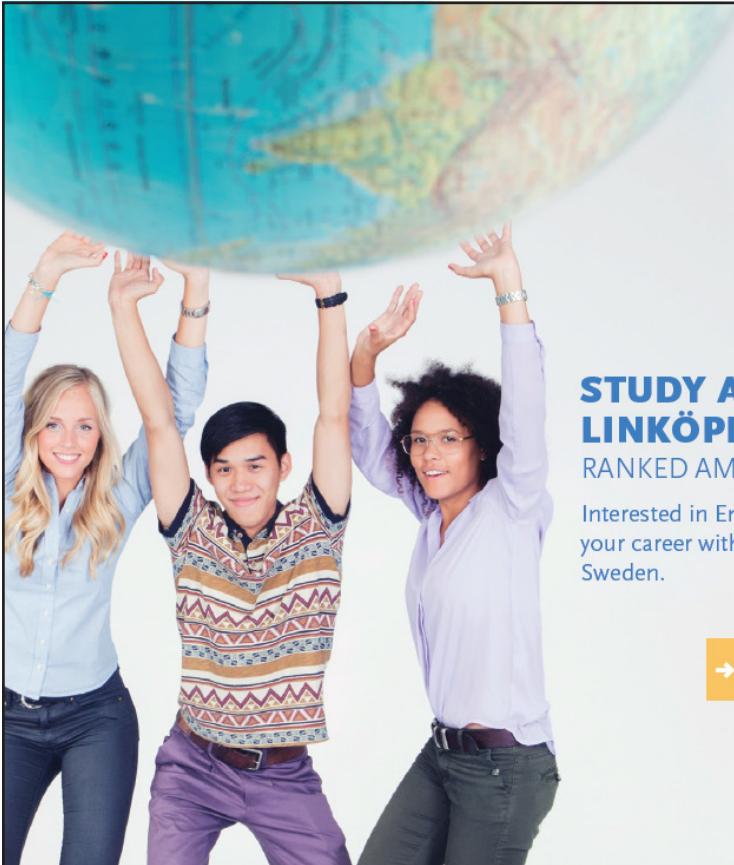
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About Shelley Fishel



Shelley Fishel has more than a dozen years' experience in helping people to get more from their computers. After working for an IT training organization Shelley decided to 'do her own thing' when she realized the limitations of delivering standard courses.

"Why waste time and money on training people in areas that are not relevant to them? It's common sense to invest that time and effort on what they really need."

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Shelley and her team have worked hard to achieve accreditation by the Learning and Performance Institute for the IT Training Surgery, as a recognized high quality provider of IT training,

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About Excel 2013 Core Advanced

This user guide will introduce you to some of Excel's more complex functionality. Specifically when analysing data.

You will learn how to:

- Use Conditional Logic in a formula – IF statements
- Use the SumIF and CountIF functions
- Produce a chart
- Sort and filter
- Apply subtotals
- Introduction to Pivot Tables
- Introduction to Macros

1 Apply Conditional Logic in formula

1.1 IF Function (IF Statement)

An If function asks Excel to consider if something is true or false. If it is true it will return one answer, if it is false it will return a different answer.

For example: ***Can my company afford to buy 10 new computers?*** There are 2 possible outcomes – if it is within the budget then the answer is “yes”, if it is outside of the budget then the answer is “no”.

1.1.1 The structure of an IF Function

$$=IF(B6 <= \$B\$3, "yes", "no")$$

The structure of an IF statement always contains the same five elements.

- Starts with =IF(
- The **Logical Test** followed by a comma
- What to do if the logical test is **True** followed by a comma
- What to do if the logical test is **False**
- Close brackets

To make this IF function easier to understand the logical test is in one colour, the **true** part is in another colour and the false part is in a third colour.

1.1.2 Operators you can use in a Logical Test

Operator	Explanation
=	Equal to
<>	Not equal to
>	Greater than
<	Less than
>=	Greater than or equal to
<=	Less than or equal to

1.1.3 Typing in an IF Function

	15			
	Hours	Overtime Rate	Overtime?	Overtime Pay
	15	£ 12.00	=IF(B5>\$B\$2,"Overtime","No Overtime")	

Figure 260 – structure of an IF statement

1. Click in the cell where you want the answer
2. Type in the =IF(
3. Type in your logical test
4. Type a comma
5. Type in what Excel must do if this is true
6. Type a comma
7. Type in what Excel must do if this is false
8. Close the brackets
9. Press Enter

If Excel is to display text for the true or false result then you must enclose the text in inverted commas.

You can also put a formula in the IF statement for the True or False result.

For example:

I want to know how much bonus each member of staff will receive:

$$=IF(B2>H1,C2*h2,0)$$

A	B	C	D	E	F	G	H	I
1 Name	Hours	Rate	Pay	Bonus				
2 Jill	35	£ 10.00	£ 350.00	=IF(B2>\$H\$1,C2*\$h\$2,0)		Standard Hours	25	
3 Alice	15	£ 15.00	£ 225.00	IF(logical_test, [value_if_true], [value_if_false])		Overtime Rate	1.1	
4 Jason	20	£ 10.00	£ 200.00	0				
5 Chip	38	£ 10.00	£ 380.00	11				
6 Dilip	10	£ 25.00	£ 250.00	0				
7								

Figure 261 – working out the bonus amount

1.2 Nested IF Function

A nested IF Function is an IF function nested inside another IF function.

The basic IF function only allows for two possible answers: either the logical test is met or it is not. When we want more than these two basic answers then we need to *nest* the formula, i.e. put one =IF inside another.

You can nest up to sixty four IF functions inside one another, but if you were going to go so far, you would be more likely to use a HLOOKUP or VLOOKUP.

1.2.1 The structure of a nested IF Function

=IF(B5>=\$G\$2,"OAP",If(B5<=\$G\$3,"Child","Adult"))

A nested IF Function is just a lot of single IF functions strung together. The structure of nested IFs is always as follows:

- Start with =IF()
- First logical test followed by a comma
- What to do if the first logical test is true
- If the first logical test is false then Excel has to move onto the next logical test which will always start with IF()
- Second logical test followed by comma
- If the second logical test is also false Excel moves onto the next logical test and this process repeats until you come to the last logical test
- At the end of the nested IF there will be your last logical test
- What to do if the last logical test is true
- What to do if the last logical test is false

You must type in a closing bracket at the end of the nested IF for each logical test you have entered.

1.3 COUNTIF Function

The COUNTIF function combines the COUNT function and the IF function. Use it when you want to count any cells that match a certain condition.

Name	Hours	Overtime Rate	Overtime?
Barbara	15	£ 12.00	No Overtime
Mina	20	£ 18.00	Overtime
George	26	£ 30.00	Overtime
John	35	£ 10.00	Overtime
Keith	14	£ 11.00	No Overtime
Lucy	30	£ 12.00	Overtime
Mick	26	£ 13.00	Overtime
Paul	25	£ 15.00	Overtime
Peter	12	£ 18.00	No Overtime
Viador	16	£ 20.00	Overtime
Steven	13	£ 23.00	No Overtime
Tina	23	£ 28.00	Overtime
Total			
Number of people with overtime		<code>=COUNTIF(D5:D16,"Overtime")</code>	

Figure 262 – count how many people have overtime

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In the example, we want Excel to count how many people have worked enough hours to qualify for overtime. So we set up a COUNTIF Function to count how many times the word “Overtime” occurs in the Overtime column.

Name	Hours	Overtime Rate	Overtime?
Barbara	15	£ 12.00	No Overtime
Mina	20	£ 18.00	Overtime
George	26	£ 30.00	Overtime
John	35	£ 10.00	Overtime
Keith	14	£ 11.00	No Overtime
Lucy	30	£ 12.00	Overtime
Mick	26	£ 13.00	Overtime
Paul	25	£ 15.00	Overtime
Peter	12	£ 18.00	No Overtime
Viador	16	£ 20.00	Overtime
Steven	13	£ 23.00	No Overtime
Tina	23	£ 28.00	Overtime
Total			
Number of people with overtime			8

Figure 263 – result returned

1.3.1 The structure of a COUNTIF Function

=COUNTIF(C6:C9,"yes")

This says, look in the cells C6 to C9, and if you find the work yes in them count how many times.

The structure of a COUNTIF always contains the same four elements.

- Starts with =COUNTIF(
- The range of cells that Excel is to look at
- The criteria which Excel will use to count
- Close brackets

To make this COUNTIF function easier to understand in this example, the range is in **purple** text and the criteria is **orange** text.

1.3.2 Typing in a COUNTIF Function

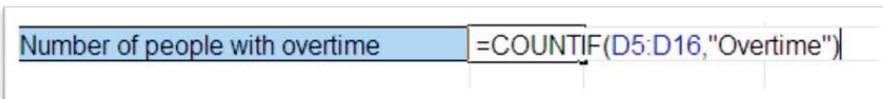


Figure 264 – type the Countif function directly into the cell

1. Click in the cell where you want the answer
2. Type =COUNTIF(
3. Highlight the range of cells you are counting from
4. Type in your criteria
5. Press Enter

1.4 SUMIF Function

This function will add the value of cells that meet a certain criteria.

For example, suppose we want to calculate the total salary cost of all females:

A screenshot of an Excel spreadsheet. A table has columns A, B, and C. Column A lists names, column B lists gender, and column C lists salary. Row 9 is labeled 'Total Female Salary' and contains the formula '=SUMIF(B2:B7,"Female",C2:C7)'. A green box highlights the range B2:B7, which is labeled 'Range over which to apply criteria'. A green box highlights the range C2:C7, which is labeled 'Range over which to sum'.

	A	B	C	D
1	Name	Gender	Salary	
2	Kaiser	Male	38,000	
3	Zac	Male	35,000	
4	Mia	Female	12,000	
5	Nikola	Female	25,000	
6	Serena	Female	42,000	
7	Sam	Male	28,000	
8				
9	Total Female Salary	=SUMIF(B2:B7,"Female",C2:C7)		

Figure 265 – Sumif adds up all the rows that meet your criteria

If the range B2 to B7 says Female then add up all of the salaries that correspond.

The answer for the Total Female Salaries = £79,000.

1.4.1 The structure of a SUMIF Function

The syntax for the SUMIF function is as follows:

=SUMIF(Range,Criteria,Sum Range)

Range: The range of cells that Excel is to look at

Criteria: The criteria that the cells must meet in order to be added

Sum Range: The cells to Sum

2 Create and apply Range Names

2.1 Defining a Named Cell or Range of Cells

A Named Cell or Range of Cells can help in different ways. When a cell is named it behaves as an Absolute Cell Reference, by giving the cell a name such as VAT or Price, Excel knows to refer to that particular cell when you use it in a formula.

Name a Range of Cells and you can navigate around easily. When used in a formula Excel will pick up the right cell in the formula.

Named Ranges are also handy for summarizing data quickly or finding a piece of data at the intersection between two ranges. Read on to learn how this works.

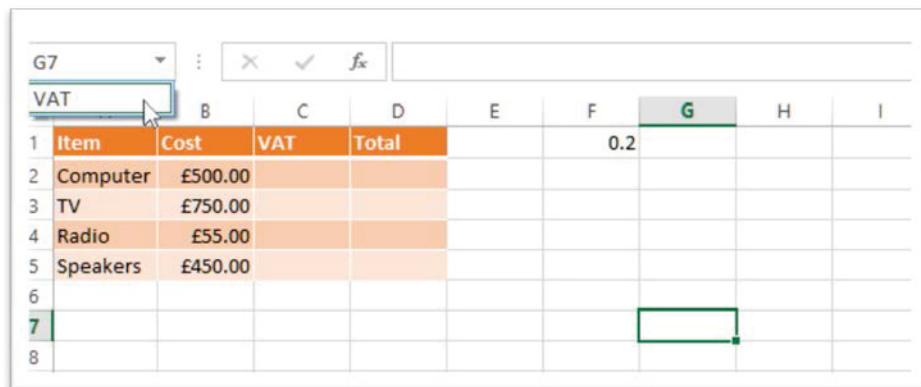
2.1.1 Name a single cell

	A	B	C	D	E	F	G	H
1	Item	Cost	VAT	Total		0.2		
2	Computer	£500.00						
3	TV	£750.00						
4	Radio	£55.00						
5	Speakers	£450.00						

Figure 266 – Name a cell for easy to read formula

1. Click on the cell you want to name (in our example F1)
2. Click into the Name Box (to the left of the Formula Bar)
3. Over type the cell reference with the Name for the cell (In our example VAT)
4. Press Enter to confirm the name

Now I have a cell called VAT which can be seen from the drop down arrow in the Name Box

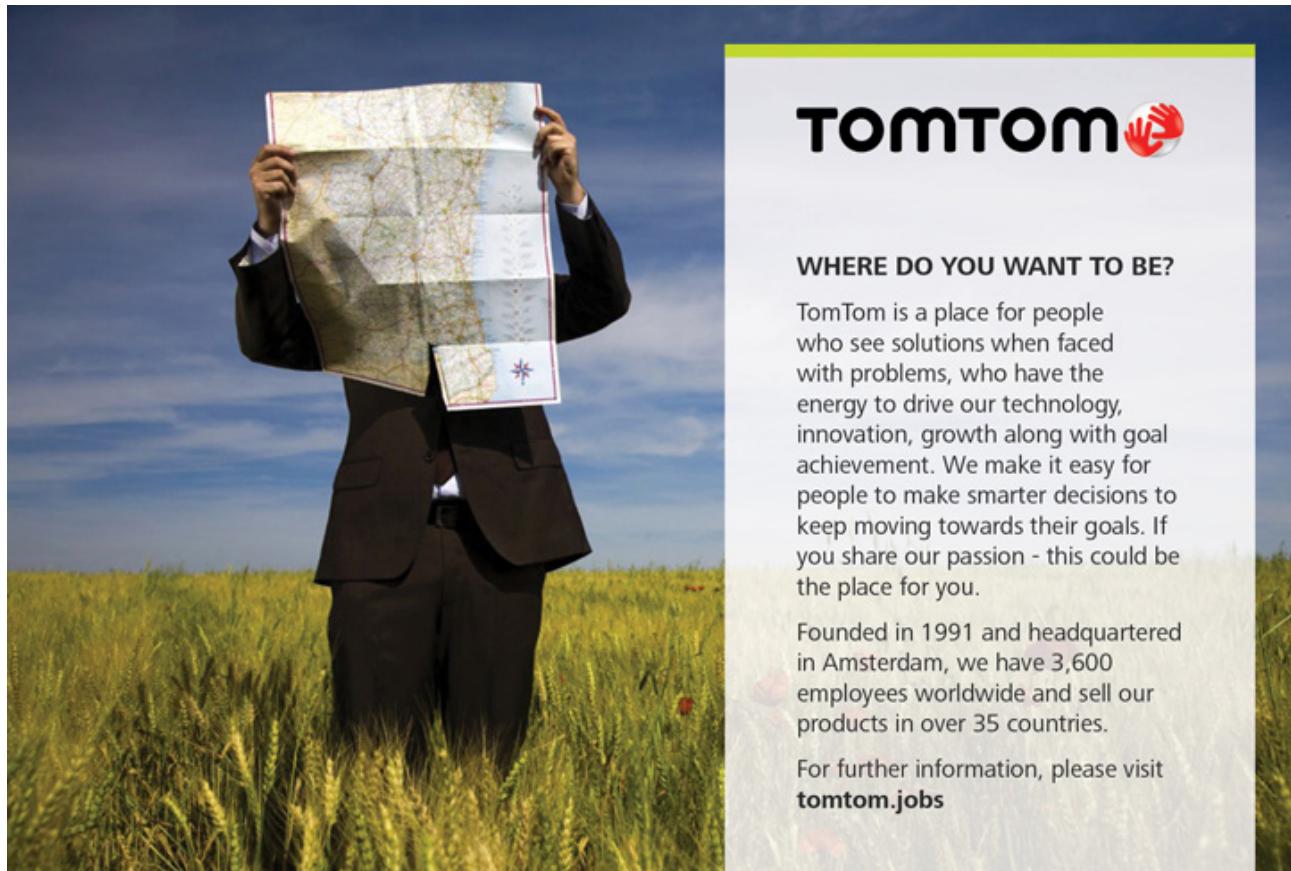


The screenshot shows a Microsoft Excel spreadsheet. The Name Box at the top left displays 'G7' and has a dropdown arrow pointing down, with 'VAT' listed in the dropdown menu. The spreadsheet contains a table with columns 'Item', 'Cost', 'VAT', and 'Total'. Row 1 is the header, and rows 2 through 5 contain data for 'Computer', 'TV', 'Radio', and 'Speakers' respectively. The 'VAT' column for these items is empty. Row 6 is blank, and row 7 is currently selected, indicated by a green border around the cell range G7:H7.

	Item	Cost	VAT	Total		G	H	I
1	Item	Cost	VAT	Total				
2	Computer	£500.00			0.2			
3	TV	£750.00						
4	Radio	£55.00						
5	Speakers	£450.00						
6								
7								
8								

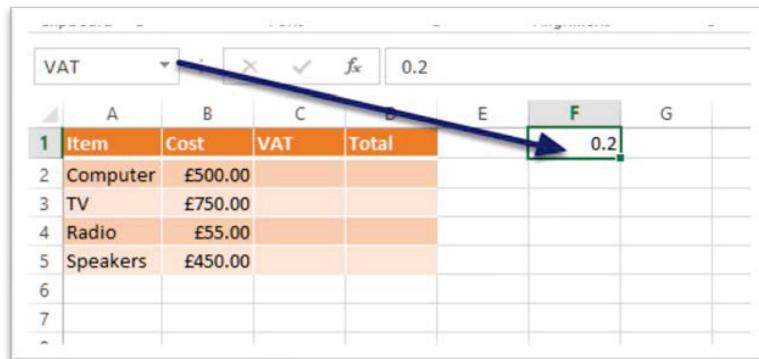
Figure 267 – see names cells in the name box

Here you can see that my cursor is in Cell G7 and in the drop down arrow is the name VAT.



The image is a composite of two parts. On the left, a man in a dark suit stands in a field of tall grass, holding a large, detailed map over his head. He is looking upwards at the map. On the right, there is a promotional graphic for TomTom. It features the TomTom logo with a red hand icon. Below the logo, the text 'WHERE DO YOU WANT TO BE?' is displayed. The text continues: 'TomTom is a place for people who see solutions when faced with problems, who have the energy to drive our technology, innovation, growth along with goal achievement. We make it easy for people to make smarter decisions to keep moving towards their goals. If you share our passion - this could be the place for you.' At the bottom of the graphic, it says 'Founded in 1991 and headquartered in Amsterdam, we have 3,600 employees worldwide and sell our products in over 35 countries.' and 'For further information, please visit tomtom.jobs'.

To move the cursor to the cell called VAT I can select it from the drop down list.



A screenshot of an Excel spreadsheet. The formula bar at the top shows the name 'VAT' selected. The main area of the screen displays a table with columns labeled 'Item', 'Cost', 'VAT', and 'Total'. The 'VAT' column contains the value '0.2'. A blue arrow points from the formula bar to the cell containing '0.2' in the 'VAT' column.

1	Item	Cost	VAT	Total
2	Computer	£500.00		
3	TV	£750.00		
4	Radio	£55.00		
5	Speakers	£450.00		
6				
7				

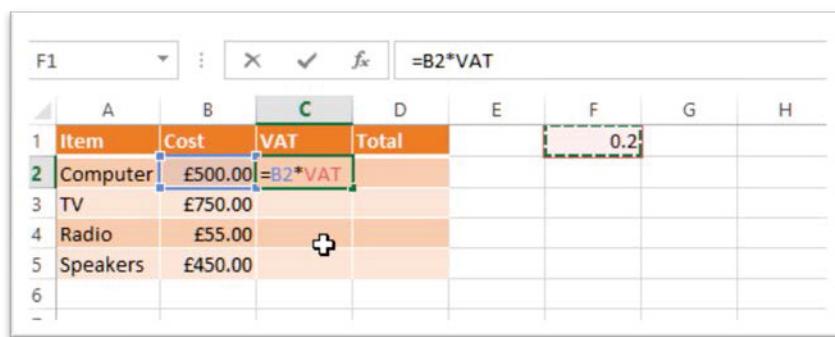
Figure 268 – use named cells to navigate around

Here you can see that I have now jumped to the cell called VAT and this is where the cursor is now positioned.

2.2 Using a Named Cell in a formula

I can now use my named cell in a formula to:

- Make it more readable
- Use it as an Absolute Cell Reference



A screenshot of an Excel spreadsheet. The formula bar at the top shows the formula '=B2*VAT'. The main area of the screen displays a table with columns labeled 'Item', 'Cost', 'VAT', and 'Total'. The 'VAT' column contains the value '0.2'. Cell B2 is currently selected, indicated by a blue border. The formula bar also shows '=B2*VAT'.

1	Item	Cost	VAT	Total
2	Computer	£500.00	=B2*VAT	
3	TV	£750.00		
4	Radio	£55.00		
5	Speakers	£450.00		
6				
7				

Figure 269 – Named cells are absolute

Create the formula as you normally would.

1. Click into the cell where the result will display
2. Type an = sign
3. Click on the first cell to include
4. Type the mathematical Operator (in our example an Asterix for multiply)
5. Click on the cell with the multiplier in (F1 which is called VAT) Notice that Excel calls the cell by its name not the cell reference
6. Press Enter

2.2.1 Auto fill the formula

A	B	C	D	E	F
1	Item	Cost	VAT	Total	
2	Computer	£500.00	£100.00		
3	TV	£750.00	£150.00		
4	Radio	£55.00	£11.00		
5	Speakers	£450.00	£90.00		

Figure 270 – as an Absolute reference the named cell allows you to Auto fill your list

Use the Auto fill Handle (the little black plus sign in the bottom right hand corner of the cell) to copy the formula down all the other rows.

A	B	C	D	E	F	G	H
1	Item	Cost	VAT	Total	0.2		
2	Computer	£500.00	£100.00				
3	TV	£750.00	£150.00				
4	Radio	£55.00	£11.00		0.2		
5	Speakers	£450.00	£90.00				
6							
7							
8							

Figure 271 – all the cells have the correct references in the formula

Notice that each of the rows has adjusted the first part so B2 then B3 then B4 etc however all of the formula reference the cell called VAT.

2.3 Naming a range of cells

Named ranges can be used to navigate, select and be used in formula to make them more understandable.
Named cells are absolute and so make copying formula really simple.

2.3.1 Create a Named Range from a selection

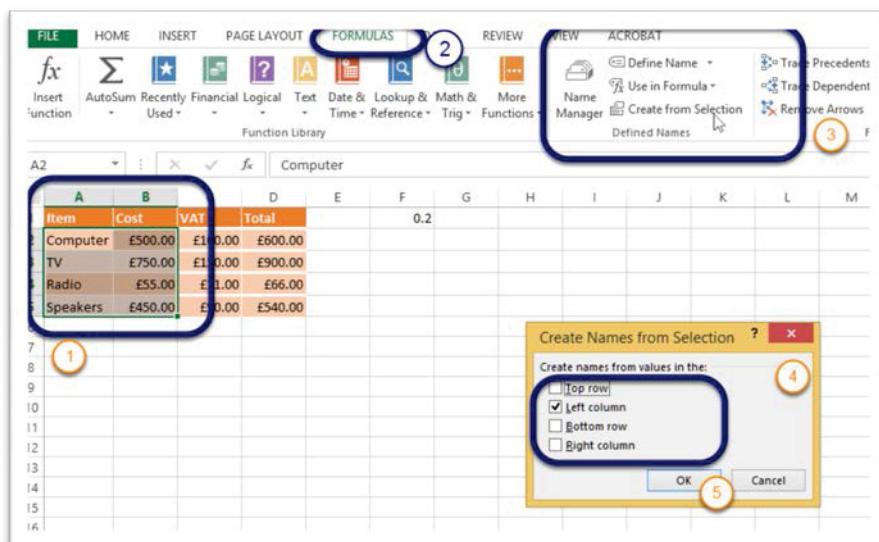


Figure 272 – Name, cells or ranges of cells

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I already have a cell called VAT and I would like to make creating my formula even easier.

I would like the formula to read: Computer*VAT, or TV*VAT

I need to Create Names from Selection – here is how:

1. Select the cells to name along with the cells that contain the labels
2. Click on the Formulas Ribbon
3. In the Defined Names group click on Create from Selection
4. In the Dialogue box that pops up, select the correct position for the name
(in our case Left Column)
5. Click OK

2.3.2 Use a name in a formula

Function Library						
SUM	:	X	✓	f _x	=computer*VAT	
A	B	C	D	E	VAT	G
1 Item	Cost	VAT	Total	E VAT	0.2	G
2 Computer	£500.00	=computer*VAT	£500.00			
3 TV	£750.00	£150.00	£900.00			
4 Radio	£55.00	£11.00	£66.00			
5 Speakers	£450.00	£90.00	£540.00			
6						

Figure 273 – names in formula

I now have Computer*VAT and can create TV*VAT, Radio*VAT and Speakers*VAT

A	B	C	D	E
Item	Cost	VAT	Total	
Computer	500	=Computer*VAT	=B2+C2	
TV	750	=TV*VAT	=B3+C3	
Radio	55	=Radio*VAT	=B4+C4	
Speakers	450	=Speakers*VAT	=B5+C5	
6				
7				
8				

Figure 274 – easier to read

All the cells show the correct function using the named cells. Much easier to read and makes so much more sense.

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2.4 Editing and renaming a named range

If you want to edit a range, maybe it needs to refer to a different group of cells or you need to give it a different name, using the Name Manager.

2.4.1 The Name Manager

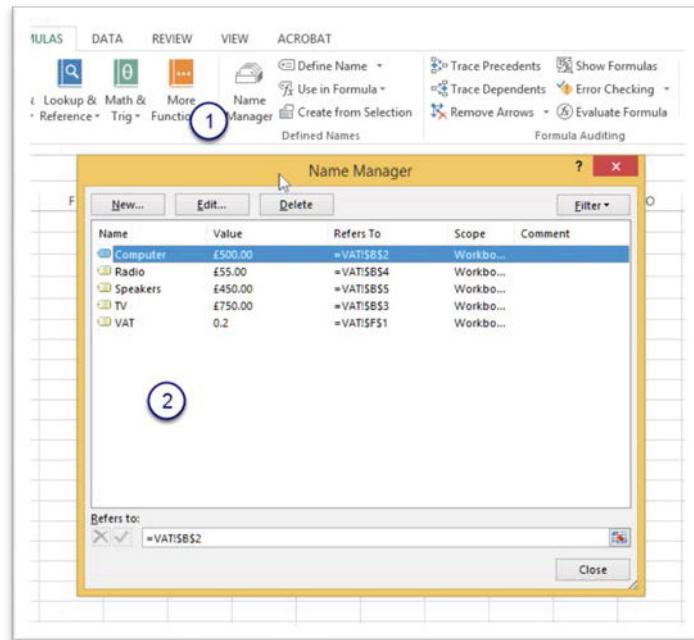


Figure 275 – use the name manager

Click on the Name Manager Icon and in the dialogue box that appears decide what you want to do:

Rename a range – click the range to rename then click Edit and type a new name for the range.

Change the cells referenced – Click the range to change then click Edit and select the cells to use.

Delete a Range – if you no longer need that range you can delete it entirely.

2.5 Define a Name Using the Dialogue Box

In my spreadsheet I already have a cell called VAT and now I want to create a couple of new ranges. I will use the Define Name icon.

2.5.1 Define a Name

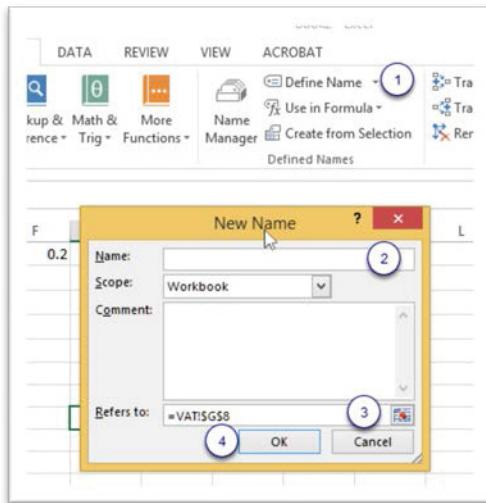


Figure 276 – define a new name

1. Click on Define Name in the Define Names group
2. Type a name for the new range in the Name box
3. Select the cells to which the new name refers
4. Click OK

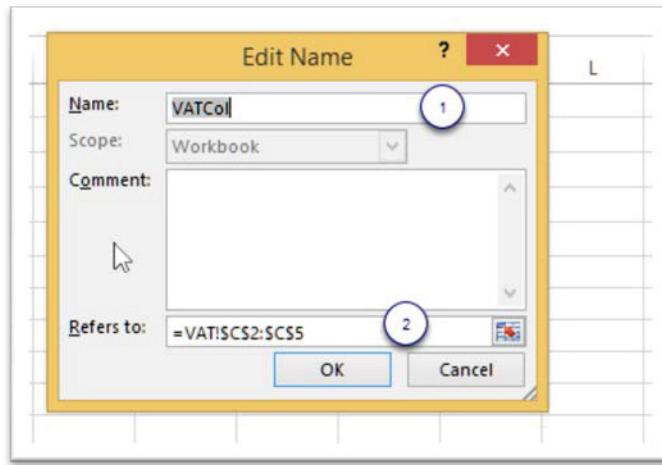


Figure 277 – new range created

Here is my new range

Name: VAT col (I already have a cell called VAT)

Refers to: =VAT!\$C\$2:\$C\$5

VAT! Is the worksheet the range is on and \$C\$2:\$C\$5 is the range of cells it refers to.

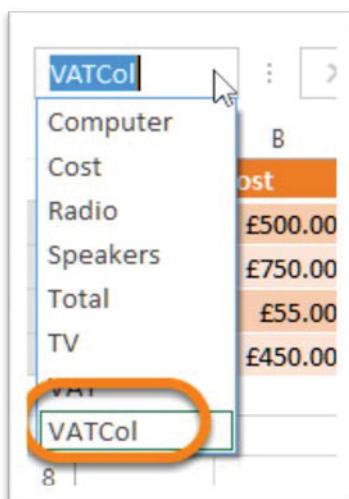


Figure 278 – new name in the list in the name box

A professional headshot of a woman with red hair, smiling, occupies the left side of the advertisement. The right side features a white diagonal band with text and the AXA logo. The text reads:

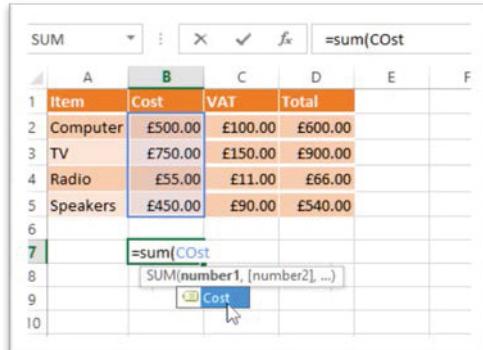
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2.6 Sum a range

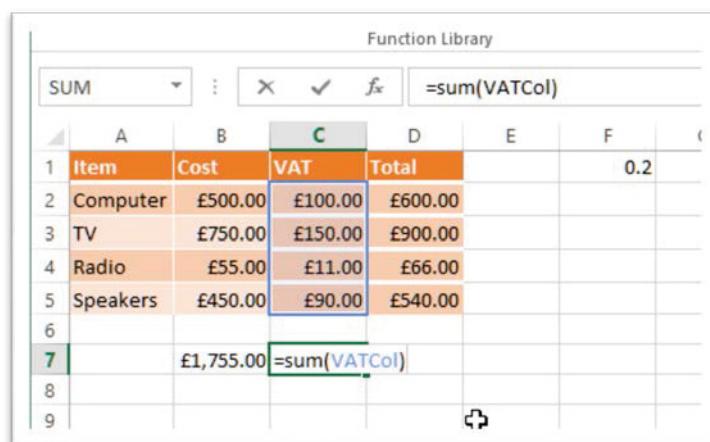
Now that I have a defined name for both the VAT column and the Cost Column I can get Excel to add them all up.



SUM	<input type="button" value="X"/>	<input checked="" type="button" value="✓"/>	<input type="button" value="fx"/>	=sum(Cost)
A	B	C	D	E F
1	Item	Cost	VAT	Total
2	Computer	£500.00	£100.00	£600.00
3	TV	£750.00	£150.00	£900.00
4	Radio	£55.00	£11.00	£66.00
5	Speakers	£450.00	£90.00	£540.00
6				
7		=sum(Cost)		
8		SUM(number1, [number2], ...)		
9		<input type="button" value="Cost"/>		
10				

Figure 279 – sum a range

1. Click into the cell where the answer will display
2. Type an = sign
3. Type Sum followed by an open bracket
4. Start to type the name of the range and you will see a yellow label pop up, You can double click on the label to include it or carry on typing the name of the range to sum.
5. Close the brackets
6. Press Enter



SUM	<input type="button" value="X"/>	<input checked="" type="button" value="✓"/>	<input type="button" value="fx"/>	=sum(VATCol)
A	B	C	D	E F
1	Item	Cost	VAT	Total
2	Computer	£500.00	£100.00	£600.00
3	TV	£750.00	£150.00	£900.00
4	Radio	£55.00	£11.00	£66.00
5	Speakers	£450.00	£90.00	£540.00
6				0.2
7		£1,755.00	=sum(VATCol)	
8				
9				

Figure 280 – sum a range

I can now do the same for the Vat Column.

	A	B	C	D	E
1	Item	Cost	VAT	Total	
2	Computer	£500.00	£100.00	£600.00	
3	TV	£750.00	£150.00	£900.00	
4	Radio	£55.00	£11.00	£66.00	
5	Speakers	£450.00	£90.00	£540.00	
6					
7		£1,755.00	£351.00		
8					
9					

Figure 281 – all done

Voila! Here are the totals and not a cell reference in sight!

	A	B	C	D	E
1	Item	Cost	VAT	Total	
2	Computer	500	=Computer*VAT	=B2+C2	
3	TV	750	=TV*VAT	=B3+C3	
4	Radio	55	=Radio*VAT	=B4+C4	
5	Speakers	450	=Speakers*VAT	=B5+C5	
6					
7		=SUM(Cost)	=SUM(VATCol)		
8					
9					
10					

Figure 282 – here are the formula displayed so you can see what is going on behind the function

3 Charts

3.1 Using Quick Analysis

As we have seen elsewhere in this book, Quick Analysis also offers a choice of Charts depending on the data that you select first.

3.1.1 Quick Analysis Charts

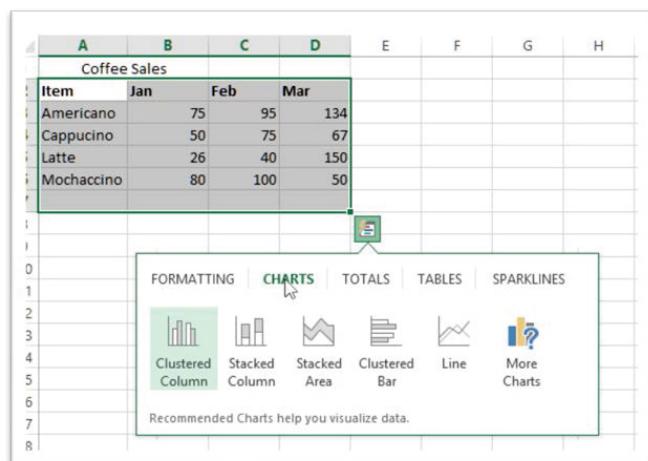


Figure 283 – Quick Analysis offers a selection of recommended charts

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Select the data and then click on the small Quick Analysis button – choose Charts and then hover over the different recommended charts to see what they look like. Find the one that does the job and click on it.

3.2 Recommended Charts

When creating a chart, it is sometimes a challenge to decide which chart type to use. In Excel 2013, you can now get a recommendation and see samples of the charts that Excel thinks fit your data. It is quite useful to see what it looks like before deciding if it is the right one for you.

3.2.1 Let Excel recommend a chart

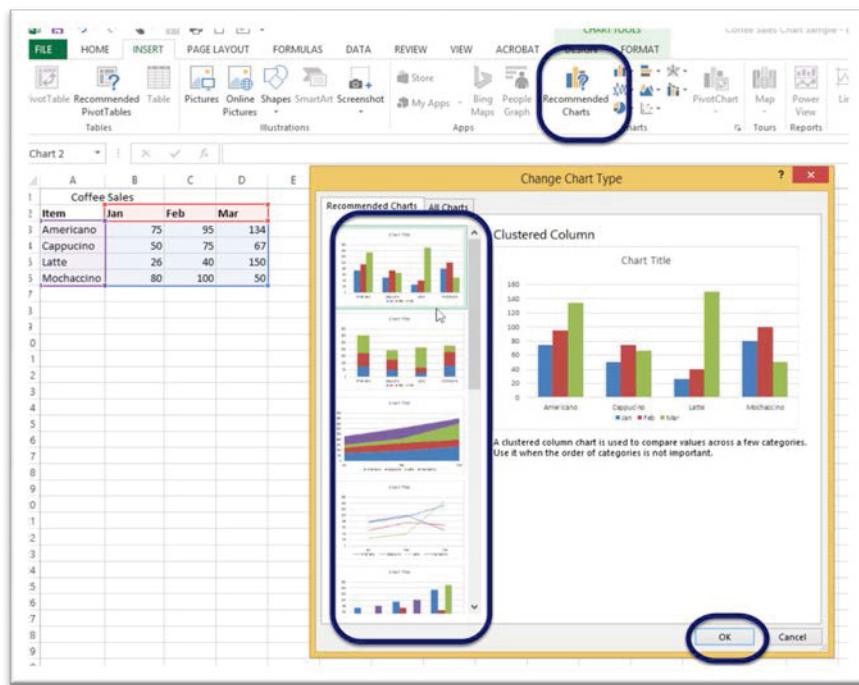


Figure 284 – Excel will recommend charts based on your data selection

1. Select the data for the chart
2. Click on the Insert Ribbon
3. Click on Recommended Charts
4. Choose one of the charts that Excel suggests
5. Click OK

3.2.2 The chart appears – magic!

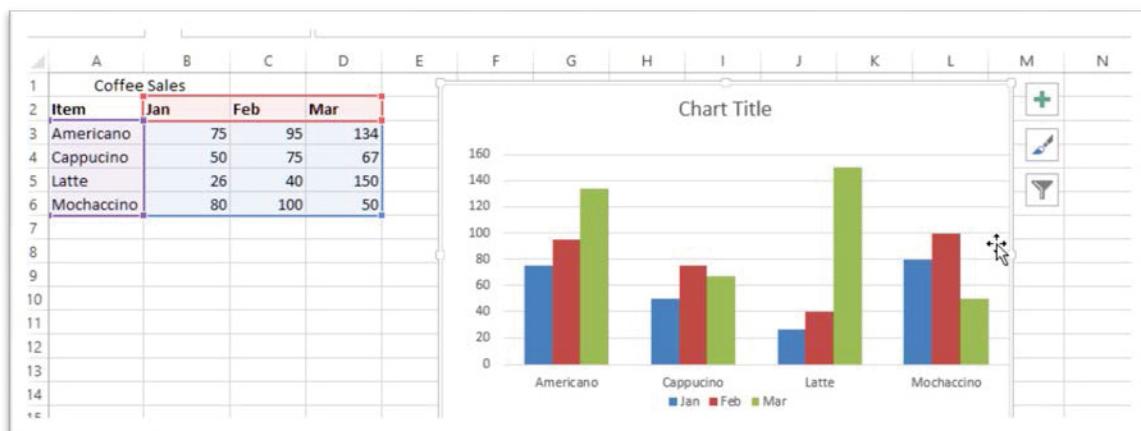


Figure 285 – Recommended chart appears

The chart type selected now appears on the spreadsheet next to the data, ready for a Chart Title or to be reformatted to match your style.

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3.3 Creating charts with the keyboard

A very quick and simple way to create a column chart in Excel is to use the keyboard shortcut F11

Simply highlight the data for the chart and press the F11 key. F11 is one of the function keys along the top of your keyboard.

3.3.1 Create a chart using the keyboard

Americano	75
Cappuccino	50
Latte	26
Mochaccino	80

Figure 286 – select your data

Highlight the data for the chart

Press the F11 key

Chart appears on a new worksheet

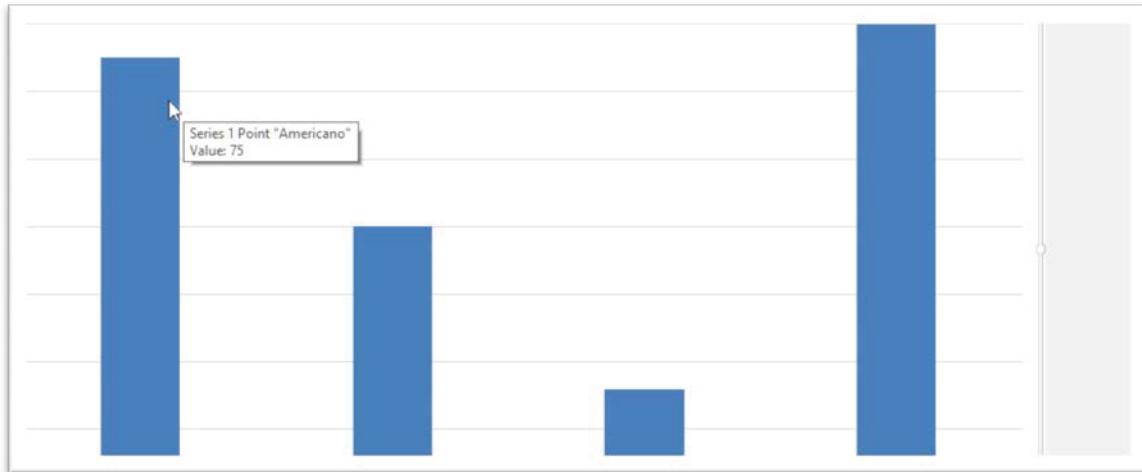


Figure 287 – it is magic

Edit as normal

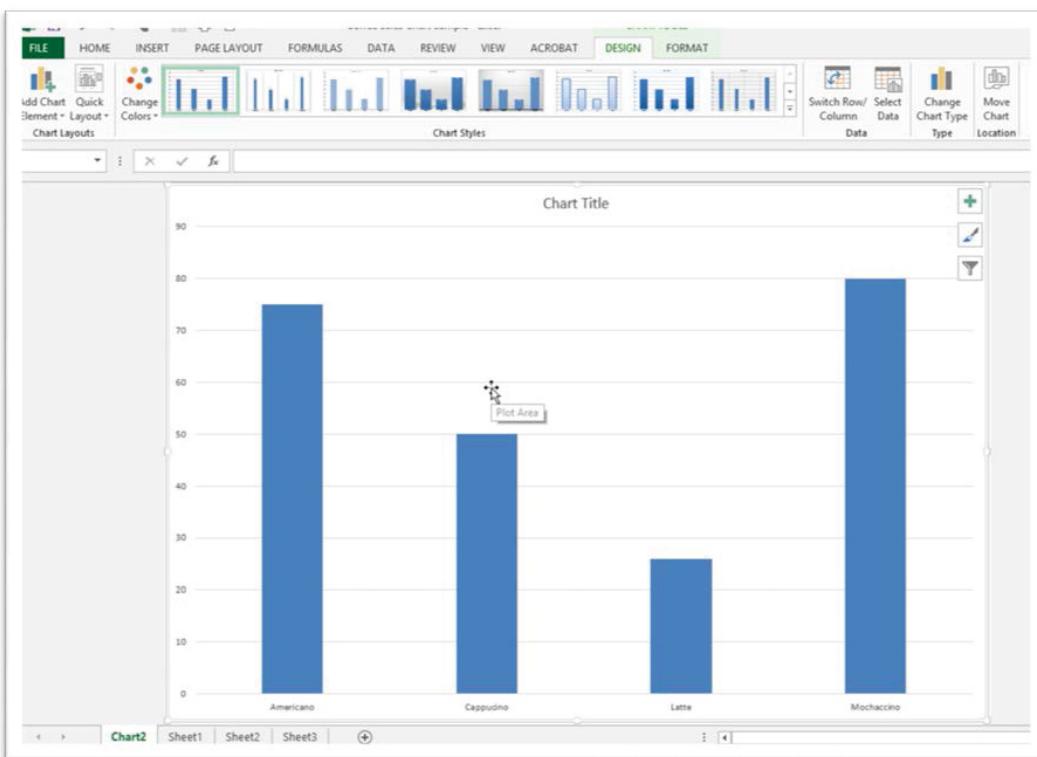


Figure 288 – edit the chart in the normal way

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3.4 Creating line charts

To create a line chart, you need to select the data and then the type of chart to create.

3.4.1 Line chart

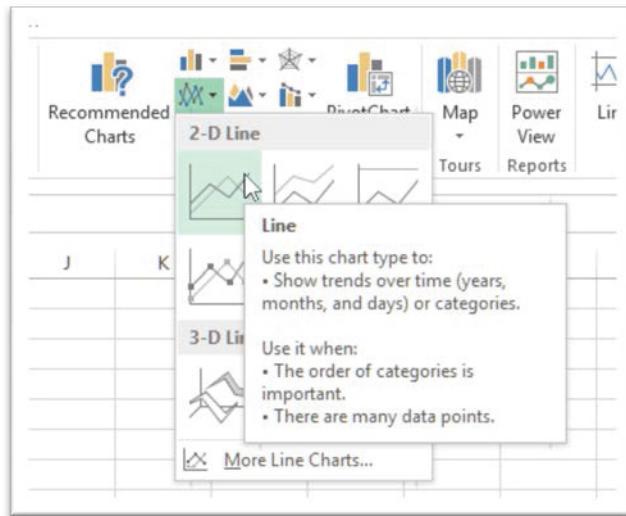


Figure 289 – Choose the Line Chart Icon

To create a line chart:

1. Select the data
2. Click on the Insert Ribbon
3. Click on the drop down arrow under Line Chart
4. Choose the type of line chart you require

3.4.2 The line chart

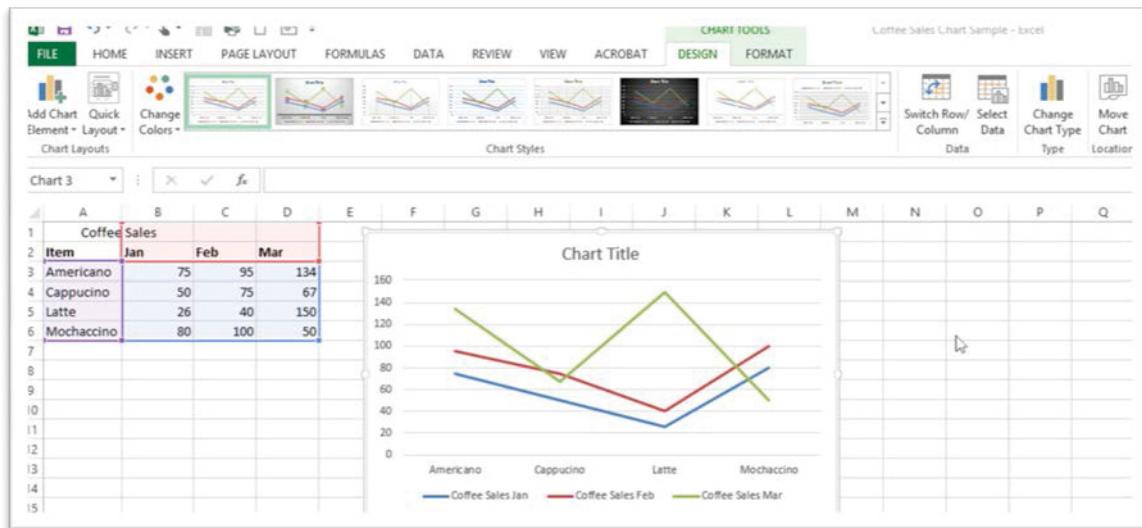


Figure 290 – the Line Chart chosen appears

Here is the line chart I just created. It looks almost fine to me. The only thing is, the way the data is arranged does not make as much sense to me as I would like. I need to switch the rows and columns. At the moment the chart is showing me the series of Jan, Feb and Mar Sales. The lines are the different total sales. I would prefer to see the coloured lines as the types of coffee sold

To achieve this I can click on Switch Row/Columns and Excel will change it in a second.

3.4.1 Switch Row/Columns

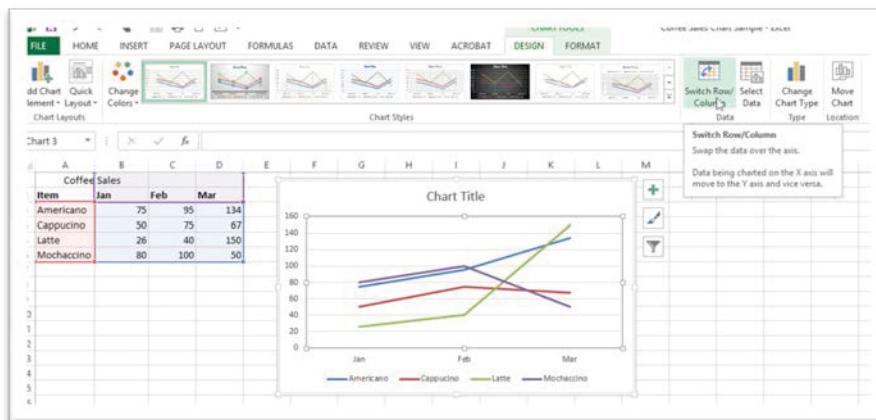


Figure 291 – Switch Rows/Columns

I clicked on Switch Row/Column and now the series are the types of coffee so I can see how each coffee is performing here in the Line Chart.

3.5 Creating and editing a column chart

Column charts are great when used with data that has up to 12 data points. If your data has fewer than 12 data points or ranges then choose a column chart.

3.5.1 Insert a column Chart

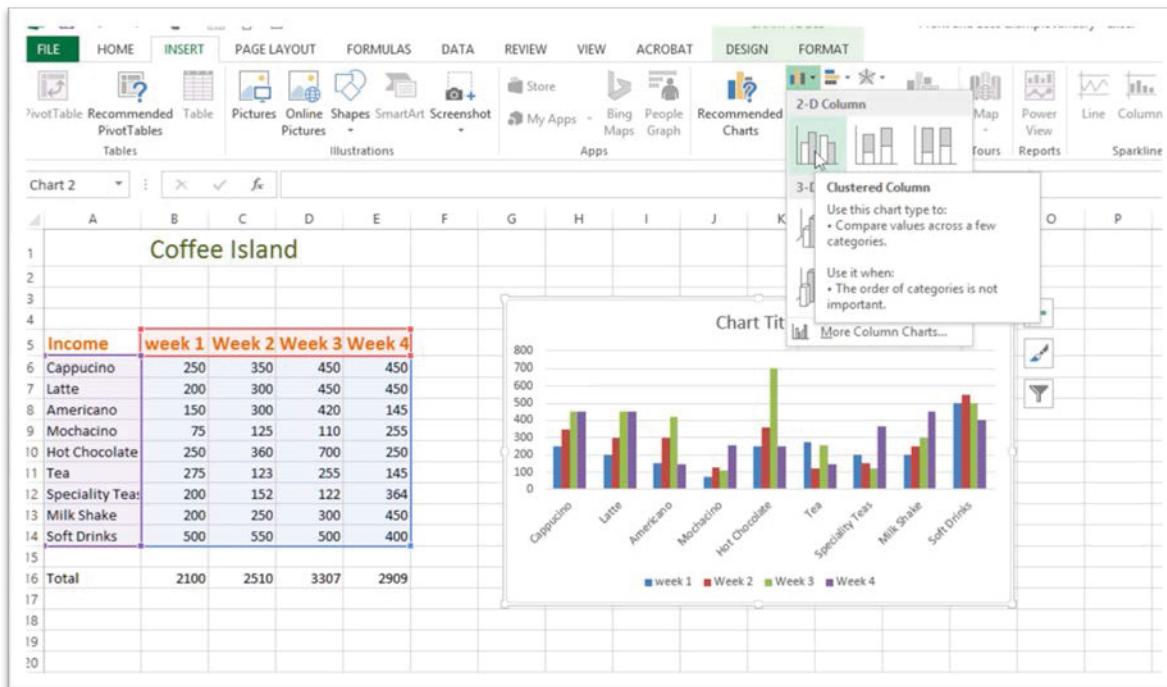


Figure 292 – Sales of each type of drink sold at Coffee Island

1. Select the data you want to chart
2. Click on the Insert Ribbon Tab
3. Select the type of column chart you want to use – note that Excel does help by giving you pointer on when to use each type of chart
4. The chart is placed on your spreadsheet immediately

3.5.2 Edit the chart

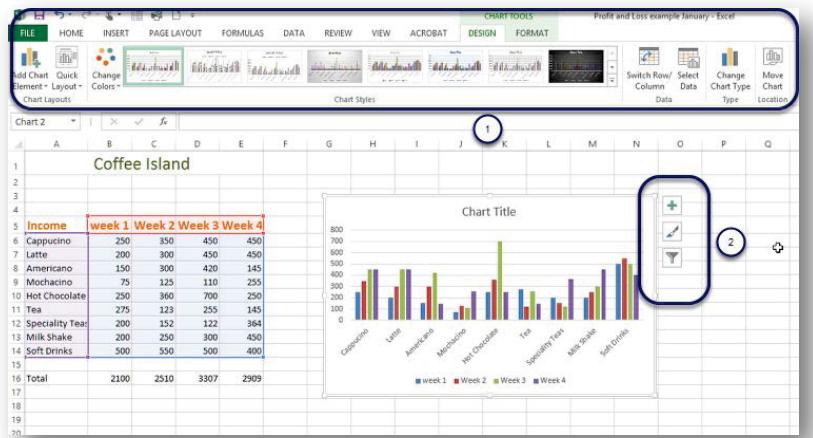


Figure 293 – many ways to format a chart

In Excel 2013 there are more ways to get to the various customization options.

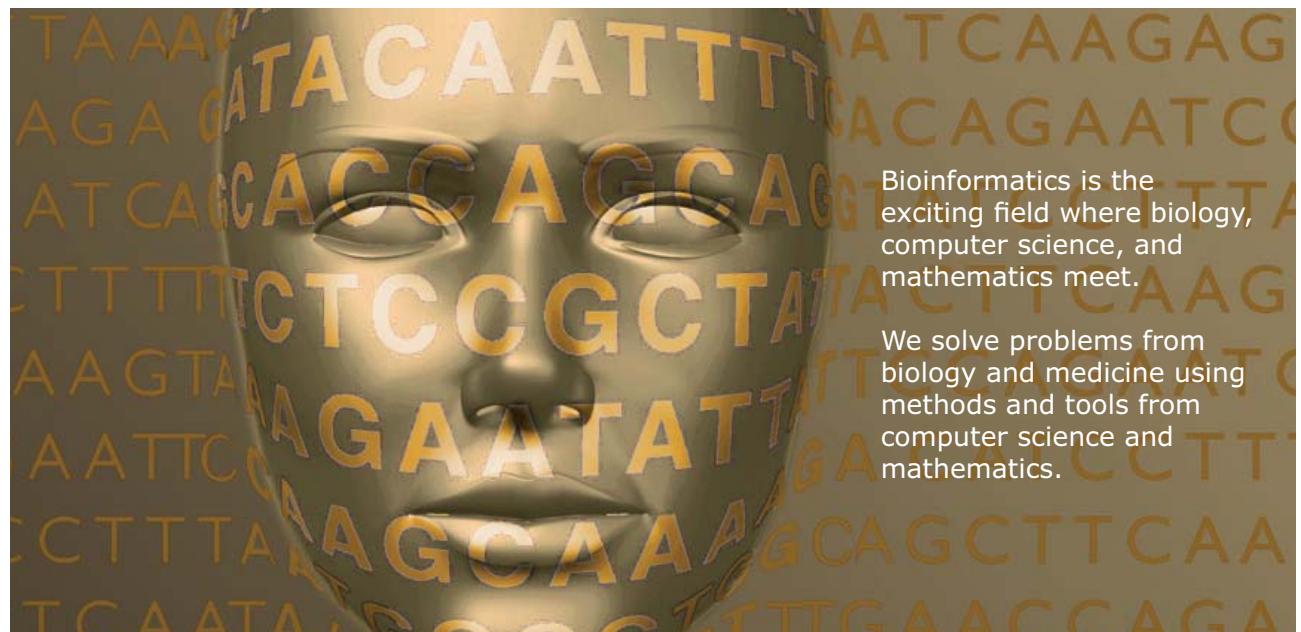
When you add a chart Excel pops up two new Ribbons, Design and Format. Use these Ribbons to change the way your chart looks and is formatted. (1)

New in Excel 2013 is the ability to add and change chart elements from the pop out icons next to the chart itself. (2)



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3.6 Creating pie charts

A pie chart is great for showing the way that 100% is divided between the items you are charting. I can either see how the coffee sales divide up among the months, or how each month divides up amongst the coffee types. As a pie chart looks at just 100% it is not used to compare, in the same way a column or bar chart are used.

3.6.1 Pie chart

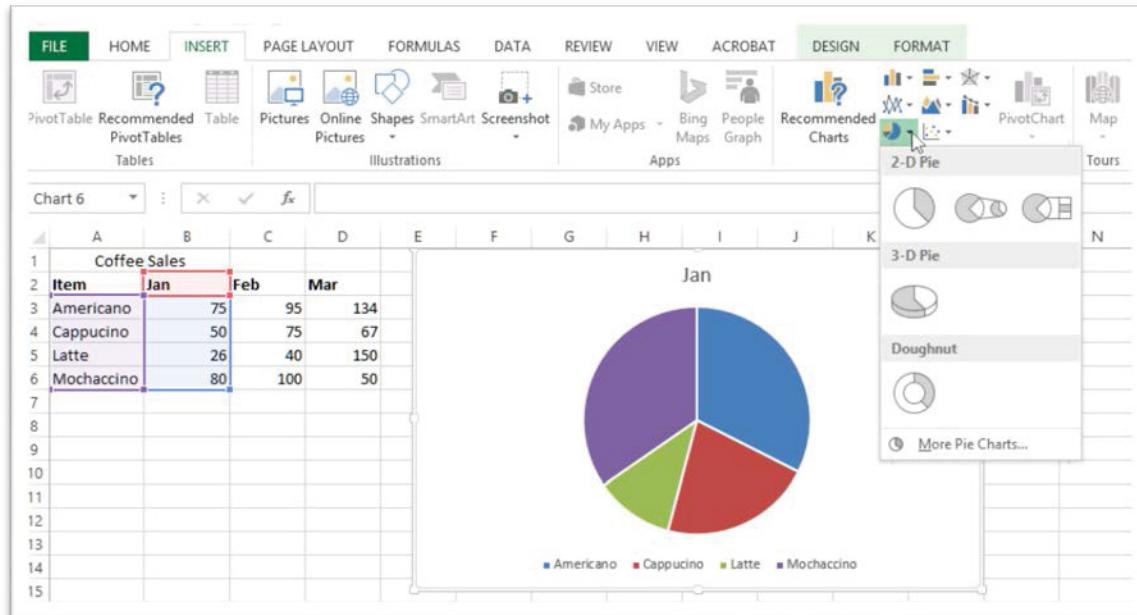


Figure 294 – a pie chart divides 100% into segments

1. Select the data
2. Click on the Insert Ribbon
3. Click on the drop down below the Pie Chart Icon
4. Choose which type of pie chart you want to use
5. The pie chart Appears!

I am looking at how the different types of coffee divide up in January so I selected just the January figures with the types of coffee labels.

3.7 Modifying charts using the Ribbon

The way that charts are modified follows the same general process for all chart types. There are two ways to modify charts:

- The Ribbon
- The Chart Tools on the worksheet next to the chart.

3.7.1 Using the ribbon



Figure 295 – Contextual ribbons for charts

When you have added a chart to your worksheet, you will notice the appearance of two new Ribbon Tabs under the general heading Chart Tools.

The Design Tab and the Format Tab

3.7.2 The Design Ribbon

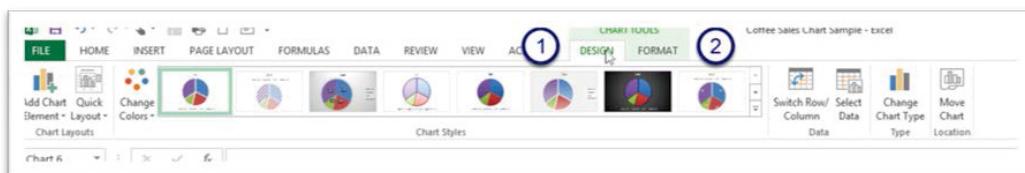


Figure 296 – The Design Ribbon

The Design Ribbon offers you lots of ways to customize the chart and make it your own style.

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3.7.3 Add chart elements

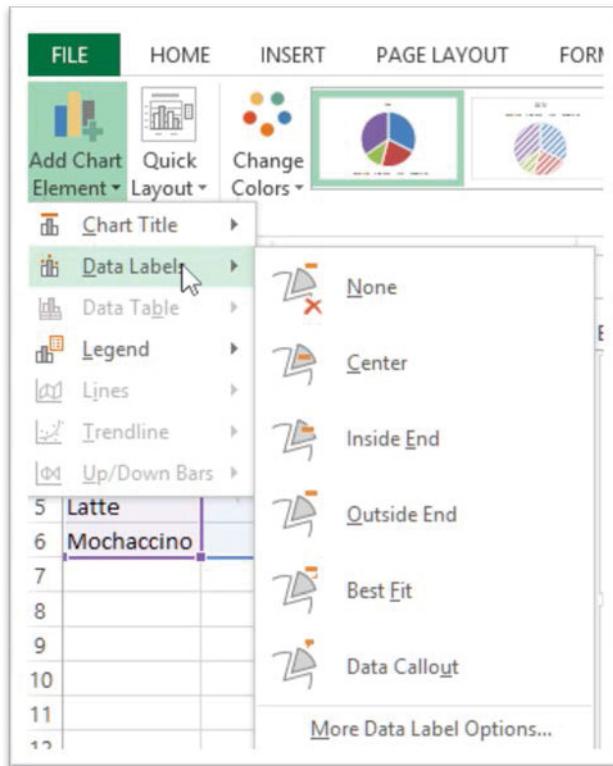


Figure 297 – add Chart Elements to make the chart easier to read

Chart Elements allow you to add elements to your chart to make it easier to read or style

Chart Title – decide if you want a title and where it goes

Data Labels – again you decide how they are placed and where

Data Table – this depends on the type of chart you are working with – it allows you to add the data underneath the chart – try it out and see

Legend – allows you to add a legend and decide on its placement

Lines – this will be available if you have a chart that supports it

Trend line – again if you have data and the right type of chart this will be live

Up Down Bars – in a Line Chart you can add Up Down Bars to show movement

Grid lines – this option is available when you have a chart that supports displaying grid lines

3.7.4 Quick layout

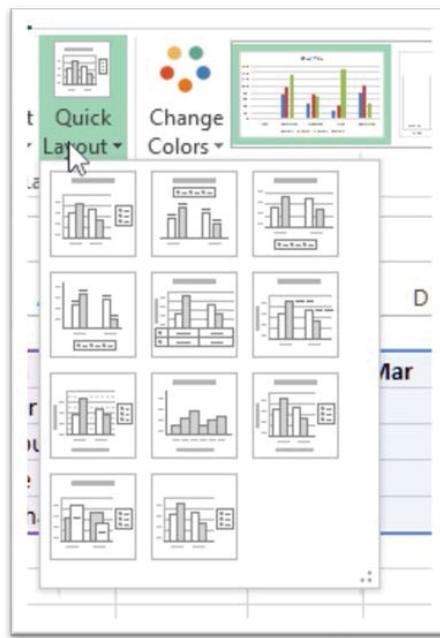


Figure 298 – change the way the chart looks quickly

Use the Quick Layout to change the way the data is set out – you can choose from a selection of presets.

3.7.5 Change colours

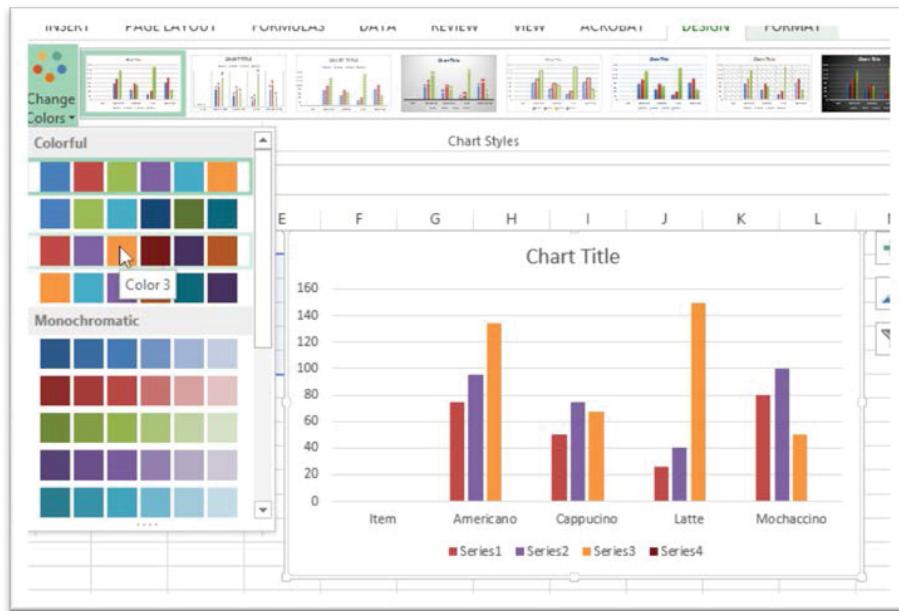


Figure 299 – modify colours to match your style

Change the colours of the bars or lines in your chart with the Change Colours icon. Select from colourful or monochrome themes.

3.7.6 Chart Styles

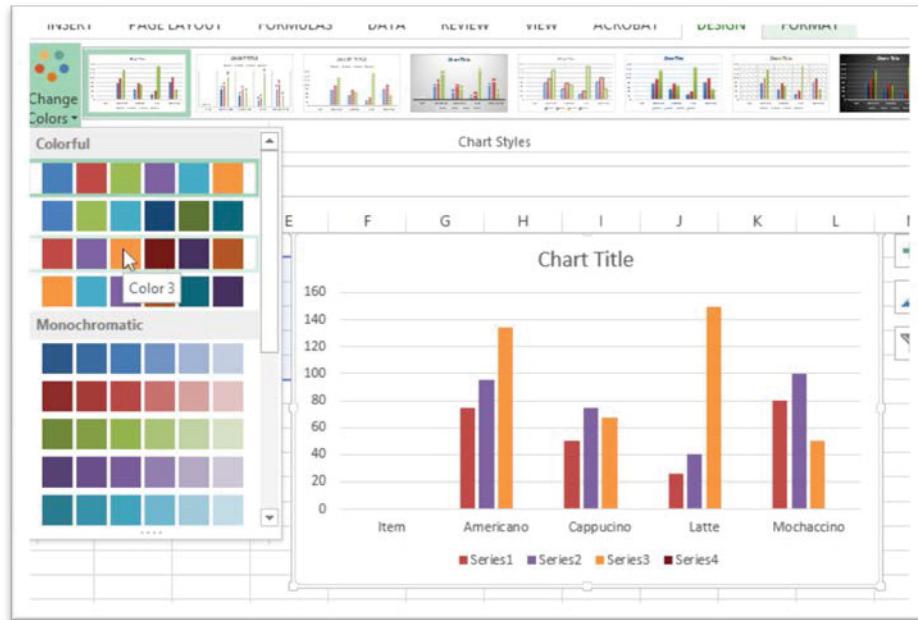


Figure 300 – make a chart your own by changing the style

Select from one of the preset chart styles in the gallery to change how your chart displays. You will see a live preview of how it looks as you hover over the different styles and by clicking on the style it is applied.

3.7.7 Switch Row/Column

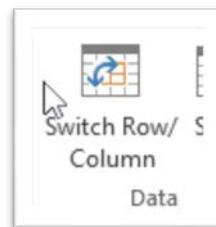


Figure 301 – change how the chart uses your data

In the chart I have the months as the series and the types of coffee in clusters – if I want to see the data the other way around I can Switch Row/Columns.

3.7.8 Select Data

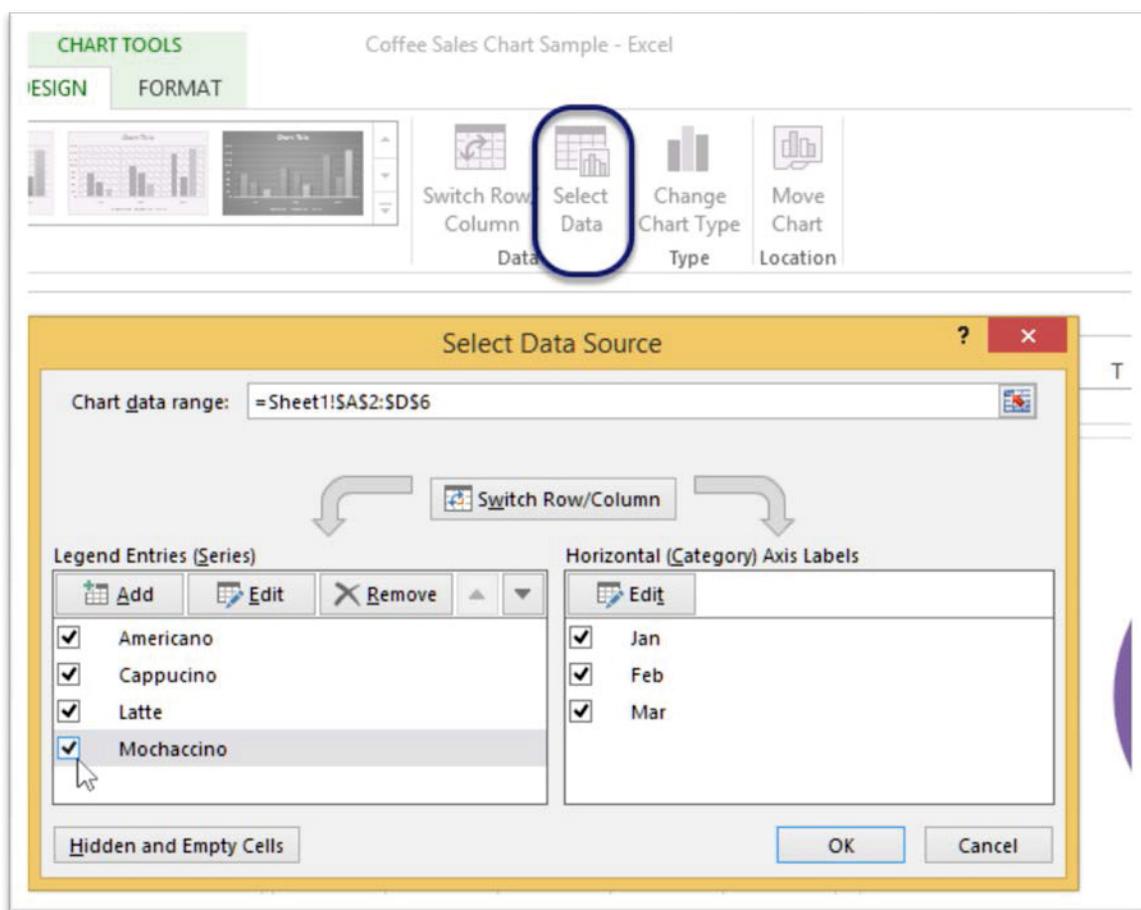


Figure 302 – add extra series or data to a chart

In the event that you created a chart and forgot to include some data or you have added data to the range for the chart at a later date and now want to include it, you can use the Select Data button to add more data.

1. Select the data including the new data you want to add
2. Click the Select Data button
3. Your new range will appear in the list and be added to the chart when you click OK

3.7.9 Change Chart Type

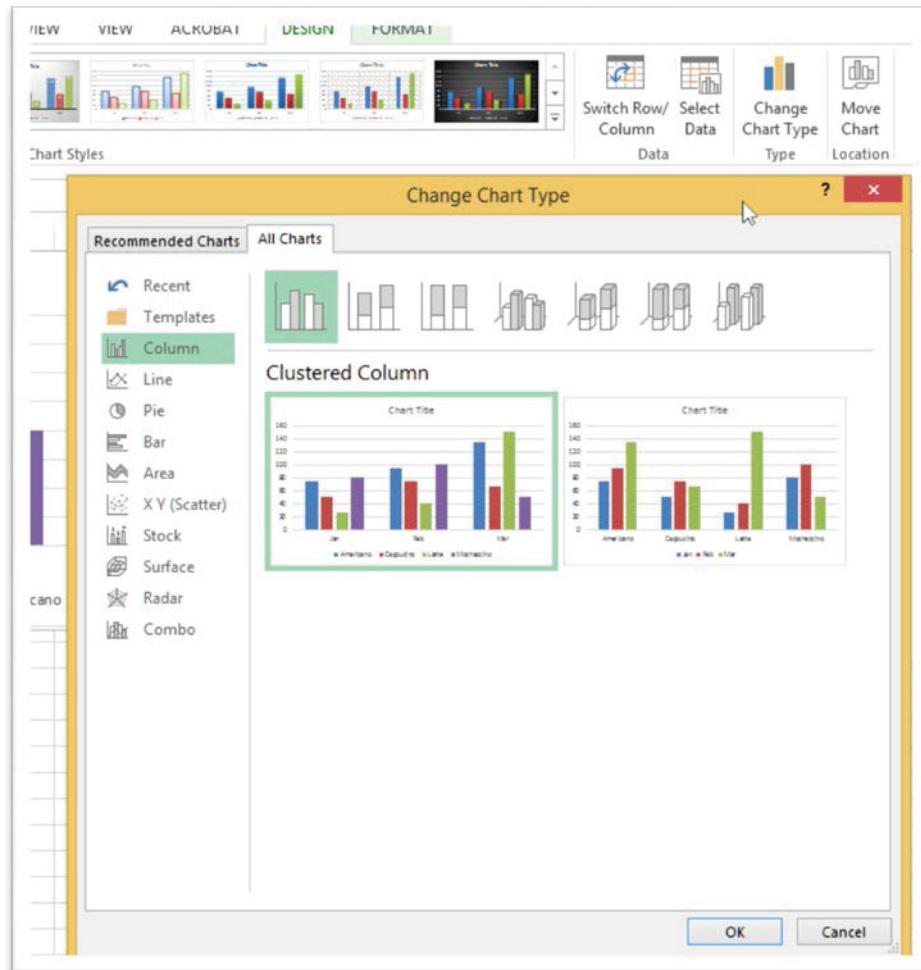


Figure 303 – wrong chart – no problem, just change it!

If you decide that the type of chart you selected does not fit the purpose you need, change the type of chart altogether.

1. Click Change Chart Type
2. Choose a different chart from within the charts offered
3. Click OK

3.7.10 Move Chart

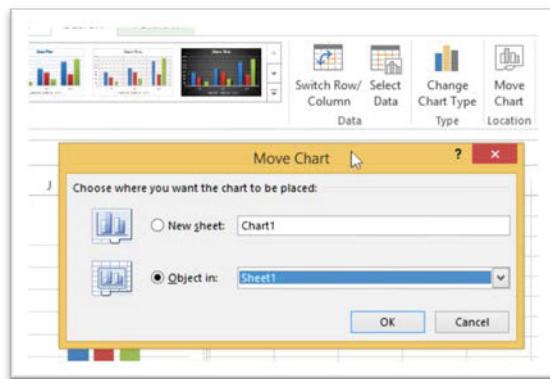


Figure 304 – move it to another location

If you want to move the chart to another worksheet or location you can use the Move Chart button.

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3.8 Modifying charts using icons

When you add a chart to your worksheet, three icons pop up alongside: Elements, Style and Filter. These allow you to work with the chart directly without having to go up to the Ribbon.

3.8.1 Icons

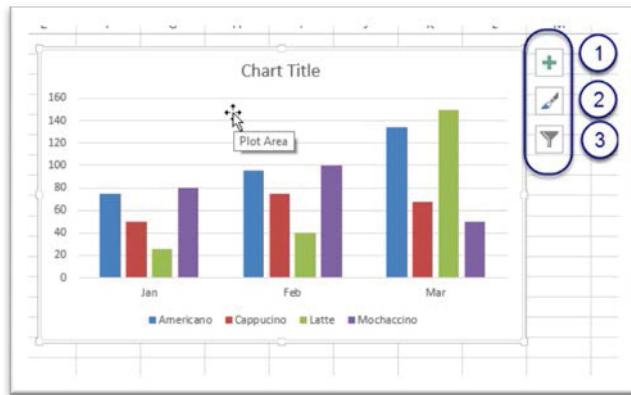


Figure 305 – use the icons to modify the chart right on your screen

1. Elements
2. Styles
3. Filter

3.8.2 Elements

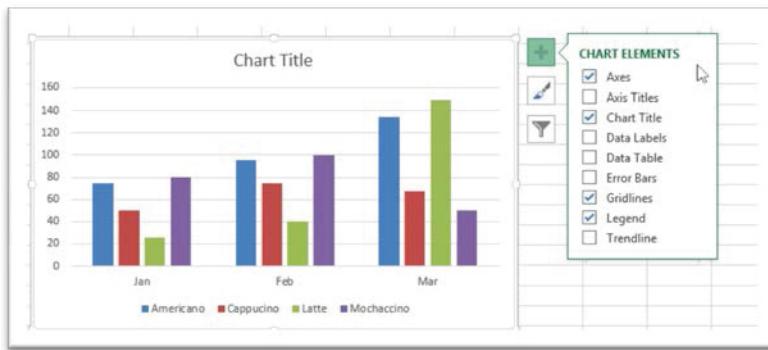


Figure 306 – add or remove different elements

Click on the icon to select the different types of elements you can add to a chart. You will be offered the elements that are relevant to the chart type you used.

3.8.3 Styles

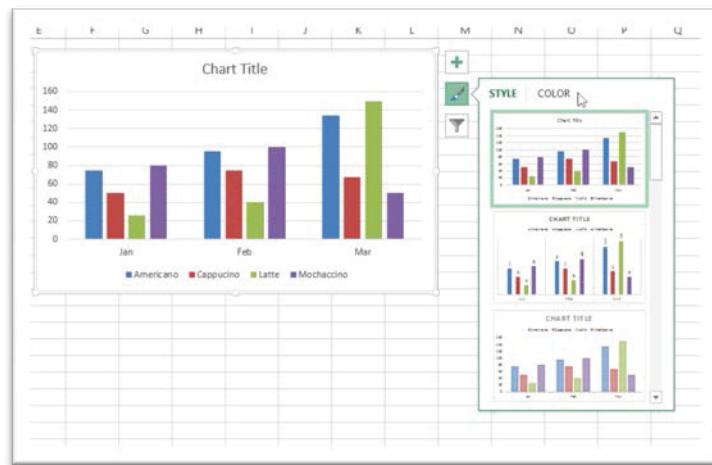


Figure 307 – change the style

Click the style icon to see the different style options. You can also change the colours here by clicking on Colour in the header and then selecting the one you want to use.

3.8.4 Filter

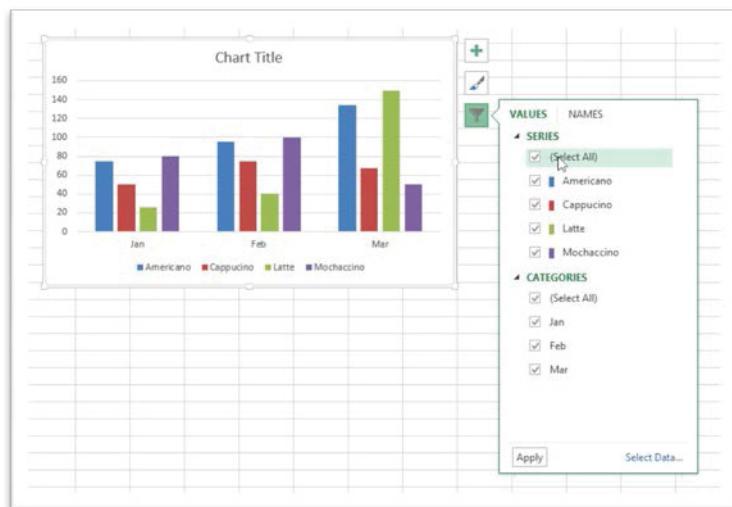


Figure 308 – you can even apply a filter!

Use the filter icon to display or hide different parts of the data. Simply un-check the series or categories you want to remove and then click Apply.

3.9 Formatting charts – Task Pane

When you double click on parts of a chart you will be offered a task pane with formatting options to choose from.

3.9.1 Format the Chart Area

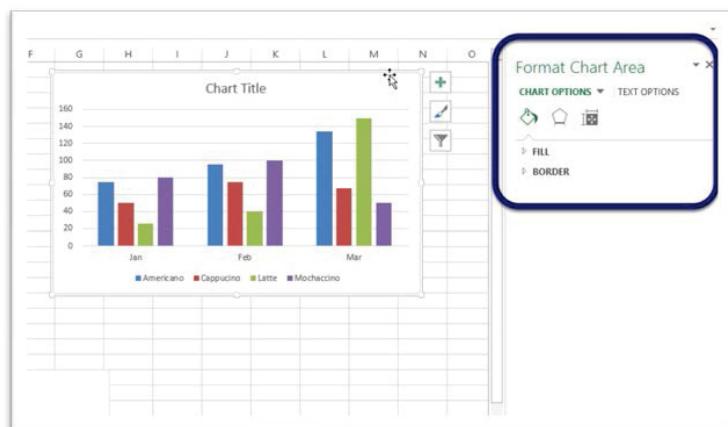


Figure 309 – use the task pane for more detailed changes

Double click on the chart area and the Format Chart Area task pane appears. Here you can change all kinds of formatting – chart and text options, fill, border, shadow, size, font colour, font outline etc.

Click on the different areas within the task pane to expand them and experiment with what they do.

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3.9.2 Format Data Series

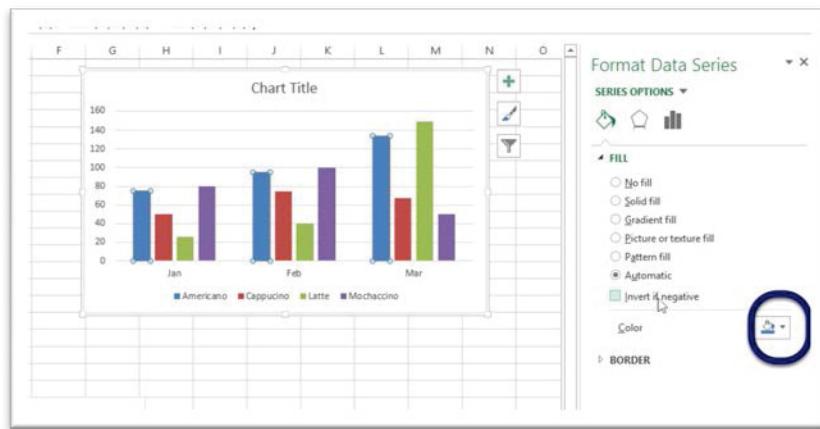


Figure 310 – change just one data series

Double click on a data series – in this example I double clicked on the blue columns for Americano. Now I can change how this series looks. If I want it to be in a different colour I can change that by selecting a different colour from the drop down next to Colour.

Test out the different options to see how they work.

3.9.3 Format Plot Area

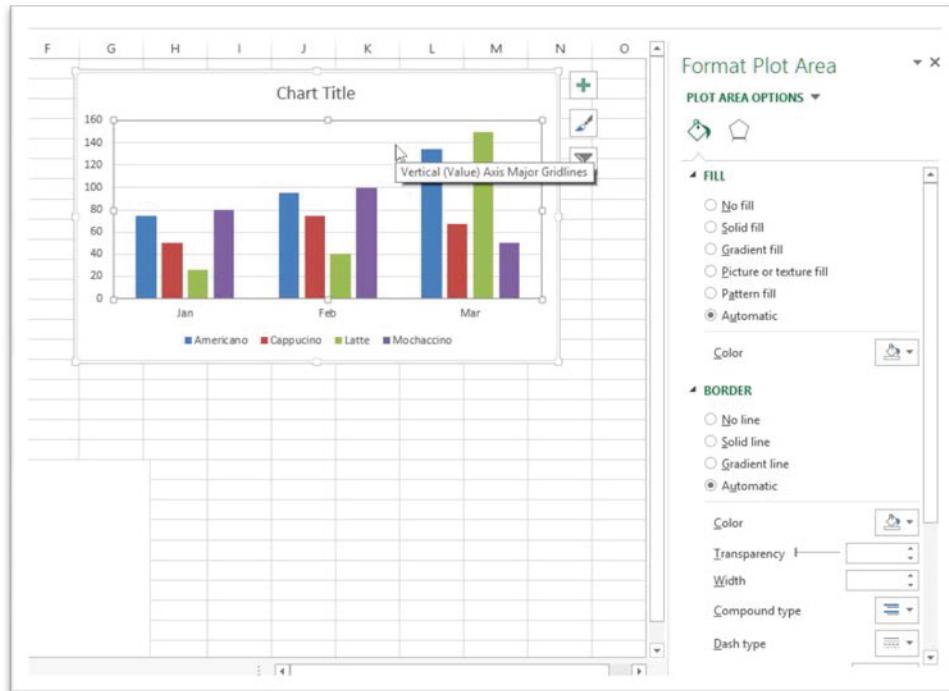


Figure 311 – format the plot area – add fill or borders and more

Double Click on the plot area and the Plot Area Task Pane opens up with options to change.

3.9.4 Format Major Grid lines

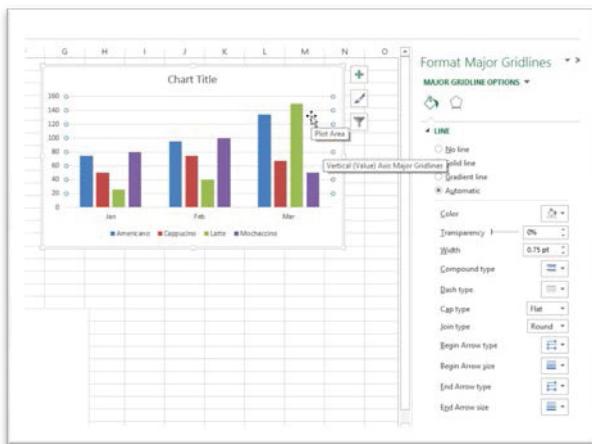


Figure 312 – Add major gridlines to help with readability and format them

Double click the major grid lines to get the Format Major Grid lines task pane with all of the available options.

3.9.5 Format Axis

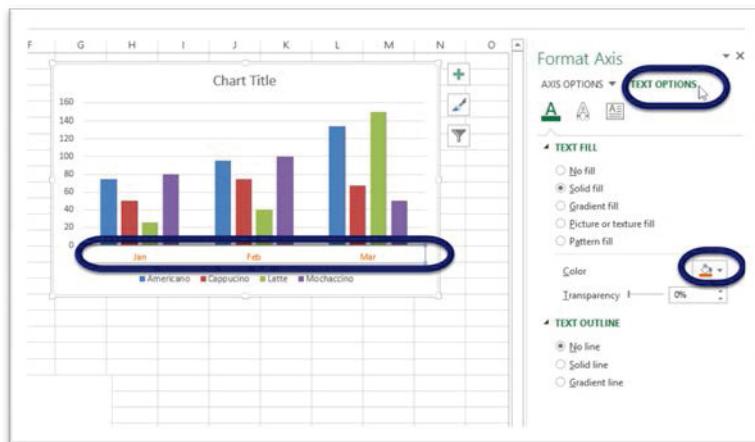


Figure 313 – add an axis or change how the axis looks

Double click on the axis you want to format, and the Format Axis task pane displays. Here you will see options to format the axis or the text. In my example, I have changed the text to orange to make it stand out a bit more. Try out all the different options.

4 Apply and manipulate illustrations

4.1 Pictures in Excel

In Excel, as in the other Microsoft Office programs, you can add pictures to make your work more interesting. You might want to add a logo or a piece of Smart Art to illustrate a point. Familiar tools from other applications are available in Excel 2013.

4.1.1 Insert a picture from a file on your computer

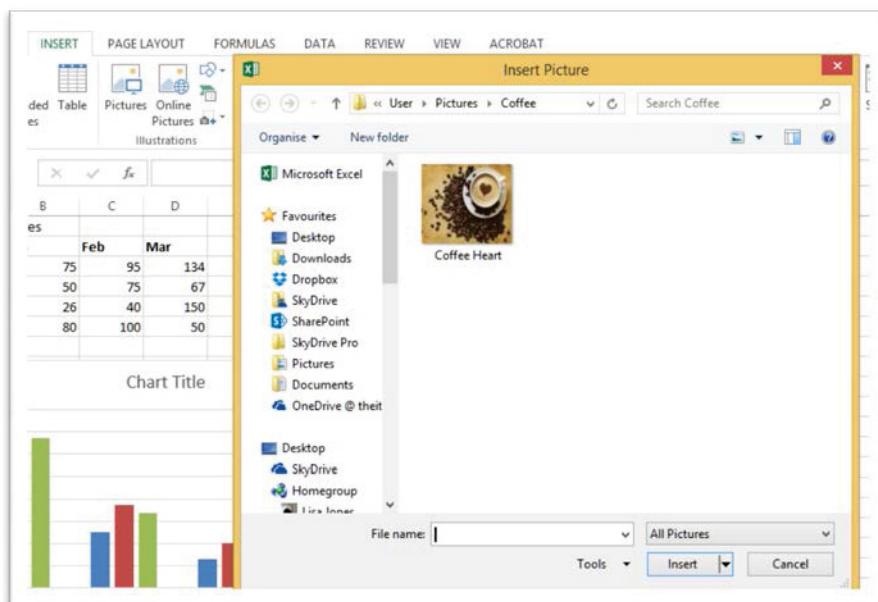


Figure 314 – insert picture from file

1. Place the cursor where you want the picture to appear
2. Click on the Insert Ribbon
3. Click on Pictures
4. Navigate to the folder where your picture is stored (mine is in a folder called Coffee in my Pictures Library)
5. Click Insert

4.1.2 Insert an online Picture

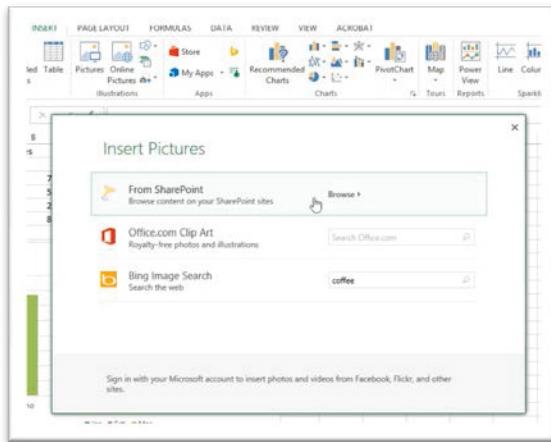


Figure 315 – add an online picture

If you don't have a picture on your computer you can go online for more options.

- **From SharePoint** – if you are using SharePoint in your organization, you may have pictures stored there and you can search for them by clicking Browse
- **Office.com Clip Art** – if you are looking for some Clip Art, go online to Office.com by typing a keyword and then clicking the magnifying glass
- **Bing Image Search** – type your keyword here and click on the Magnifying Glass to search

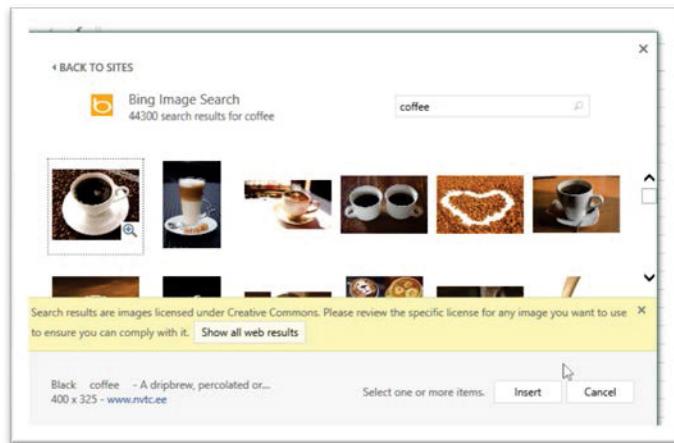


Figure 316 – images from Bing

Bing will offer you a selection of images and a warning about copyright. Make sure you comply!

Click on the image you want to use and click Insert.

The picture is downloaded and inserted into your document. You may well need to resize it too!

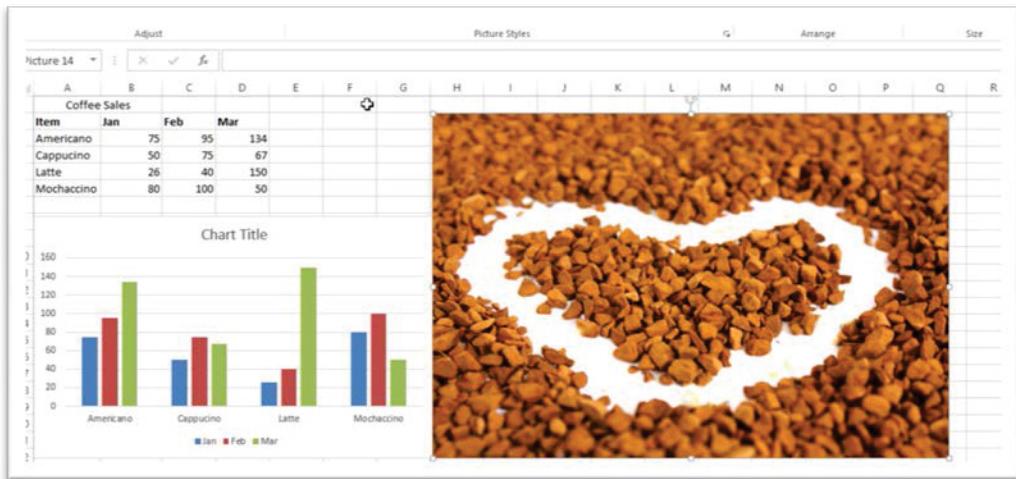


Figure 317 – image added



4.2 Resize the picture – dragging

Pictures will pop into your spreadsheet and often be far too large. Use the following methods to resize them.

4.2.1 Reside the picture – dragging



Figure 318 – click and drag on the diagonal to keep proportion

Grab the corner and when you see the diagonal white arrow drag the cursor down and to the right – keeping the ratio of the long and short edges proportional.

4.2.2 Resize the picture using the Ribbon

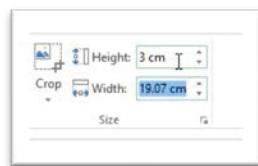


Figure 319 – set an actual size on the Ribbon

1. Click on the picture to select it
2. Click into the height or width box in the Size Group on the Picture Tools Format Ribbon
3. Type the size you want the picture to be
4. Excel will automatically change the other value to keep the picture proportional

4.3 Modify a picture

Excel 2013, like the other Microsoft Office applications, offers many ways to modify and enhance your pictures. Use the Picture Tools Format Ribbon to make changes.

4.3.1 Picture Tools Format Ribbon

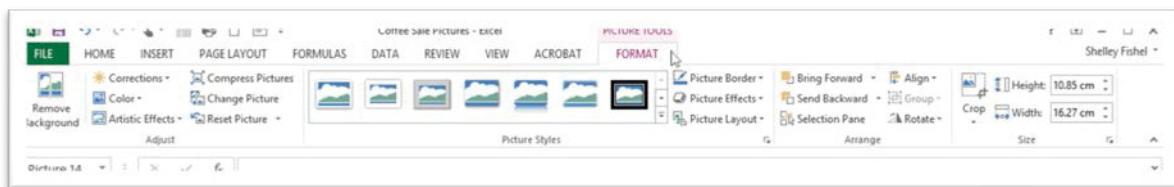


Figure 320 – The picture tools Format Ribbon

Here you can add a picture style, a border, and picture effects such as shadow change the picture layout. You can also send images backwards and bring them forwards if you have several.

Crop an image to remove the parts you don't need and adjust the size.

4.3.2 Add a style to a picture



Figure 321 – style your picture

Select the picture and then hover over the styles in the Picture Styles Gallery and see how your picture will look. When you find one that you like, click on it to apply.

4.3.3 Change Border Colour

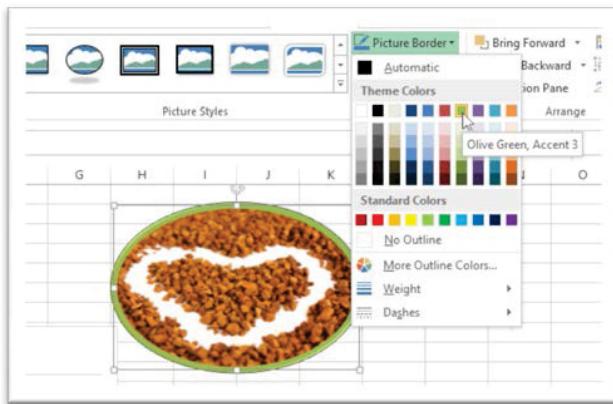


Figure 322 – give the picture a border

1. Click on the picture
2. Click on the drop down next to Picture Border
3. Choose a colour

You can choose many more colour options and even change the weight and type of line that makes up the border.

Try out the different options.



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4.3.4 Picture effects

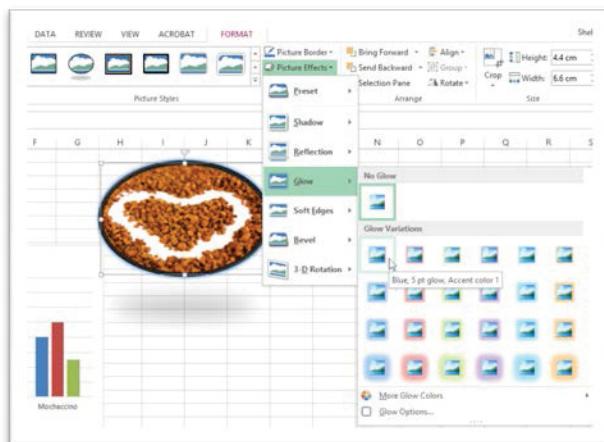


Figure 323 – change picture effects

These add shadow, glow, bevelled and different colour effects.

4.3.5 Crop a picture

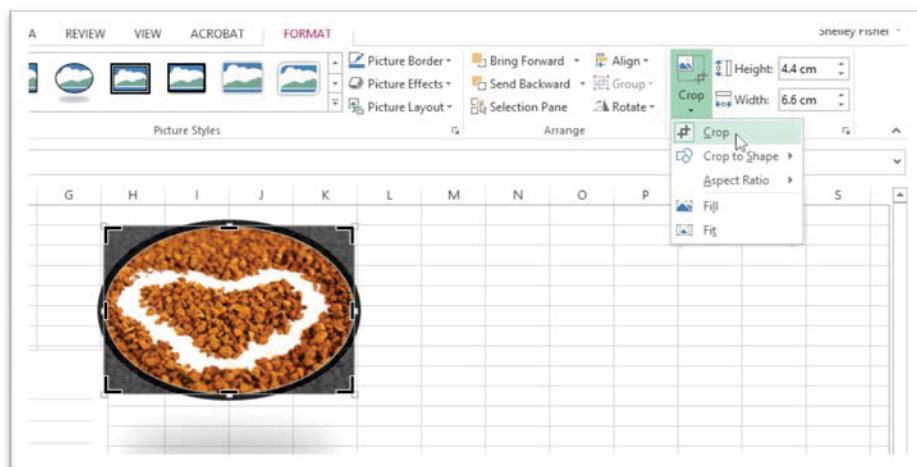


Figure 324 – crop to remove unwanted parts

When you want to remove parts of a picture rather than re size it, you can crop it. Click the Crop icon and then drag the crop handles that appear around the picture to remove parts.

4.3.6 Brightness sharpness and contrast

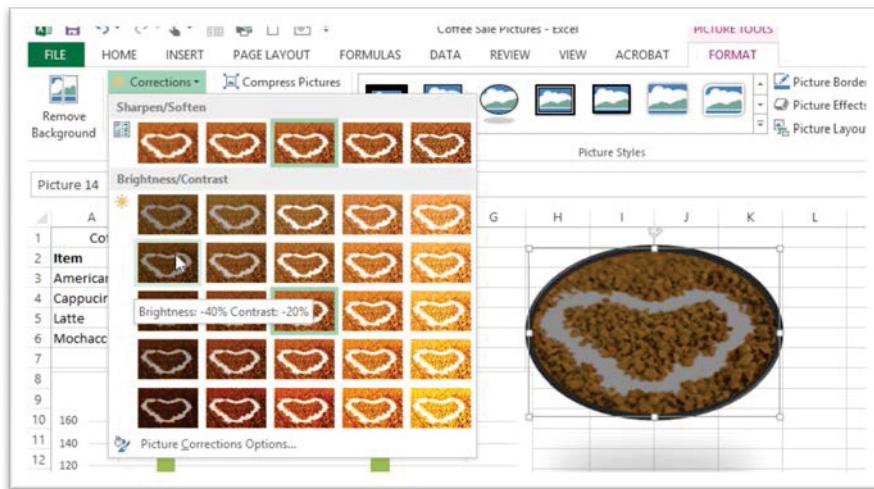


Figure 325 – make the picture brighter or sharper here

You can change the sharpness or saturation of an image, the brightness and the contrast. Click the icon and make a choice. Live Preview will show you what the picture will look like and when you find what works, click on the icon to apply.

4.3.7 Adjust the colour

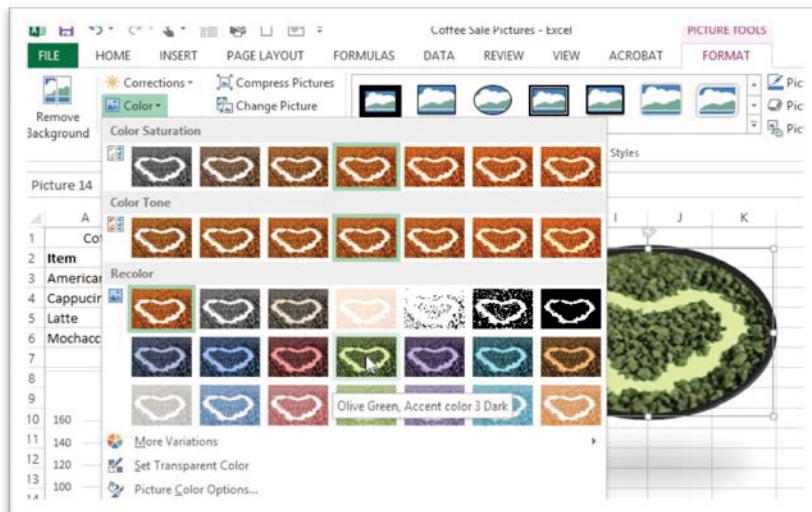


Figure 326 – if you want to recolour the picture, do it here

If you want to change the colour of the picture, perhaps to match the theme of your spreadsheet, you can select a colour tone, or recolour the picture from the colour button. Test out some of the other options here.

4.3.8 Apply artistic effects

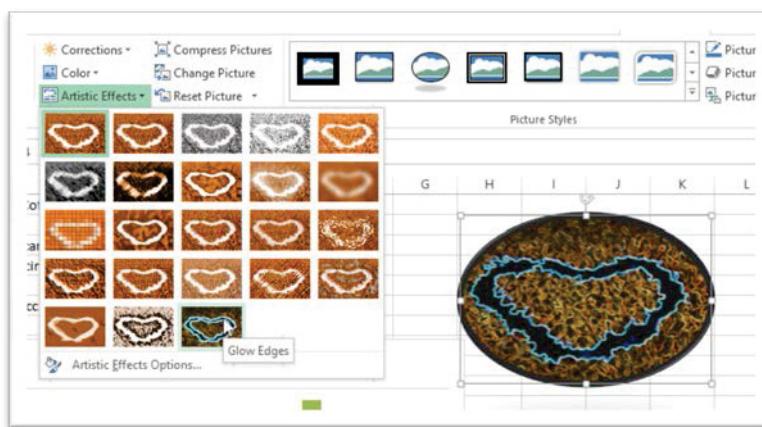


Figure 327 – use Artistic Effects to really change how it looks

You can change the picture in other ways by selecting from one of the artistic effects available.

1. Click on the Picture
2. Click the drop down arrow next to Artistic Effects
3. Select the effect you want to apply



4.4 Reset a picture

If you are anything like me, you will try out all sorts of different effects on your picture and then decide that you like it just the way it was. In this case you need to Reset the Picture to its original state.

4.4.1 Reset a picture

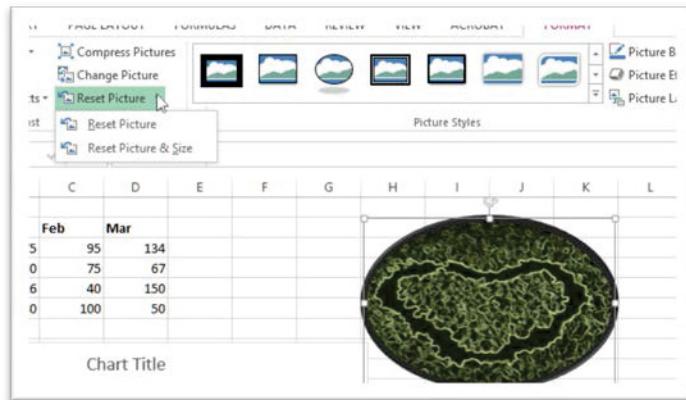


Figure 328 – reset the picture to how it started out

Click the Reset Picture icon

Choose whether to simply reset the colour/brightness back to how it was – or if you also resized the picture, you can choose to take it back to its original size too.

5 SmartArt

5.1 SmartArt

SmartArt is a way of presenting data such as a process, a hierarchy or an idea visually. It can jazz up a boring spreadsheet.

5.1.1 Add process SmartArt

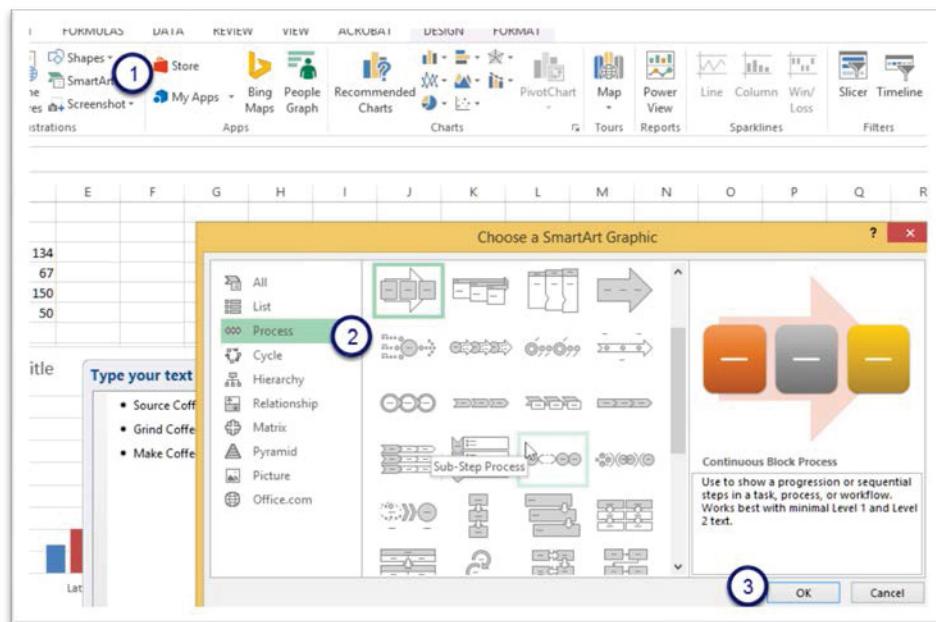
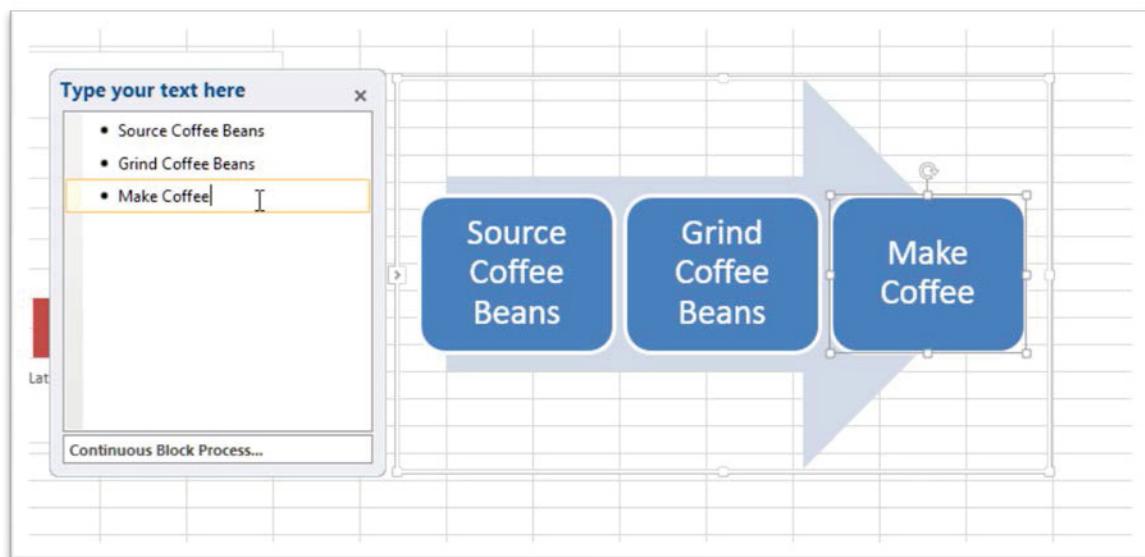


Figure 329 – create a process diagram

On the Insert Ribbon

1. Click SmartArt
2. Choose a style from those on offer
3. Click OK

5.1.2 Add text

**Figure 330 – add text**

A text pane pops out of the left side of SmartArt and you can type your text in here – or you can type directly into the shapes.

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5.1.3 Change the colour of SmartArt

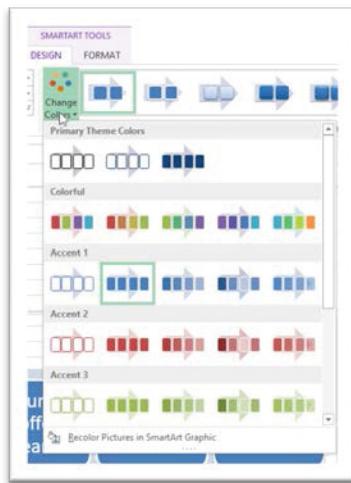


Figure 331 – change the colour

On the SmartArt Tools Design Ribbon that pops up, you can select a different colour set for the SmartArt.

5.1.4 Make other changes

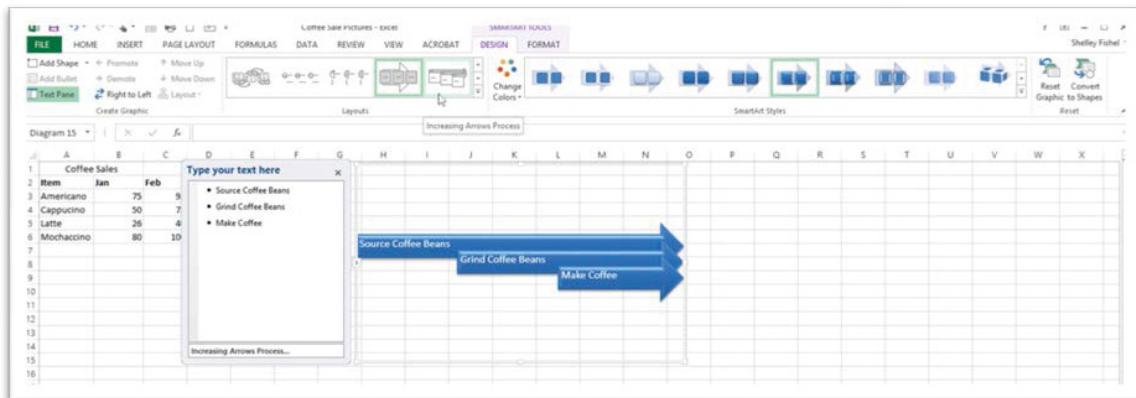


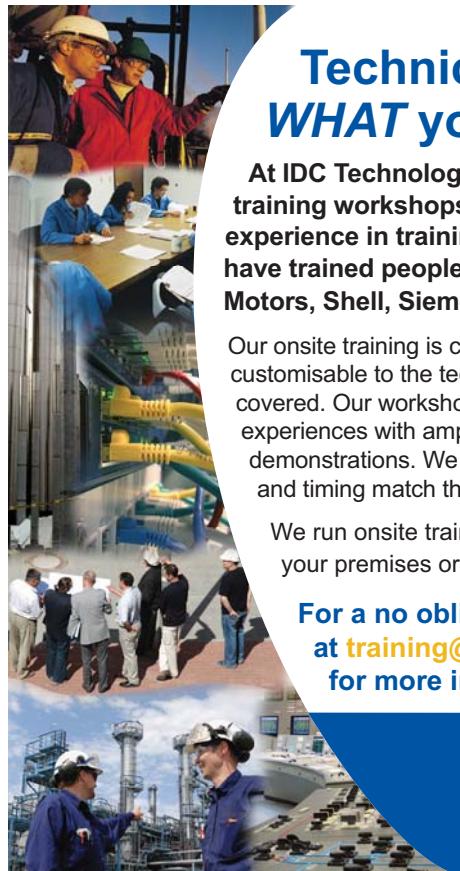
Figure 332 – Smart Art design

Other changes you can make to SmartArt on the Design Ribbon are:

- Adding more shapes
- Changing the overall layout
- Change the colours
- Change SmartArt styles
- Reset to how it started out once you made changes
- Convert to Shapes takes away the automatic functionality of SmartArt and turns the SmartArt into one big shape

On the Format Ribbon you can:

- Change the individual shapes
- Change the shape styles – border and shading
- Format the Word Art within the shapes
- Apply text formatting
- Arrange and align
- Re-size



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6 Shapes

6.1 Inserting shapes into a workbook

Shapes can be drawn onto a worksheet to illustrate a point or to look like a button or label.

6.1.1 Insert shapes



Figure 333 – add shapes

1. Click on the Insert Ribbon
2. Click the drop down arrow next to Shapes
3. Choose a shape

6.1.2 Draw the shape

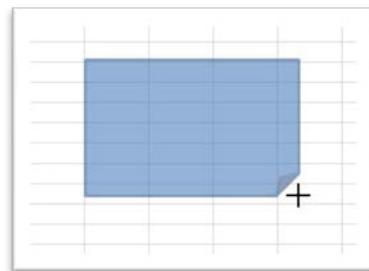


Figure 334 – drag to draw the shape

Click and drag out the shape until it reaches the size you want.

6.1.3 Format the shape



Figure 335 – the Format Ribbon

You can now use the Drawing Tools Format Ribbon to make changes to how your shapes appear. Change the colour, the border the fill, how any text looks and any alignment and size.

6.1.4 Add text to a shape

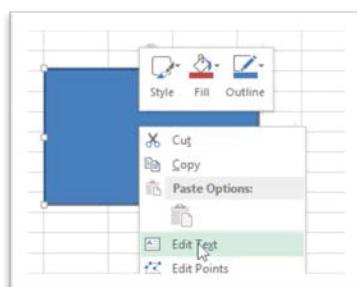


Figure 336 – add text

Click into the shape and start typing

6.1.5 Edit text

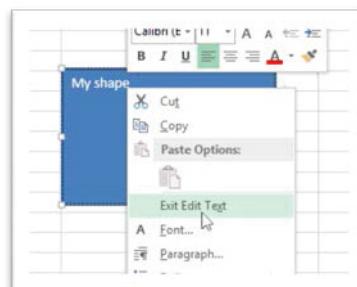


Figure 337 – Edit the text

Right Click on the shape and click Edit Text – you can now change what you had already entered.

7 Screenshots

7.1 Inserting a screenshot

Sometimes, when you need to illustrate a point, it would be handy to have a screen shot to show what you mean. With Office 2013 you can now add screen shots just about anywhere.

7.1.1 Take a screen clipping of part of a window

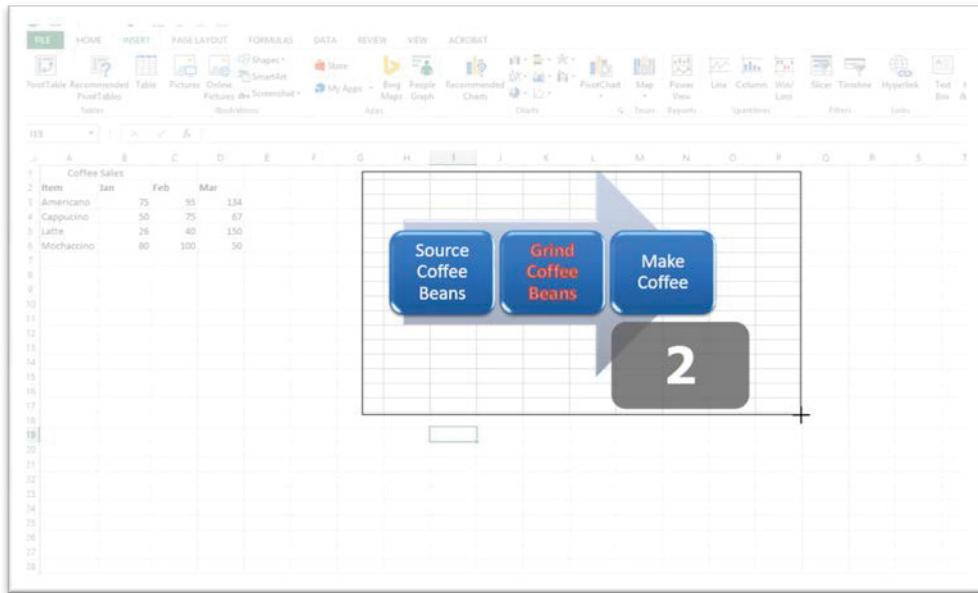


Figure 338 – get a screen clipping

Here I have gone to a different workbook which is open behind the one where I want to place the clipping. Having clicked on Screen Clipping at the bottom of the menu I then clicked into the worksheet for which I want to get a screen shot. The screen goes white. I can then click and drag over the white area to get what I want and that part of the screen goes bright as you can see in the image above. When I let go the image is placed in the worksheet I started from.

7.1.2 Add a screen shot

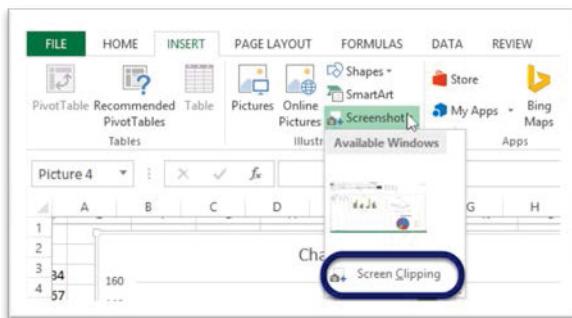


Figure 339 – add a screen clipping

The Screen Clipping tool works by taking a screen shot of the whole screen or by allowing you to draw the area that you want to clip. As Excel 2013 works with each workbook opening in its own instance it is easy to get a clipping of just part of a window.

To get a picture of the whole of the screen in another application, web page or workbook click on the window you want to capture in the Available Windows section.

If however you want to get just part of the screen, then use the Screen Clipping command at the bottom of the window.

7.1.3 Take a screen clipping of a section of the screen

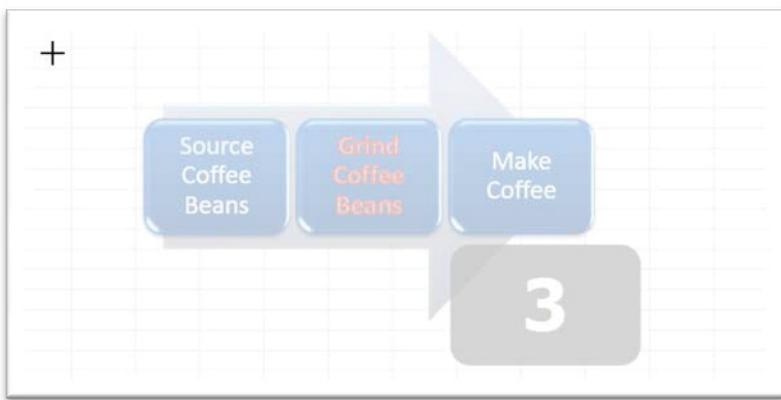


Figure 340 – clip a section

1. Click Screen Clipping at the bottom of the insert screen shot menu
2. Then switch to the screen you want to clip from
3. You will see a big black plus sign
4. Click and drag over the area you want to clip – note that the screen has gone white and the area you select goes bright
5. When you let go, the clipping will appear in the worksheet you started from

8 Manage comments

8.1 Inserting and editing comments

Comments are like little yellow post it notes that sit in your spreadsheet. They are useful to remind yourself what you did or for explaining changes made to those who are using the spreadsheet.

8.1.1 Add a comment



Figure 341 – adding comments

1. Click on the Review Tab (1)
2. Click New Comment (2)

A	B	C	D	E	F	G	H	I	J
Coffee Island									
Income	Week 1	Week 2	Week 3	Week 4					
Cappuccino	1050	1050	1400	1500					
Latte	600	900	1350	1500					
	---	---	---	---					

Figure 342 – a red comment indicator and yellow comment

A yellow comment is added to the worksheet and a small red triangle is displayed top right of the cell. Type the comment into the yellow post it note.

8.1.2 How do I know if there is a comment?



Figure 343 – the red triangle indicates a comment

The cell containing the comment has a small red triangle to show that a comment exists.

8.1.4 To see the comment

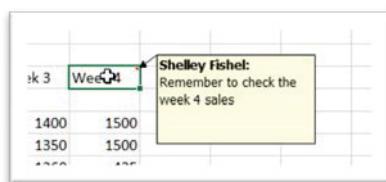
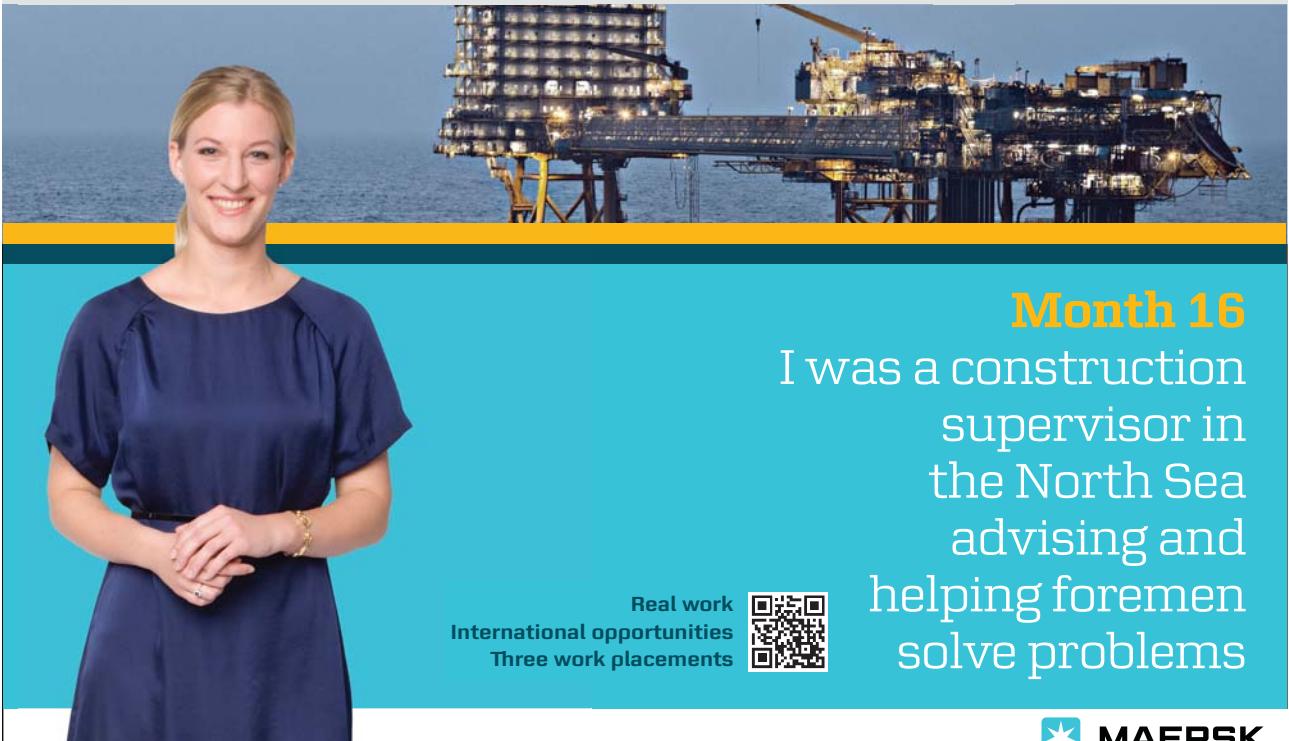


Figure 344 – hover to see the comment

Hover or click on the cell with the comment indicator.

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Month 16

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8.1.5 Edit a comment



Figure 345 – use the Ribbon to edit a comment

Click on Edit Comment, the comment will then pop up on the worksheet so that you can change what is written inside.

You can also Right Click with the mouse on the cell with the comment indicator and select Edit Comment.

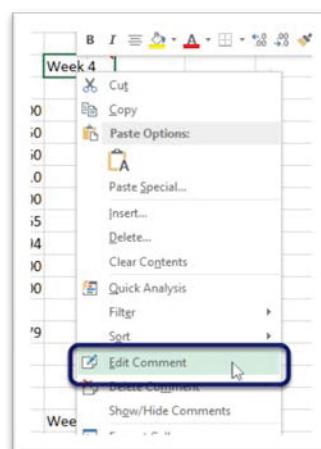


Figure 346 – Right click to edit a comment

8.2 Deleting comments

8.2.1 Delete a comment via the Ribbon

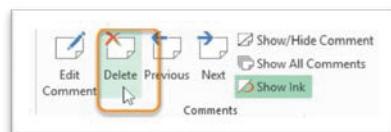


Figure 347 – Delete a comment via the Ribbon

1. Click on the cell with the comment
2. On the Review Ribbon click on the Delete icon

8.2.2 Delete comment via Right Click



Figure 348 – Delete a comment with a right click

1. Right click on the cell with the comment
2. Select Delete Comment

8.3 Show/Hide Comments

If you want to see the comments displayed on the screen all the time you can show them. Then when you no longer need to see them you can hide them.

8.3.1 Show comments

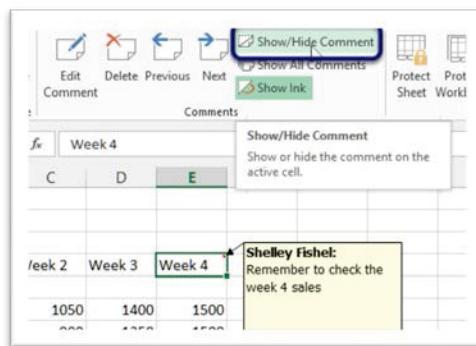


Figure 349 – display the comments permanently

1. Click on the cell with the comment indicator
2. Click on Show/Hide Comments

The comment is now displayed on screen and if you move to another cell it stays put!

8.3.2 Hide comments

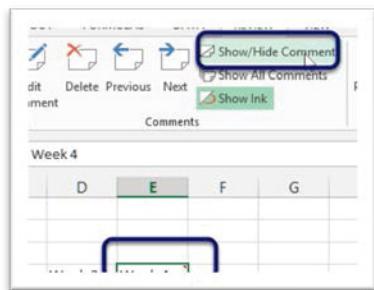


Figure 350 – hide comments

Click on Show/Hide Comments – the comment is now hidden.

An advertisement for Oticon. The top half shows a collage of professional images: a man at a desk, a modern building at night, a woman holding a laptop, a woman smiling, and a man holding a document. The bottom half features a large blue swoosh graphic. The website 'www.job.oticon.dk' is in the bottom left, and the 'oticon PEOPLE FIRST' logo is in the bottom right.

8.3.3 Show all comments

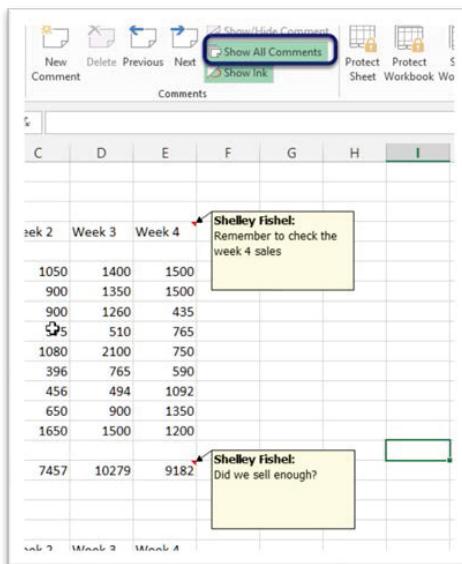


Figure 351 – display all comments

To display all comments together rather than going through them one-by-one, you can click on Show All Comments.

To hide them again click Show All Comments again.

8.4 Moving between comments

When you have lots of comments on your spreadsheet, it can be useful to display them one after the other.

8.4.1 Move to next comment



Figure 352 – next and previous to move between comments

From the first comment cell – click on Next

8.4.2 Move to previous comment



Figure 353 – previous to move back

Click on Previous in the Comments group.

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8.5 Printing comments

Comments do not print. They are there on screen as a reminder. If you want to print them you can have them print on screen exactly as they appear or print them at the end of the sheet.

8.5.1 Print comments on the worksheet

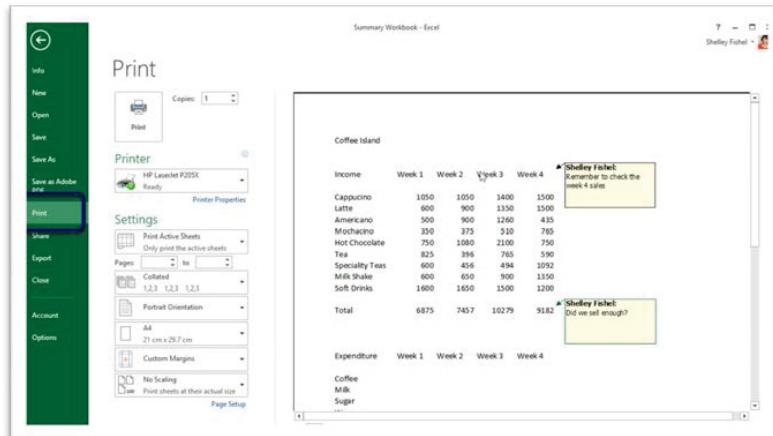


Figure 354 – print comments

1. Display the comments on the worksheet first
2. Click File
3. Click Print
4. Click on Page Setup

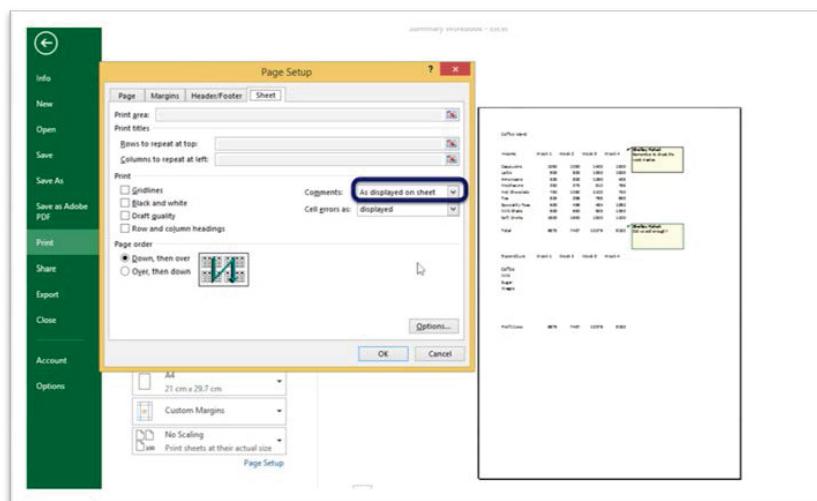


Figure 355 – decide where you want to print them

1. Click on the Sheet tab
2. Select As displayed on sheet
3. Click OK

8.5.2 Print comments at the end of the worksheet

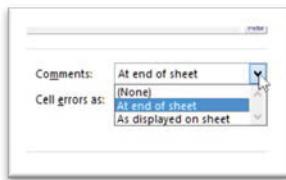


Figure 356 – print the comments at the end

1. Click File
2. Click Print
3. Click Page Setup
4. Click the Sheet Tab
5. Select At end of sheet

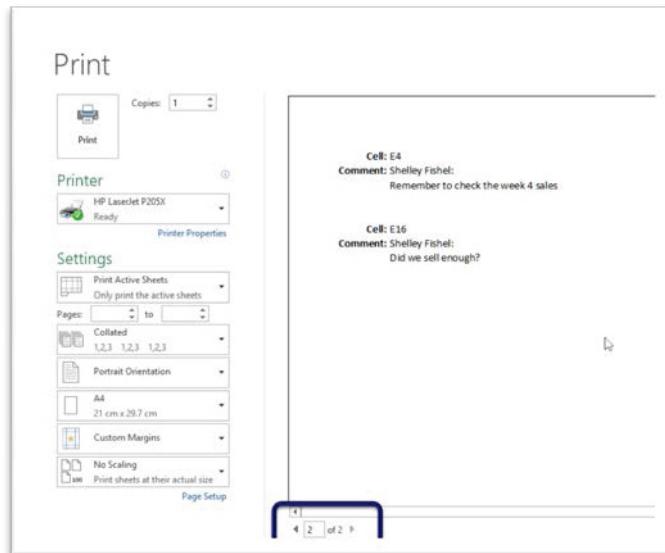


Figure 357 – comments at the end of the worksheet

Now the comments show at the end of the sheet, here we are on page 2 of 2 and the comments are shown.

9 Sorting data

9.1 Databases in Excel – introduction

A **Database** is a structured collection of information.

A Database in Excel is structured in a very particular way:

The data is broken up into separate **Fields** that can be applied to every record in the database e.g. an addresses database might have fields for first name, last name and so on. These fields make up the columns of the database. The field names are usually in the first row of the database.

Each subsequent row contains the data for each **Record** – one record per row.

Databases or lists have NO blank Columns and NO blank Rows. It is possible to have a blank cell, however as soon as Excel detects a blank row or a blank column the rest of the data is treated as a separate list. We will see an example of this a little later on.



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Date	Customer	Area	Category	Item	Number Sold	Cost per Item	Sales
2 14/11/2011		South	Hot Drinks	Machiatto	4	£1.95	£7.80
3 14/11/2011		South	Hot Drinks	Machiatto	4	£1.95	£7.80
4 14/11/2011		South	Hot Drinks	Machiatto	4	£1.95	£7.80
5 14/11/2011	London	South	Hot Drinks	Machiatto	4	£1.95	£7.80
6 14/11/2011	London	South	Hot Drinks	Machiatto	4	£1.95	£7.80
7 14/11/2011	London	South	Hot Drinks	Machiatto	4	£1.95	£7.80
8 14/11/2011	London	North	Hot Drinks	Machiatto	181	£1.95	£352.95
9 14/11/2011	Leeds	North	Hot Drinks	Machiatto	181	£1.95	£352.95
10 14/11/2011	Leeds	North	Hot Drinks	Machiatto	181	£1.95	£352.95
11 14/11/2011	Leeds	North	Hot Drinks	Machiatto	181	£1.95	£352.95
12 14/11/2011	Leeds	North	Hot Drinks	Machiatto	181	£1.95	£352.95
13 14/11/2011	Leeds	North	Hot Drinks	Machiatto	181	£1.95	£352.95
14 14/11/2011	Bath	South	Hot Drinks	Latte	267	£1.85	£493.95
15 14/11/2011	Bath	South	Hot Drinks	Latte	267	£1.85	£493.95
16 14/11/2011	Bath	South	Hot Drinks	Latte	267	£1.85	£493.95
17 14/11/2011	Glasgow	South	Milkshake	Strawberry	344	£2.50	£860.00
18 14/11/2011	Glasgow	South	Milkshake	Strawberry	344	£2.50	£860.00
19 14/11/2011	Glasgow	South	Milkshake	Strawberry	344	£2.50	£860.00
20 14/11/2011	London	South	Cold Drinks	Apple Juice	591	£1.00	£591.00

Figure 358 – structure of a database

1. Field Names in the first row
2. Records – one separate record in each subsequent row

9.2 Sort data

In the Coffee Island sales list, there are different columns. Depending on the type of data analysis that needs to be done, the data will need to be sorted in different ways.

There are several ways to get to the tools to sort data. There is a Sort on the Home Tab, more detailed Sort options on the Data tab and of course there is a right click option. You can also add the Sort Icons to the Quick Access Toolbar.

9.2.1 To perform a simple sort from the Home tab

Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales
2/11/2010	Bath	South	Hot Drinks	Amencano	109	£1.90	£207.10
3/11/2010	Bath	South	Hot Drinks	Amencano	109	£1.90	£207.10
4/11/2010	Bath	South	Hot Drinks	Amencano	109	£1.90	£207.10
5/11/2010	Bath	South	Hot Drinks	Amencano	109	£1.90	£207.10
6/11/2010	Bath	South	Hot Drinks	Amencano	109	£1.90	£207.10
7/11/2010	Bath	South	Hot Drinks	Amencano	109	£1.90	£207.10
8/18/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
9/13/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,085.60
10/18/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
11/13/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,085.60
12/18/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
13/13/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,085.60
14/10/2011	Bath	South	Cold Drink	Coca Cola	654	£0.85	£555.90
15/11/2010	Bath	South	Cold Drink	Coca Cola	118	£0.85	£100.30
16/11/2010	Bath	South	Cold Drink	Coca Cola	322	£0.85	£273.70
17/11/2010	Bath	South	Cold Drink	Coca Cola	322	£0.85	£273.70
18/10/2011	Bath	South	Cold Drink	Coca Cola	654	£0.85	£555.90
19/11/2010	Bath	South	Cold Drink	Coca Cola	118	£0.85	£100.30
20/11/2010	Bath	South	Cold Drink	Coca Cola	322	£0.85	£273.70
21/11/2010	Bath	South	Cold Drink	Coca Cola	322	£0.85	£273.70
22/10/2011	Bath	South	Cold Drink	Coca Cola	654	£0.85	£555.90
23/11/2010	Bath	South	Cold Drink	Coca Cola	118	£0.85	£100.30
24/11/2010	Bath	South	Cold Drink	Coca Cola	322	£0.85	£273.70
25/11/2010	Bath	South	Cold Drink	Coca Cola	322	£0.85	£273.70
26/14/2011	Bath	South	Hot Drinks	Latte	267	£1.85	£493.95
27/14/2011	Bath	South	Hot Drinks	Latte	267	£1.85	£493.95

Figure 359 – click into the column to sort by and then sort

1. Click anywhere in the column you want to sort by
2. Click on the Home tab
3. Click on the Sort & Filter button (1)
4. Select Sort A to Z, Or
5. Select Sort Z to A

9.2.2 To perform a simple sort using the Data tab

Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales
11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,105.80
18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,105.80
18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,105.80
10/10/2011	Bath	South	Cold Drinks	Coca Cola	654	£0.85	£555.90
11/11/2010	Bath	South	Cold Drinks	Coca Cola	118	£0.85	£100.30
11/11/2010	Bath	South	Cold Drinks	Coca Cola	322	£0.85	£273.70
11/11/2010	Bath	South	Cold Drinks	Coca Cola	322	£0.85	£273.70

Figure 360 – sort from the Data Ribbon

1. Click anywhere in the column you want to sort by
2. Click on the Data tab on the Ribbon
3. Go to the Sort & Filter group
4. Select Sort A to Z, Or
5. Select Sort Z to A

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9.2.3 Sort with a right click

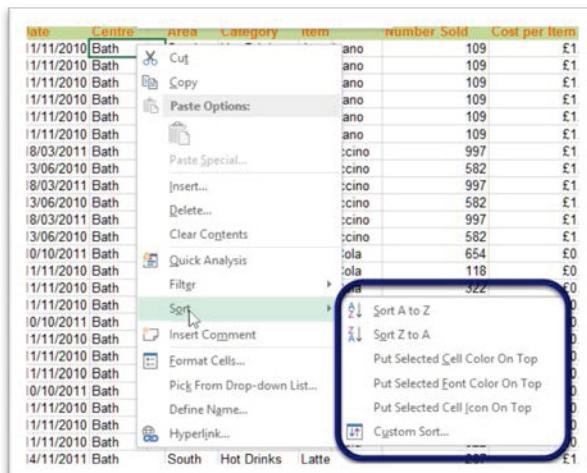


Figure 361 – sort on a right click

1. Click into the column you want to sort by
2. Right Click
3. Click on Sort
4. Select how you want to sort the data

9.2.4 To perform a custom sort (Multi Level Sorting)

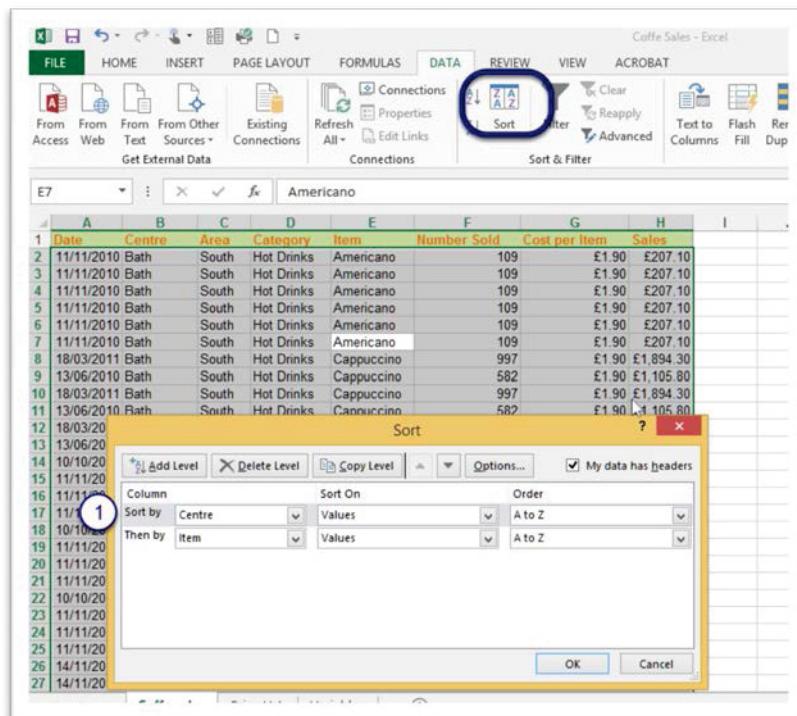


Figure 362 – custom or multi-level sort

1. Click on the Data tab
2. Click on the Sort button
3. Click on the down arrow by Sort to select the Column you want to sort by
4. Choose what you want to sort on – Values, Cell Colour, Font Colour, Cell Icon
5. Select the Order you want to sort by, A-Z, New to Old, Z-A, Old to New depending on the data.
6. **If you want to sort on more than one column:** Click on the Add Level button
7. Repeat steps 3–5
8. Click OK

To delete a level, click on the Delete Level button

You can also access the Custom Sort via the right click option.

9.2.5 Change the order of the sort levels

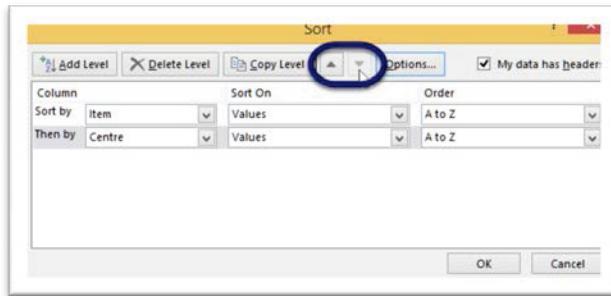


Figure 363 – change the order

If you want to change the sort order, click on the up or down arrows along the top of the Multi-Level sort box. Here I have changed the order to Item first then CentreCentre.

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9.3 Sort on font colour

If you have changed the font colour of certain parts of your data you can sort by font colour.

9.3.1 Selected font colour on top

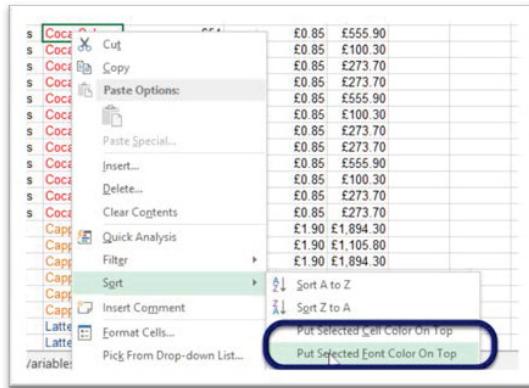


Figure 364 – sort by font colour

1. Right Click on the cell with the font colour you want to have at the top of your list
2. Click Sort
3. Then Choose Put Selected Font Colour on Top

9.4 Sort on cell colour

If you have shaded in some cells you can have them appear at the top of the list.

9.4.1 Place cell colour on top

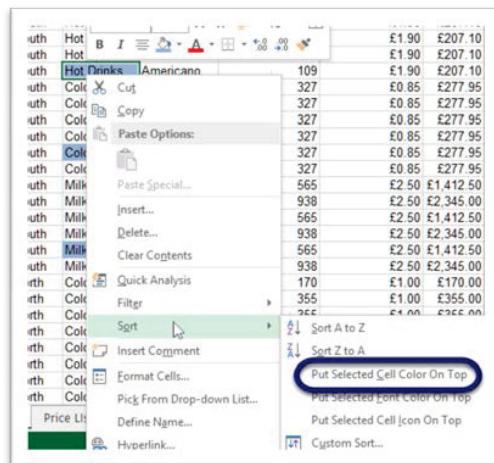


Figure 365 – sort on Cell Colour

1. Right click on the cell with the shading
2. Click Sort
3. Select Put Selected Cell Colour on Top

A	B	C	D	E	F	G	H	
1	Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales
2	11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
3	12/07/2010	Bath	South	Cold Drinks	Orange Juice	327	£0.85	£277.95
4	10/10/2011	Bath	South	Milkshake	Strawberry	565	£2.50	£1,412.50
5	11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
6	11/11/2010	Bath	South	Hot Drin k s	Americano	109	£1.90	£207.10
7	11/11/2010	Bath	South	Hot Drin k s	Americano	109	£1.90	£207.10
8	11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
9	11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10

Figure 366 – coloured cells appear at the top of the list

All of the cells shaded blue are now at the top of the list.

9.5 Sort on cell icon

If you have used conditional formatting to add icons to cells, you can use these to sort by.

9.5.1 Put selected cell icon on top

Category	Item	Number Sold	Cost per Item	Sales
Hot Drinks	Americano	109	£1.90	£207.10
Cold Drinks	Orange Juice	327	£0.85	£277.95
Milkshake	Strawberry	565	£2.50	£1,412.50
Hot Drinks	Americano	109	£1.90	£207.10
Hot Drinks	Americano	109	£1.90	£207.10
Hot Drinks	Americano	109	£1.90	£207.10
Hot Drinks	Americano	109	£1.90	£207.10
Cold Drinks	Orange Juice	327	£0.85	£277.95
Cold Drinks	Orange Juice	327	£0.85	£277.95
Cold Drinks	Orange Juice	327	£0.85	£277.95
Cold Drinks	Orange Juice	327	£0.85	£277.95
Cold Drinks	Orange Juice	327	£0.85	£277.95
Milkshake	Strawberry	565	£2.50	£1,412.50
Milkshake	Strawberry	565	£2.50	£1,412.50
Milkshake	Strawberry	565	£2.50	£1,412.50
Milkshake	Strawberry	565	£2.50	£1,412.50
Cold Drinks	Apple Juice	327	£0.85	£277.95
Cold Drinks	Apple Juice	327	£0.85	£277.95
Cold Drinks	Apple Juice	327	£0.85	£277.95
Cold Drinks	Apple Juice	327	£0.85	£277.95
Cold Drinks	Apple Juice	327	£0.85	£277.95
Cold Drinks	Apple Juice	327	£0.85	£277.95
Cold Drinks	Apple Juice	327	£0.85	£277.95
Cold Drinks	Apple Juice	327	£0.85	£277.95
Cold Drinks	Apple Juice	327	£0.85	£277.95
Cold Drinks	Apple Juice	327	£0.85	£277.95

Figure 367 – sort on cell icon – conditional format

1. Right click on the cell with the icon you want to have at the top of the list
2. Click on Sort
3. Select Put Selected Cell Icon on Top

A	B	C	D	E	F	G	H	I
1	Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales
2	11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
3	12/07/2010	Bath	South	Cold Drinks	Orange Juice	327	£0.85	£277.95
4	11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
5	11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
6	11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
7	11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
8	11/11/2010	Bath	South	Hot Drinks	American	109	£1.90	£207.10
9	12/07/2010	Bath	South	Cold Drinks	Orange Juice	327	£0.85	£277.95
10	12/07/2010	Bath	South	Cold Drinks	Orange Juice	327	£0.85	£277.95
11	12/07/2010	Bath	South	Cold Drinks	Orange Juice	327	£0.85	£277.95
12	12/07/2010	Bath	South	Cold Drinks	Orange Juice	327	£0.85	£277.95
13	12/07/2010	Bath	South	Cold Drinks	Orange Juice	327	£0.85	£277.95
14	14/06/2011	Glasgow	North	Cold Drinks	Apple Juice	170	£1.00	£170.00
15	11/11/2010	Glasgow	North	Cold Drinks	Apple Juice	355	£1.00	£355.00
16	11/11/2010	Glasgow	North	Cold Drinks	Apple Juice	355	£1.00	£355.00
17	14/06/2011	Glasgow	North	Cold Drinks	Apple Juice	170	£1.00	£170.00
18	11/11/2010	Glasgow	North	Cold Drinks	Apple Juice	355	£1.00	£355.00
19	11/11/2010	Glasgow	North	Cold Drinks	Apple Juice	355	£1.00	£355.00
20	14/06/2011	Glasgow	North	Cold Drinks	Apple Juice	170	£1.00	£170.00
21	11/11/2010	Glasgow	North	Cold Drinks	Apple Juice	355	£1.00	£355.00
22	10/10/2011	Bath	South	Milkshake	Strawberry	565	£2.50	£1,412.50
23	10/10/2011	Bath	South	Milkshake	Strawberry	565	£2.50	£1,412.50
24	11/11/2010	Bath	South	Milkshake	Strawberry	938	£2.50	£2,345.00
25	10/10/2011	Bath	South	Milkshake	Strawberry	565	£2.50	£1,412.50
26	11/11/2010	Bath	South	Milkshake	Strawberry	938	£2.50	£2,345.00
27	11/11/2010	Bath	South	Milkshake	Strawberry	938	£2.50	£2,345.00

Figure 368 – all sorted!

My red arrows pointing down are now at the top of the list.

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10 Filtering data

10.1 Filter data – the filter icon

Filtering allows you to hide the information that you do not want to see. So if I want to see sales of Cappuccino in London only, I can use the filter option to do just that. Then I can change the filter to suit my needs and refocus on different sets of data.

10.1.1 Filter on the Home Tab

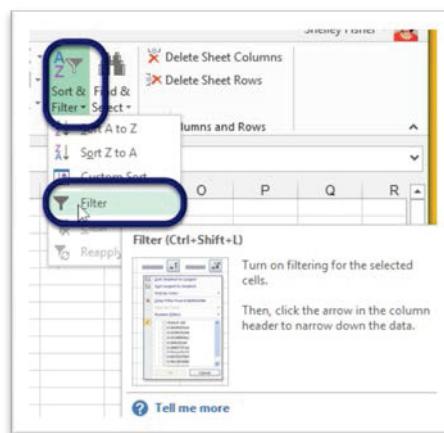


Figure 369 – filter from the Home Ribbon

1. Click anywhere inside your list
2. On the Home Tab click Sort and Filter
3. Click Filter

10.1.1 Filter on the data tab



Figure 370 – switch on the filter via the Data Ribbon

1. Click anywhere inside your list
2. Click on the Data Icon
3. Click Filter in the Sort and Filter Group

10.2 Filter on text

Now that you know where the filter lives, let's use it to find sales of Cappuccinos.

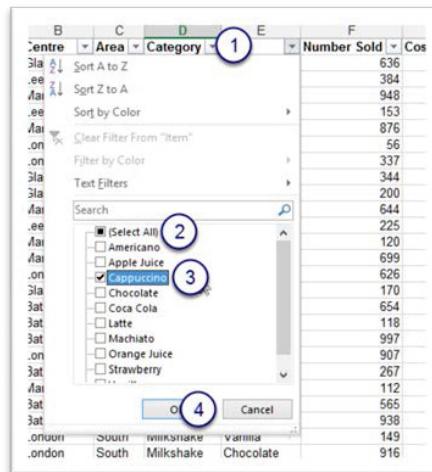


Figure 371 – pull out the records you want to see

1. Click on the drop down arrow by the column heading you want to filter
2. Un-check Select All
3. Select the item on which you want to filter
4. Click OK

	A	B	C	D	E	F	G	H
1	Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales
2	07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40
3	08/03/2011	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60
19	18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
28	14/06/2011	Leeds	North	Hot Drinks	Cappuccino	540	£1.90	£1,026.00
29	10/10/2011	Leeds	North	Hot Drinks	Cappuccino	578	£1.90	£1,098.20
32	12/08/2010	Glasgow	North	Hot Drinks	Cappuccino	902	£1.90	£1,713.80
33	13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,105.80
38	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50
39	12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90
44	18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50
35	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50
36	12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90
41	18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50
37	07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40
44	08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60
45	18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
70	14/06/2011	Leeds	North	Hot Drinks	Cappuccino	540	£1.90	£1,026.00
71	10/10/2011	Leeds	North	Hot Drinks	Cappuccino	578	£1.90	£1,098.20
74	12/08/2010	Glasgow	North	Hot Drinks	Cappuccino	902	£1.90	£1,713.80
75	13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,105.80
90	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50
91	12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90
96	18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50
07	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50
08	12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90
13	18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50
15								

Figure 372 – records that do not match criteria are hidden

I now have only rows where the value in the Item column is Cappuccino.

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10.2.1 Use the Right Click

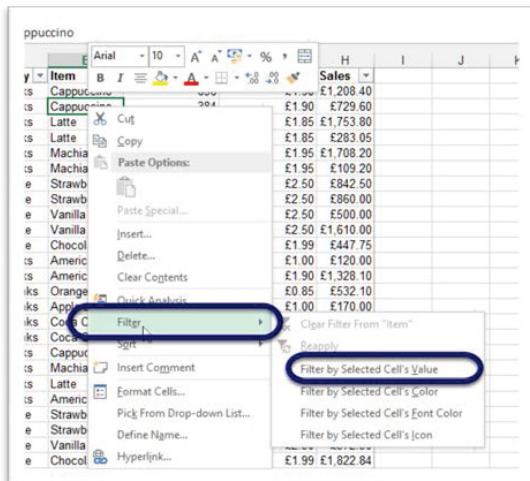


Figure 373 – filter is also on the Right Click

1. Right click on the cell with the value you want to filter out – in my example, I have clicked on a cell with Cappuccino
2. Click Filter
3. Click on Filter by Selected Cell's Value

You will now see only rows with the value you chose.

The image is a composite of two parts. On the left, a man in a dark suit stands in a field of tall grass, holding a large map over his head. On the right, there is a promotional graphic for TomTom. It features the TomTom logo (a red hand icon next to the word 'TOMTOM') and the tagline 'WHERE DO YOU WANT TO BE?'. Below this, there is a paragraph of text about the company's history and global presence. At the bottom, it says 'Founded in 1991 and headquartered in Amsterdam, we have 3,600 employees worldwide and sell our products in over 35 countries.' and 'For further information, please visit [tomtom.jobs](#)'.

10.3 Filter on more than one column

I would now like to see the sales of Cappuccino in Manchester only. I will apply the filter to both the Item and the Centre columns.

10.3.1 Apply the filter to another column

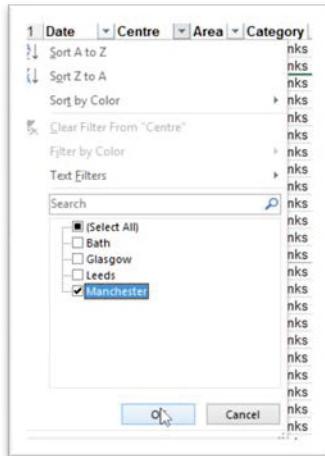


Figure 374 – keep adding filters to narrow down your results

1. Click on the drop down arrow next to the second column to filter on
2. Un-check Select All
3. Click to select the item on which you want to filter
4. Click OK

	A	B	C	D	E	F	G	H	I	J
	Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales		
1	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50		
18	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50		
19	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50		
36	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50		
90	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50		
07	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50		
15										
16										
47										

Figure 375

I now have only rows where Cappuccino was sold in Manchester.

You can tell that rows have been hidden by looking at the row numbers – which will also have turned blue.

10.4 Remove the filter

Now I want to see all of the data. There are a few ways to clear the filter.

10.4.1 Clear the filter

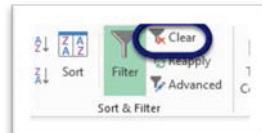


Figure 376 – clear a filter

Click on Clear

All the data comes back with the Auto filter arrows still in place

10.4.2 Turn off the filter



Figure 377 – turn off the filter altogether

Click on the Filter icon

The filter is cleared and the auto filter arrows are removed

10.4.3 Clear the filter from one column only

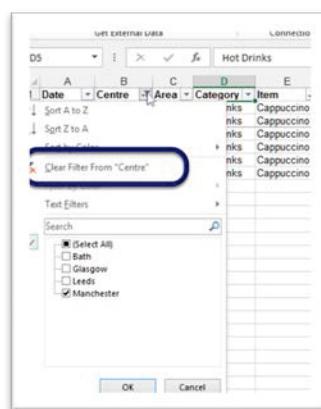


Figure 378 – clear just one filter

1. Click the drop down arrow of the column whose filter you want to clear
2. Select Clear Filter From “the field name”
3. Click OK

10.4.4 Remove with Right Click

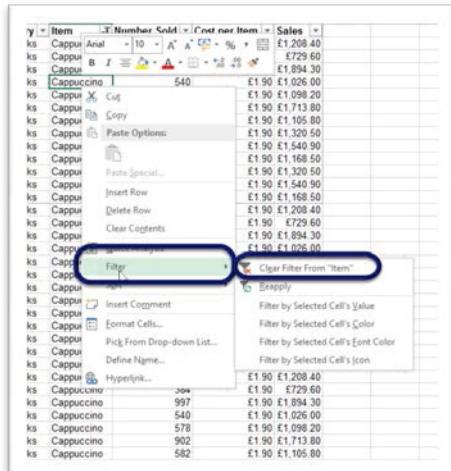


Figure 379 – use the right click

1. Right click in the column you have filtered
2. Select Filter
3. Select Clear Filter From “Name of Column” (in our example it is from the Item Column)

10.5 Filter data on colour

If you have applied conditional formatting to your list to show data with certain cell colours, or font colours, you can make Excel show you just those cells. Just like when sorting by colour.

10.5.1 Filter on font colour

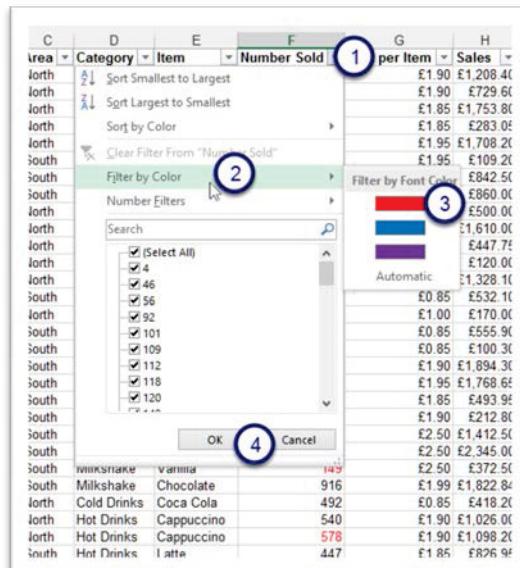


Figure 380 – Filter on font colour

In my Number Sold column I have changed some values to show in Red text.

1. Click the drop down of the column you want to filter
2. Click on Filter by Colour
3. Choose the colour you want to see
4. Click OK

	Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales
1	07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40
2	08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60
3	12/08/2010	London	South	Milkshake	Strawberry	337	£2.50	£842.50
4	12/08/2010	Manchester	North	Hot Drinks	Americano	699	£1.90	£1,328.10
8	11/11/2010	Bath	South	Cold Drinks	Coca Cola	118	£0.85	£100.30
9	18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
10	12/08/2010	London	South	Hot Drinks	Machiatto	907	£1.95	£1,768.65
5	18/10/2011	London	South	Milkshake	Vanilla	149	£2.50	£372.50
9	10/10/2011	Leeds	North	Hot Drinks	Cappuccino	578	£1.90	£1,098.20
4	14/06/2011	London	South	Hot Drinks	Latte	617	£1.85	£1,141.45
0	14/06/2011	Leeds	North	Milkshake	Vanilla	546	£2.50	£1,365.00

Figure 381 – only rows in red show up

Only cells that have a red font are shown.

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needs to be "The Shift".



10.5.2 Filter on cell colour

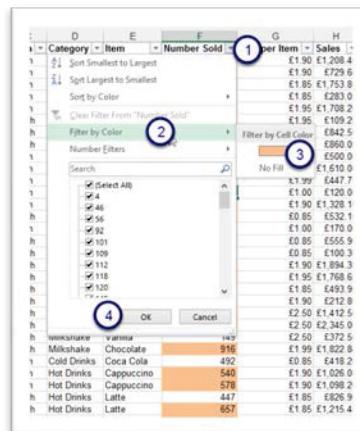


Figure 382 – filter on shaded rows

I have coloured all cells that have a value greater than 500 orange and now want to see only those rows.

1. Click the drop down of the column you want to filter
2. Click on Filter by Cell Colour
3. Choose the Colour you want to see
4. Click OK

Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales
07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40
09/11/2010	Manchester	North	Hot Drinks	Latte	948	£1.85	£1,753.80
11/11/2010	Manchester	North	Hot Drinks	Machiatto	876	£1.95	£1,708.20
10/10/2011	Manchester	North	Milkshake	Vanilla	644	£2.50	£1,610.00
12/08/2010	Manchester	North	Hot Drinks	Americano	699	£1.90	£1,328.10
14/11/2011	London	South	Cold Drinks	Orange Juice	626	£0.85	£532.10
10/10/2011	Bath	South	Cold Drinks	Coca Cola	654	£0.85	£555.90
18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
12/08/2010	London	South	Hot Drinks	Machiatto	907	£1.95	£1,768.65
10/10/2011	Bath	South	Milkshake	Strawberry	565	£2.50	£1,412.50
11/11/2010	Bath	South	Milkshake	Strawberry	938	£2.50	£2,345.00
12/08/2010	London	South	Milkshake	Chocolate	916	£1.99	£1,822.84
14/06/2011	Leeds	North	Hot Drinks	Cappuccino	540	£1.90	£1,026.00
10/10/2011	Leeds	North	Hot Drinks	Cappuccino	578	£1.90	£1,098.20
18/10/2011	London	South	Hot Drinks	Latte	657	£1.85	£1,215.45
12/08/2010	Glasgow	North	Hot Drinks	Cappuccino	902	£1.90	£1,713.80
13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,105.80
14/06/2011	London	South	Hot Drinks	Latte	617	£1.85	£1,141.45
18/10/2011	Glasgow	North	Hot Drinks	Americano	571	£1.90	£1,084.90

Figure 383 – only shaded rows shown.

10.5.3 Clear the filter

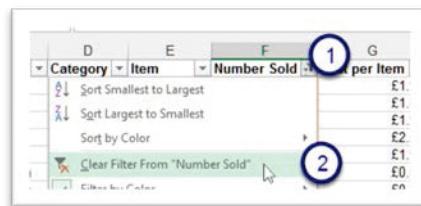


Figure 384 – clear the filter

1. Click the drop down arrow on the column you want to clear the filter from
2. Click Clear Filter from “name of column”

Remember you can also clear the filter with a Right Click or via the Data Tab and Clear Filter.

10.6 Text filters

Say you need to filter out rows that begin with a certain letter or contain a particular value, that contain a particular word or in fact do not contain a particular word. These can all be done from the drop down arrows.

Here we will take a look at Text Filters.

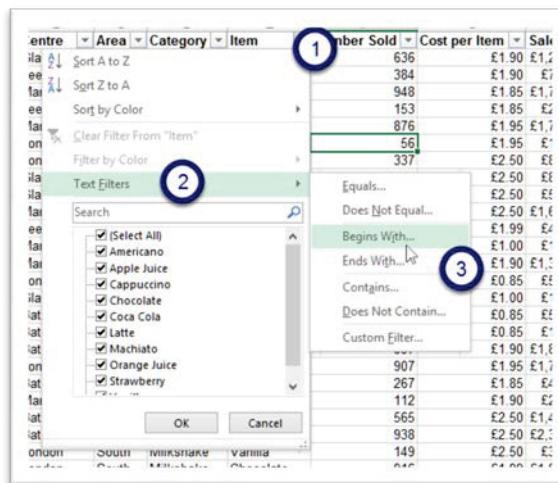


Figure 385 – different text filters available

1. Click the drop down arrow on the heading of the column to filter
2. Select Text Filters
3. Choose the filter you want to apply

I want to find all rows where the item begins with C.

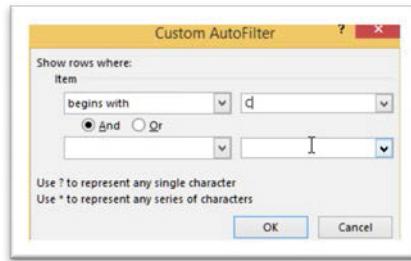


Figure 386 – set criteria

1. In the Custom Auto Filter box that appears
2. Type the criteria
3. Click OK

Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales
27/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,209.40
08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60
11/11/2010	Leeds	North	Milkshake	Chocolate	225	£1.99	£447.75
10/10/2011	Bath	South	Cold Drinks	Coca Cola	654	£0.85	£555.90
11/11/2010	Bath	South	Cold Drinks	Coca Cola	118	£0.85	£100.30
18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
12/08/2010	London	South	Milkshake	Chocolate	916	£1.99	£1,822.84
14/02/2011	Glasgow	North	Cold Drinks	Coca Cola	492	£0.85	£418.20
14/06/2011	Leeds	North	Hot Drinks	Cappuccino	540	£1.90	£1,026.00
10/10/2011	Leeds	North	Hot Drinks	Cappuccino	578	£1.90	£1,098.20
12/08/2010	Glasgow	North	Hot Drinks	Cappuccino	902	£1.90	£1,713.80
13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,105.80
10/10/2011	London	South	Milkshake	chocolate	905	£1.99	£1,800.95
10/10/2011	Leeds	North	Cold Drinks	Coca Cola	46	£0.85	£39.70
11/11/2010	Bath	South	Cold Drinks	Coca Cola	322	£0.85	£273.70
18/03/2010	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,400.50
02/05/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,549.90
16/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50
10/12/2011	London	South	Milkshake	chocolate	205	£1.99	£400.95
10/10/2011	Leeds	North	Cold Drinks	Coca Cola	46	£0.85	£39.10
11/11/2010	Bath	South	Cold Drinks	Coca Cola	322	£0.85	£273.70
18/03/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50
12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90
18/02/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50
07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,209.40
08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60
11/11/2010	Leeds	North	Milkshake	Chocolate	225	£1.99	£447.75
10/10/2011	Bath	South	Cold Drinks	Coca Cola	654	£0.85	£555.90
11/11/2010	Bath	South	Cold Drinks	Coca Cola	118	£0.85	£100.30
18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
12/08/2010	London	South	Milkshake	Chocolate	916	£1.99	£1,822.84
14/02/2011	Glasgow	North	Cold Drinks	Coca Cola	492	£0.85	£418.20
14/06/2011	Leeds	North	Hot Drinks	Cappuccino	540	£1.90	£1,026.00
10/10/2011	Leeds	North	Hot Drinks	Cappuccino	578	£1.90	£1,098.20
12/08/2010	Glasgow	North	Hot Drinks	Cappuccino	902	£1.90	£1,713.80
13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,105.80
10/10/2011	London	South	Milkshake	chocolate	905	£1.99	£1,800.95
10/10/2011	Leeds	North	Cold Drinks	Coca Cola	46	£0.85	£39.10

Figure 387 – text filter applied

I now only see rows where the item begins with C.

10.7 Number filters

Excel has many more filters for numbers than a simple select all rows with this number option. We can look for rows with a value greater than one we specify, or less than, equal to or between.

10.7.1 Number filters

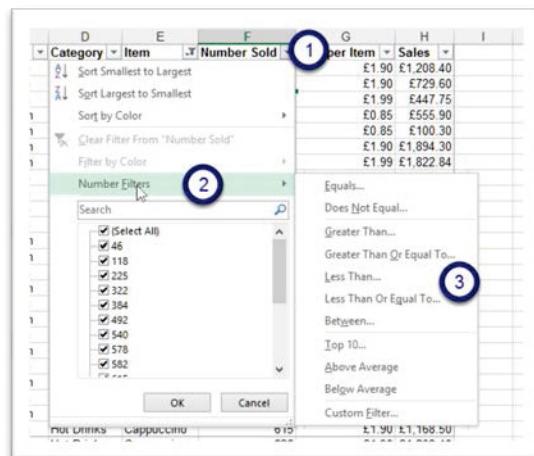


Figure 388 – Number filters

1. Click the drop down arrow on the heading of the column you want to filter
2. Select Number Filters
3. Choose the filter that matches your criteria



Figure 389 – Set criteria

I chose Greater Than...

1. In the dialogue box type in the criteria – in my case greater than 500
2. Click OK

Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales
07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40
09/11/2010	Manchester	North	Hot Drinks	Latte	948	£1.85	£1,753.80
11/11/2010	Manchester	North	Hot Drinks	Machiatto	876	£1.95	£1,708.20
10/10/2011	Manchester	North	Milkshake	Vanilla	644	£2.50	£1,610.00
12/08/2010	Manchester	North	Hot Drinks	Americano	699	£1.90	£1,328.10
14/11/2011	London	South	Cold Drinks	Orange Juice	626	£0.85	£532.10
10/10/2011	Bath	South	Cold Drinks	Coca Cola	654	£0.85	£555.90
18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
12/08/2010	London	South	Hot Drinks	Machiatto	907	£1.95	£1,768.65
10/10/2011	Bath	South	Milkshake	Strawberry	565	£2.50	£1,412.50
11/11/2010	Bath	South	Milkshake	Strawberry	938	£2.50	£2,345.00
12/08/2010	London	South	Milkshake	Chocolate	916	£1.99	£1,822.84
14/06/2011	Leeds	North	Hot Drinks	Cappuccino	540	£1.90	£1,026.00
10/10/2011	Leeds	North	Hot Drinks	Cappuccino	578	£1.90	£1,098.20
18/10/2011	London	South	Hot Drinks	Latte	657	£1.85	£1,215.45
12/08/2010	Glasgow	North	Hot Drinks	Cappuccino	902	£1.90	£1,713.80
13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,105.80
14/06/2011	London	South	Hot Drinks	Latte	617	£1.85	£1,141.45
18/10/2011	Glasgow	North	Hot Drinks	Americano	571	£1.90	£1,084.90
14/06/2011	Leeds	North	Milkshake	Vanilla	546	£2.50	£1,365.00
10/10/2011	London	South	Milkshake	Chocolate	696	£1.99	£1,380.06

Figure 390 – Result matches my criteria

Now I only see rows where the value is greater than 500 in the Number Sold column.

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10.8 Date filters

What about finding all sales that happened in a particular month or range of dates? Yes with Excel's date filters you can do just that.

10.8.1 Date filters

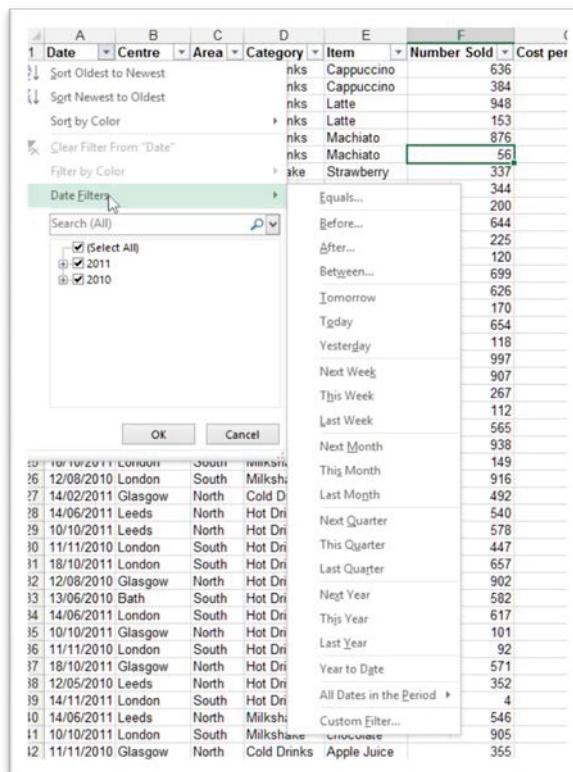


Figure 391 – lots of data filters available

There is a huge choice of date filters.

I will choose Between and look for all sales that occurred in 2010.

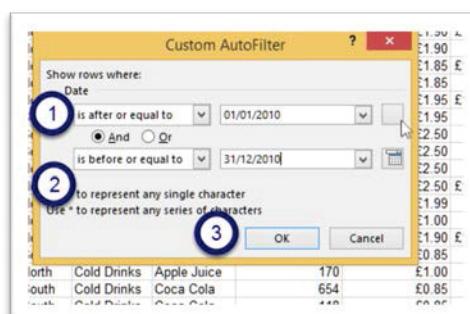


Figure 392 – set criteria

1. Type in the first date of the range – note it says after or equal to – in my example
01/01/2010 First Jan 2010
2. Type in the last date of the range – note it says before or equal to – in my example
31/12/2010 31st December 2010
3. Click OK

	A	B	C	D	E	F	G	H
	Date	City	Region	Item	Description	Count	Unit Price	Total
4	09/11/2010	Manchester	North	Hot Drinks	Latte	948	£1.85	£1,753.80
5	11/11/2010	Manchester	North	Hot Drinks	Machiatto	876	£1.95	£1,708.20
6	12/08/2010	London	South	Milkshake	Strawberry	337	£2.50	£842.50
7	11/11/2010	Leeds	North	Milkshake	Chocolate	225	£1.99	£447.75
8	12/08/2010	Manchester	North	Hot Drinks	Americano	699	£1.90	£1,328.10
9	11/11/2010	Bath	South	Cold Drinks	Coca Cola	118	£0.85	£100.30
10	12/08/2010	London	South	Hot Drinks	Machiatto	907	£1.95	£1,768.65
11	11/11/2010	Bath	South	Milkshake	Strawberry	938	£2.50	£2,345.00
12	12/08/2010	London	South	Milkshake	Chocolate	916	£1.99	£1,822.84
13	11/11/2010	London	South	Hot Drinks	Latte	447	£1.85	£826.95
14	12/08/2010	Glasgow	North	Hot Drinks	Cappuccino	902	£1.90	£1,713.80
15	13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,105.80
16	11/11/2010	London	South	Hot Drinks	Americano	92	£1.90	£174.80
17	12/05/2010	Leeds	North	Hot Drinks	Machiatto	352	£1.95	£686.40
18	11/11/2010	Glasgow	North	Cold Drinks	Apple Juice	355	£1.00	£355.00
19	12/07/2010	Bath	South	Cold Drinks	Orange Juice	327	£0.85	£277.95
20	11/11/2010	Bath	South	Cold Drinks	Coca Cola	322	£0.85	£273.70
21	12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90
22	11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
23	12/08/2010	Manchester	North	Hot Drinks	Machiatto	741	£1.95	£1,444.95
24	11/11/2010	Glasgow	North	Cold Drinks	Apple Juice	355	£1.00	£355.00
25	12/07/2010	Rath	South	Cold Drinks	Orange Juice	327	£0.85	£277.95

Figure 393 – date filter applied

I now only have rows with dates between Jan 1st 2010 and December 31st 2010.

You can try out the different date filters to find what works for you.

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11 Format as table

11.1 What is format as table

Reasons to use Tables in Excel 2013:

- A filter is switched on as soon as you format the data as a table
- Easily format the table and apply great looking pre-set styles to the data
- The Header Row stays in view no matter where you scroll
- Apply Banded Columns and Rows easily
- Sort the Table from the drop down of any column
- Add a total row to the bottom of the data and it will perform calculations on the right most column, however you can also add a function to the total row of any numerical column
- The table will expand if you add more columns or rows to it and any chart that you have based on the table will automatically expand as well.
- Calculated columns are added automatically – perform a calculation in the first cell of a new column, press enter and the calculation is repeated in the whole column.

Tables in Excel 2013 are great time savers when you want to analyse your data

11.2 Format as table icon

To turn your list of data into a table, it must have no blank columns or rows. You can have several tables on one worksheet if you have different groups of data.

11.2.1 Format as table

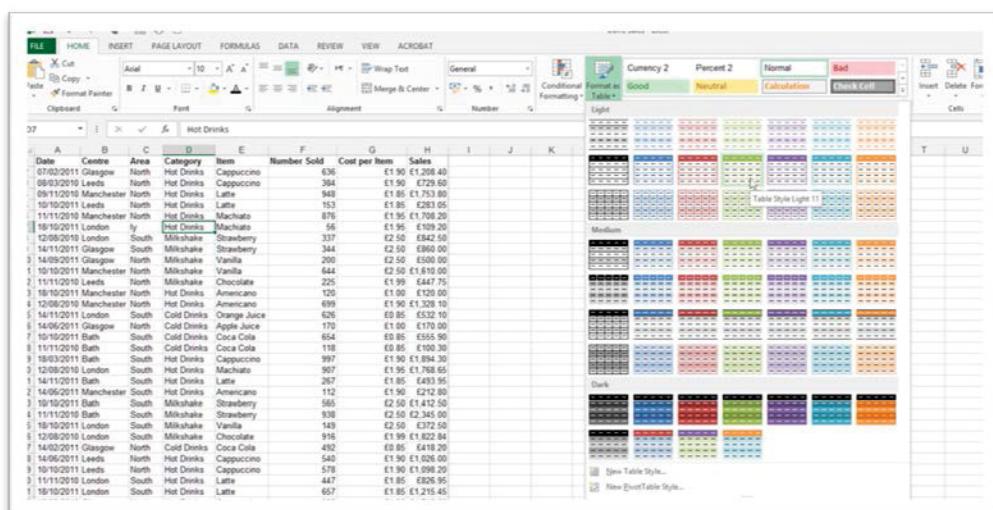


Figure 394 – table styles

1. Click anywhere inside your data list
2. Click on the Format as Table Icon
3. Select a format to apply

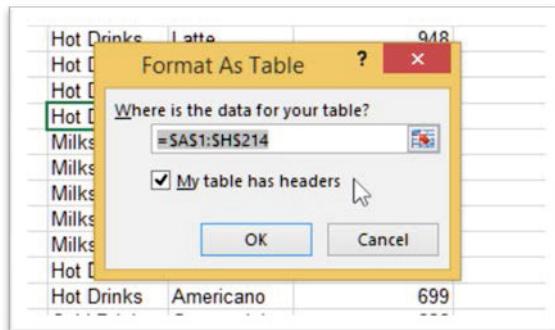


Figure 395 – confirm the range

1. You will be prompted to check if the range that Excel finds is correct.
2. Click OK if it is.

	A	B	C	D	E	F	G	H	I
1	Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales	
2	07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40	
3	08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60	
4	09/11/2010	Manchester	North	Hot Drinks	Latte	948	£1.85	£1,753.80	
5	10/10/2011	Leeds	North	Hot Drinks	Latte	153	£1.85	£283.05	
6	11/11/2010	Manchester	North	Hot Drinks	Machiatto	876	£1.95	£1,708.20	
7	18/10/2011	London	South	Hot Drinks	Machiatto	56	£1.95	£109.20	
8	12/08/2010	London	South	Milkshake	Strawberry	337	£2.50	£842.50	
9	14/11/2011	Glasgow	South	Milkshake	Strawberry	344	£2.50	£860.00	
10	14/09/2011	Glasgow	North	Milkshake	Vanilla	200	£2.50	£500.00	
11	10/10/2011	Manchester	North	Milkshake	Vanilla	644	£2.50	£1,610.00	
12	11/11/2010	Leeds	North	Milkshake	Chocolate	225	£1.99	£447.75	
13	18/10/2011	Manchester	North	Hot Drinks	Americano	120	£1.00	£120.00	
14	12/08/2010	Manchester	North	Hot Drinks	Americano	699	£1.90	£1,328.10	
15	14/11/2011	London	South	Cold Drinks	Orange Juice	626	£0.85	£532.10	
16	14/06/2011	Glasgow	North	Cold Drinks	Apple Juice	170	£1.00	£170.00	
17	10/10/2011	Bath	South	Cold Drinks	Coca Cola	654	£0.85	£555.90	
18	11/11/2010	Bath	South	Cold Drinks	Coca Cola	118	£0.85	£100.30	
19	18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30	
20	12/08/2010	London	South	Hot Drinks	Machiatto	907	£1.95	£1,768.65	
21	14/11/2011	Bath	South	Hot Drinks	Latte	267	£1.85	£493.95	
22	18/06/2011	Manchester	South	Hot Drinks	Americano	142	£1.00	£142.00	

Figure 396 – style applied

I chose Table Style Medium 4 which is green and has banded rows.

11.3 Insert a table

You can insert a Table via the Insert Ribbon and Excel will apply a preset format without giving you the choice of how it looks.

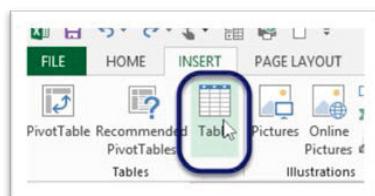


Figure 397 – insert a table

1. Click inside your data
2. Click on Insert
3. Click Table



Figure 398 – confirm the range

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1. Check the range is correct
2. Click OK

Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales
07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40
08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60
09/11/2010	Manchester	North	Hot Drinks	Latte	948	£1.85	£1,753.80
10/10/2011	Leeds	North	Hot Drinks	Latte	153	£1.85	£283.05
11/11/2010	Manchester	North	Hot Drinks	Machiatto	876	£1.95	£1,708.20
18/10/2011	London	ly	Hot Drinks	Machiatto	56	£1.95	£109.20
12/08/2010	London	South	Milkshake	Strawberry	337	£2.50	£842.50
14/11/2011	Glasgow	South	Milkshake	Strawberry	344	£2.50	£860.00
14/09/2011	Glasgow	North	Milkshake	Vanilla	200	£2.50	£500.00
10/10/2011	Manchester	North	Milkshake	Vanilla	644	£2.50	£1,610.00
21/11/2010	Leeds	North	Milkshake	Chocolate	225	£1.99	£447.75
18/10/2011	Manchester	North	Hot Drinks	Americano	120	£1.00	£120.00
12/08/2010	Manchester	North	Hot Drinks	Americano	699	£1.90	£1,328.10
14/11/2011	London	South	Cold Drinks	Orange Juice	626	£0.85	£532.10
14/06/2011	Glasgow	North	Cold Drinks	Apple Juice	170	£1.00	£170.00
10/10/2011	Bath	South	Cold Drinks	Coca Cola	654	£0.85	£555.90
11/11/2010	Bath	South	Cold Drinks	Coca Cola	118	£0.85	£100.30
18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
12/08/2010	London	South	Hot Drinks	Machiatto	907	£1.95	£1,768.65
14/11/2011	Bath	South	Hot Drinks	Latte	267	£1.85	£493.95
14/06/2011	Manchester	South	Hot Drinks	Americano	112	£1.90	£212.80
10/10/2011	Bath	South	Milkshake	Strawberry	565	£2.50	£1,412.50
11/11/2010	Bath	South	Milkshake	Strawberry	938	£2.50	£2,345.00

Figure 399 – Table applied

Excel has applied the automatic formatting and added the filter with drop downs. However I was not offered the choice of style for the table as I would have been if I had chosen to Format as Table.

11.3.1 Keyboard shortcut

To insert a table with the keyboard first make sure your cursor is inside your data and then do one of the following:

Control + T

Control + L

Notice that this method applies a preset format and does not offer you a choice of style.

11.4 Change table style

It is really simple want to change the style for a table, either because you created it with the keyboard and you want to choose, or because you don't like the one you have.

11.4.1 Select a different table style

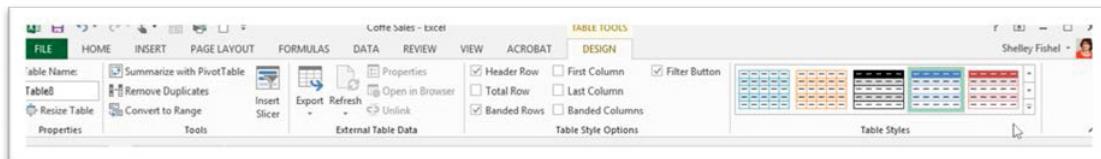


Figure 400 – change style

1. Click inside your table
2. In the Table Tools Design Ribbon go to the Table Styles group and select a different style.

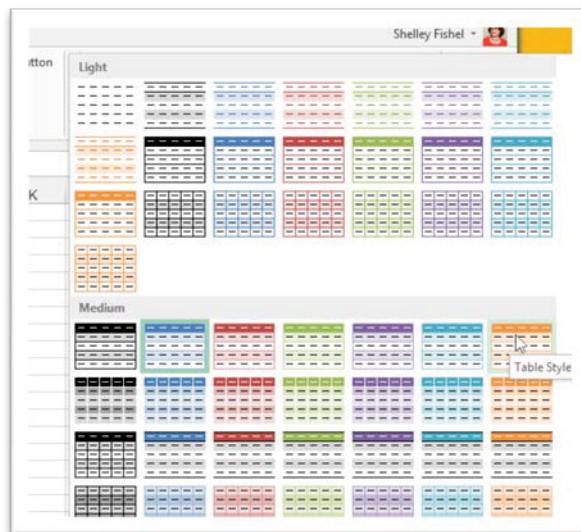


Figure 401 – pick the new style

The new colours and banding will apply immediately.

11.5 Remove formatting

The fancy table styles can be removed in favour of plain black and white text without affecting the automatic features of the table.

11.5.1 Remove formatting

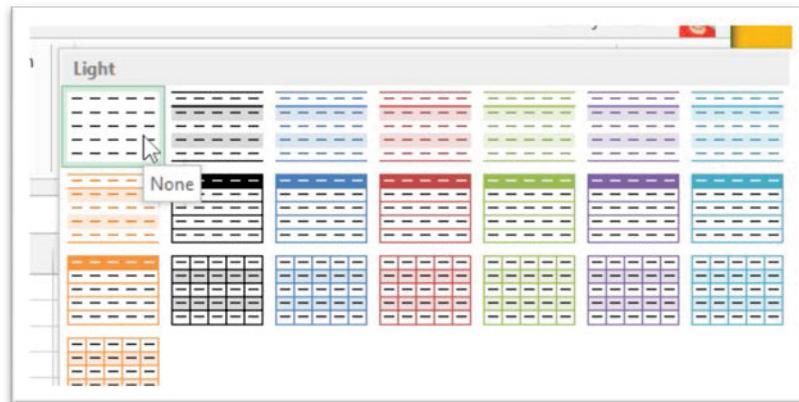


Figure 402 – select None to remove formatting

1. Click inside the table
2. In the Table Styles group select the first table labelled None

Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales
07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40
08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60
09/11/2010	Manchester	North	Hot Drinks	Latte	948	£1.85	£1,753.80
10/10/2011	Leeds	North	Hot Drinks	Latte	153	£1.85	£283.05
11/11/2010	Manchester	North	Hot Drinks	Machiatto	876	£1.95	£1,708.20
18/10/2011	London	ly	Hot Drinks	Machiatto	56	£1.95	£109.20
12/08/2010	London	South	Milkshake	Strawberry	337	£2.50	£842.50
14/11/2011	Glasgow	South	Milkshake	Strawberry	344	£2.50	£860.00
14/09/2011	Glasgow	North	Milkshake	Vanilla	200	£2.50	£500.00
10/10/2011	Manchester	North	Milkshake	Vanilla	644	£2.50	£1,610.00
11/11/2010	Leeds	North	Milkshake	Chocolate	325	£1.00	£325.00

Figure 403 – this just removes the formatting and leaves functionality

The Table reverts back to plain black and white, however the filter remains and any automatic features are still there.

11.6 Name the table

When you add a table to an Excel spreadsheet it is given a generic name which can then be used in formulas to refer to the data in the table.

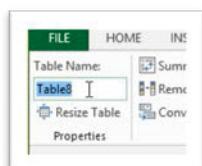


Figure 404 – give the table a name

See the name in the Properties Group on the Table Tools Design Ribbon.

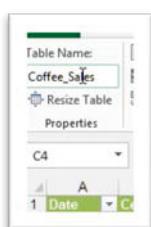


Figure 405 – type it!

Click into the box and type the new name for your table. Avoid spaces if you want to refer to the table from another worksheet later on.

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11.7 Calculated columns

An exciting feature of tables in Excel 2013 is the lightning speed at which a new column is added and the calculation done in the first cell repeated throughout the column.

In the example below, Coffee Island is increasing all drinks prices by 30% so I have placed 1.3 in cell N1. I will use this to work out the new price for each drink and it will be added to the New Price Column. Then I want to work out the new total sales price which is Number Sold × New Price per Item.

Excel will do this using Named Ranges in the Table and update the whole column at once.

F	G	H	I	J	K	L	M	N	O	P
Number Sold	Cost per Item	Sales	Column	New Cost Per Item	New Total					
636	£1.90	£1,208.40	1208.4	=[@[Cost per Item]]*\$N\$1				1.3		
384	£1.90	£729.60	729.6							
948	£1.85	£1,753.80	1753.8							
153	£1.85	£283.05	283.05							
876	£1.95	£1,708.20	1708.2							

Figure 406 – type the first formula

- The formula starts with an = and then inside [] square brackets is the formula
- Next comes @[Cost per Item] which is the name of the column referred to in the formula enclosed in square brackets (to show it is the name of a range)
- Then I have multiplied so a *
- Then \$N\$1 as the value needs to be fixed so that it can be copied to all cells in the column.

When I press Enter this formula is replicated automatically down the whole column.

A	B	C	D	E	F	G	H	I	J	K	L	M
Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales	Column	New Cost Per Item	New Total		
2 07/02/2011 Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40	1208.4			£2.47		
3 08/03/2010 Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60	729.6			£2.47		
4 09/11/2010 Manchester	North	Hot Drinks	Latte	948	£1.85	£1,753.80	1753.8			£2.41		
5 10/10/2011 Leeds	North	Hot Drinks	Latte	153	£1.85	£283.05	283.05			£2.41		
6 11/11/2010 Manchester	North	Hot Drinks	Machiato	876	£1.95	£1,708.20	1708.2			£2.54		

Figure 407 – formula to replicate

In cell J4 is the same formula.

- The cell N1 is fixed so that it is referenced correctly
- The @[Cost per Item] means that whatever is on **this row** in the column called Cost per Item will be used

11.7.1 Calculated column

	F	G	H	I	J	K	L	M	N	O
n	Number Sold	Cost per Item	Sales	Column	New Cost Per Item	New Total				1.3
puccino	636	£1.90	£1,208.40	1208.4	£2.47	=[@[Number Sold]]*[@[New Cost Per Item]]				
puccino	384	£1.90	£729.60	729.6	£2.47					
te	948	£1.85	£1,753.80	1753.8	£2.41					

Figure 408 – another example

Here is another example:

- = to start the formula
- • @ [Number Sold] – whatever is on this row in the Number Sold column
- * multiplied by
- • @ [New Cost Per Item] – whatever is on this row in the New Cost Per Item column
- All enclosed in [square brackets]

When I press Enter it will be replicated down the whole column.

A	B	C	D	E	F	G	H	I	J	K	L
1	Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales	Column	New Cost Per Item	New Total
2	07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40	1208.4	£2.47	£1,570.92
3	08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60	729.6	£2.47	£945.46
4	09/11/2010	Manchester	North	Hot Drinks	Latte	948	£1.85	£1,753.80	1753.8	£2.41	£4,279.94
5	10/10/2011	Leeds	North	Hot Drinks	Latte	153	£1.85	£283.05	283.05	£2.41	£637.97
6	11/11/2010	Manchester	North	Hot Drinks	Machiatto	876	£1.95	£1,708.20	1708.2	£2.54	£2,220.86
7	18/10/2011	London	ly	Hot Drinks	Machiatto	56	£1.95	£109.20	109.2	£2.54	£141.96
8	12/08/2010	London	South	Milkshake	Strawberry	337	£2.50	£842.50	842.5	£3.25	£1,095.25
9	14/11/2010	Glasgow	South	Milkshake	Strawberry	344	£2.50	£860.00	860.00	£3.25	£1,118.00

Figure 409 – calculation is replicated in the whole column

Here you can see in the Formula Bar that the formula in K1 has been replicated in K4.

11.8 Add a total row

Adding a total row to the table makes getting a summary really simple. Not only does the total row create a formula in the total row, it also adjusts the total if a filter is applied. Magic!

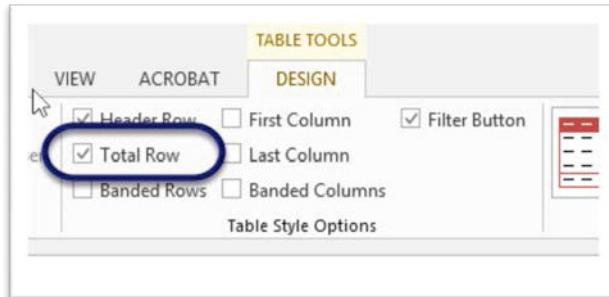


Figure 410 – tick the box for a total row

To add a total row to the table:

1. On the Table Tools Design Tab
2. Go to the Table Style Options
3. Click on Total Row to switch it on

Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales	L
196	18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50
197	12/08/2010	Manchester	North	Hot Drinks	Machiato	741	£1.95	£1,444.95
198	14/11/2011	London	South	Hot Drinks	Machiato	4	£1.95	£7.80
199	14/06/2011	Leeds	North	Milkshake	Vanilla	546	£2.50	£1,365.00
200	10/10/2011	London	South	Milkshake	chocolate	905	£1.99	£1,800.95
201	11/11/2010	Glasgow	North	Cold Drinks	Apple Juice	355	£1.00	£355.00
202	18/10/2011	Manchester	North	Cold Drinks	Orange Juice	485	£0.85	£412.25
203	12/07/2010	Bath	South	Cold Drinks	Orange Juice	327	£0.85	£277.95
204	14/11/2011	London	South	Cold Drinks	Apple Juice	591	£1.00	£591.00
205	10/10/2011	Leeds	North	Cold Drinks	Coca Cola	46	£0.85	£39.10
206	11/11/2010	Bath	South	Cold Drinks	Coca Cola	322	£0.85	£273.70
207	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50
208	12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90
209	14/11/2011	Leeds	North	Hot Drinks	Machiato	181	£1.95	£352.95
210	14/06/2011	London	South	Hot Drinks	Latte	435	£1.85	£804.75
211	10/10/2011	Manchester	North	Hot Drinks	Latte	251	£1.85	£464.35
212	11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
213	18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50
214	12/08/2010	Manchester	North	Hot Drinks	Machiato	741	£1.95	£1,444.95
15	Total					98430		£176,141.22

Figure 411 – total row is added

A total row is added to the bottom of the data and the column on the extreme right has a sum created.

11.8.1 Change from a sum to something else

10/10/2011	Manchester	North	Hot Drinks	Latte	251	£1.85	£464.35
11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50
12/08/2010	Manchester	North	Hot Drinks	Machiatto	741	£1.95	£1,444.95
Total					98430	£176,141.22	

A context menu is open over the total cell, showing options like None, Average, Count, Count Numbers, Max, Min, Sum, StdDev, Var, and More Functions... The 'Sum' option is highlighted.

Figure 412 – change the calculation

You can change the calculation type to any one of the options in the drop down list.



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11.8.2 Add a total row to another column

212] 11/11/2011 Bath	South	Hot Drinks	Americano	719	£1.90	£207.19	207.1
213] 18/10/2011 Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50	1168.5
214] 12/08/2010 Manchester	North	Hot Drinks	Machiatto	741	£1.95	£1,444.95	1444.95
215] Total				98430		£176,141.22	176141.2
216]							
217]							
218]							
219]							
220]							
221]							
222]							
223]							
224]							

Figure 413 – click the drop down below the column you want to add up

1. Click on the drop down arrow in the total row for the column you want to sum
2. Select the function you want to add
3. Your new total will appear

10] 14/06/2011 London	North	Hot Drinks	Machiatto	435	£1.85	£804.75	
11] 10/10/2011 Manchester	North	Hot Drinks	Latte	251	£1.85	£464.35	
12] 11/11/2011 Bath	South	Hot Drinks	Americano	109	£1.90	£207.10	
13] 18/10/2011 Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50	
14] 12/08/2010 Manchester	North	Hot Drinks	Machiatto	741	£1.95	£1,444.95	
15] Total				98430		£176,141.22	
16]							
17]							
18]							

Figure 414 – total row appears

I now have a total for the Number Sold and a total for the Sales.

11.9 Convert back to a range (remove automatic functionality)

When you have finished working with your data you may want to remove the automatic functionality and change the data back to a regular range.

11.9.1 Convert to range

Table Tools													
Properties		Tools											
Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales						
07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40						
08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60						
09/11/2010	Manchester	North	Hot Drinks	Latte	948	£1.85	£1,753.80						
10/10/2011	Leeds	North	Hot Drinks	Latte	153	£1.85	£283.05						
11/11/2010	Manchester	North	Hot Drinks	Machiatto	876	£1.95	£1,708.20						
18/10/2011	London	South	Milkshake	Strawberry	337	£2.50	£842.50						
12/08/2010	London												

Figure 415 – use the tools group to remove automatic functionality

1. Click inside your table
2. Click on Convert to Range in the Tools Group.

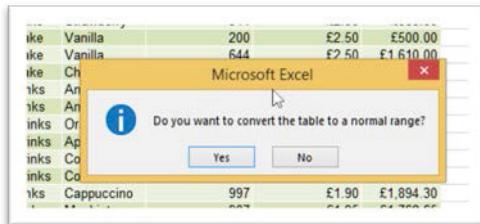


Figure 416 – make sure the cursor is inside your table

Click Yes to confirm that you do want to convert it back.

11.9.2 Automatic functionality removed

A	B	C	D	E	F	G	H	L
Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales	
07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40	
08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60	
09/11/2010	Manchester	North	Hot Drinks	Latte	948	£1.85	£1,753.80	
10/10/2011	Leeds	North	Hot Drinks	Latte	153	£1.85	£283.05	
11/11/2010	Manchester	North	Hot Drinks	Machiatto	876	£1.95	£1,708.20	
18/10/2011	London	South	Milkshake	Strawberry	337	£2.50	£842.50	
12/08/2010	London							
14/11/2011	Glasgow	North	Milkshake	Vanilla	200	£2.50	£500.00	
10/10/2011	Manchester	North	Milkshake	Vanilla	644	£2.50	£1,610.00	
11/11/2010	Leeds	North	Milkshake	Chocolate	225	£1.99	£447.75	
18/10/2011	Manchester	North	Hot Drinks	Americano	120	£1.00	£120.00	
12/08/2010	Manchester	North	Hot Drinks	Americano	699	£1.90	£1,328.10	
14/11/2011	London	South	Cold Drinks	Orange Juice	626	£0.85	£532.10	
16/06/2011	Glasgow	North	Cold Drinks	Apple Juice	170	£1.00	£170.00	
10/10/2011	Bath	South	Cold Drinks	Coca Cola	654	£0.85	£555.90	
11/11/2010	Bath	South	Cold Drinks	Coca Cola	118	£0.85	£100.30	
18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30	
12/08/2010	London	South	Hot Drinks	Machiatto	607	£1.95	£1,176.65	

Figure 417 – automatic functionality removed – style remains

The automatic functionality has been removed although the style has been kept.

If you want to remove the fancy formatting select the plain style first before converting to a normal range.
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11.9.3 Remove formatting before converting to a range

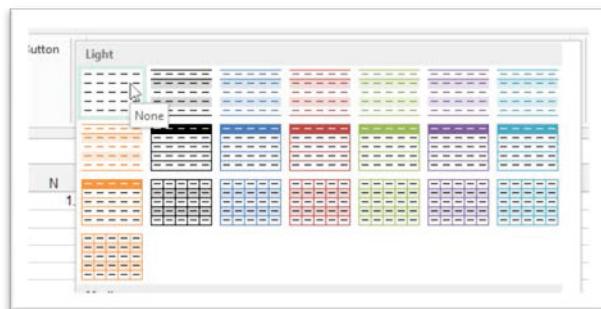


Figure 418 – choose None to remove the fancy formatting

1. Click inside your table
2. Select the first Table Style – it says None when you hover

The Table will revert to Black and White and when you Convert it to a Range, the formatting will be gone along with the automatic features.

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12 Filter a table

12.1 Filter a table

A table can be filtered in exactly the same way as a list. Only with a few magic extras!

12.1.1 Filter on one column

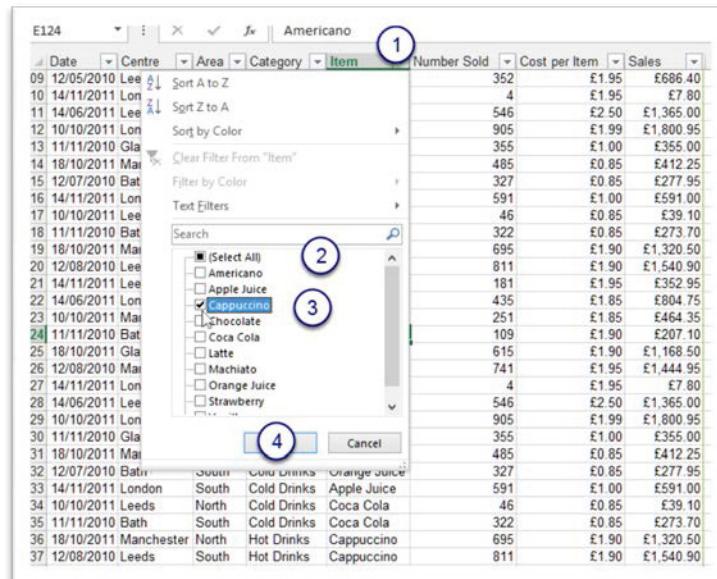


Figure 419 – tick the box of the item you want to filter on

1. Click on the drop down arrow on the column heading you want to filter
2. Un-check Select All
3. Select the check box next to the filter item
4. Click OK

12.1.2 See the results

	Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales
2	07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40
3	08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60
19	18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
28	14/06/2011	Leeds	North	Hot Drinks	Cappuccino	540	£1.90	£1,026.00
29	10/10/2011	Leeds	North	Hot Drinks	Cappuccino	578	£1.90	£1,098.20
12	12/08/2010	Glasgow	North	Hot Drinks	Cappuccino	902	£1.90	£1,713.80
33	13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,105.80
18	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50
19	12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90
4	18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50
35	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50
36	12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90
71	18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50
3	07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40
4	08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60
10	18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30
19	14/06/2011	Leeds	North	Hot Drinks	Cappuccino	540	£1.90	£1,026.00
00	10/10/2011	Leeds	North	Hot Drinks	Cappuccino	578	£1.90	£1,098.20
03	12/08/2010	Glasgow	North	Hot Drinks	Cappuccino	902	£1.90	£1,713.80
04	13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,105.80
19	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50
20	12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90
25	18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50
36	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50
37	12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90
49	18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50

Figure 420 – filter applied

Now I can see just the rows that match the filter criteria.

12.2 Filter a table with a total row

When a total row is added to the table, magic happens! Not only do I get to see just the rows that match my criteria, the total will be adjusted as well.

12.2.1 Total row unfiltered

Americano								
	Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales
02	18/10/2011	Manchester	North	Cold Drinks	Orange Juice	485	£0.85	£412.25
03	12/07/2011	Bath	South	Cold Drinks	Orange Juice	327	£0.85	£277.95
04	14/11/2011	London	South	Cold Drinks	Apple Juice	591	£1.00	£591.00
05	10/10/2011	Leeds	North	Cold Drinks	Coca Cola	46	£0.85	£39.10
06	11/11/2010	Bath	South	Cold Drinks	Coca Cola	322	£0.85	£273.70
07	18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50
08	12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90
09	14/11/2011	Leeds	North	Hot Drinks	Machiatto	181	£1.95	£352.95
10	14/06/2011	London	South	Hot Drinks	Latte	435	£1.85	£804.75
11	10/10/2011	Manchester	North	Hot Drinks	Latte	251	£1.85	£464.35
12	11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90	£207.10
13	16/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50
14	12/08/2010	Manchester	North	Hot Drinks	Machiatto	741	£1.95	£1,444.95
15	Total						98430	£176,141.22
16								

Figure 421 – regular total row

Here is my Coffee Sales worksheet with a total row and no filter. The Total Sales is £176,141.22

12.2.2 Total row filtered

Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales	L
12/08/2010	Glasgow	North	Hot Drinks	Cappuccino	902	£1.90	£1,713.80	
13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,105.80	
18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50	
12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90	
18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50	
18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50	
12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90	
18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50	
07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40	
08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60	
18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30	
14/06/2011	Leeds	North	Hot Drinks	Cappuccino	540	£1.90	£1,026.00	
10/10/2011	Leeds	North	Hot Drinks	Cappuccino	578	£1.90	£1,098.20	
12/08/2010	Glasgow	North	Hot Drinks	Cappuccino	902	£1.90	£1,713.80	
13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,105.80	
18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50	
12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90	
18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50	
18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50	
07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40	
08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60	
18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30	
14/06/2011	Leeds	North	Hot Drinks	Cappuccino	540	£1.90	£1,026.00	
10/10/2011	Leeds	North	Hot Drinks	Cappuccino	578	£1.90	£1,098.20	
12/08/2010	Glasgow	North	Hot Drinks	Cappuccino	902	£1.90	£1,713.80	
13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,105.80	
18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50	
12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90	
18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50	
Total					26583		£50,507.70	

Figure 422 – filter applied

Note that the total row is now £50,507.70! Only the Cappuccino rows have been totalled. Magic!

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12.3 Insert a slicer

Slicers are cool! Slicers allow you to filter your data from nice big buttons on the spreadsheet. See how to add and use one here.

12.3.1 Insert a slicer

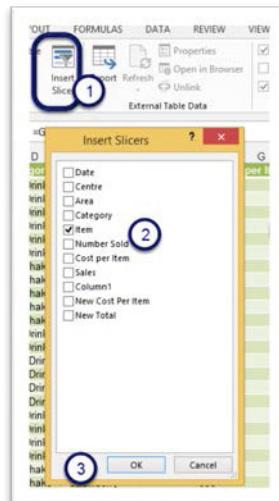


Figure 423 – add a slicer

1. Click Insert Slicer
2. Select the field name you want to use as a filter
3. Click OK

12.3.2 A slicer



Figure 424 – slicer appears with nice big filter buttons

I now have a slicer. Each of the blue buttons can be used to apply a filter.

12.3.3 Filter the table using the slicer

Date	A	B	C	D	E	F	G	H	L	M	N	O
		Centre	Area	Category	Item	Number Sold	Cost per Item	Sales				
07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40					
08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60					
18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30					
14/06/2011	Leeds	North	Hot Drinks	Cappuccino	540	£1.90	£1,026.00					
10/10/2011	Leeds	South	Hot Drinks	Cappuccino	578	£1.90	£1,098.20					
12/08/2010	Glasgow	North	Hot Drinks	Cappuccino	902	£1.90	£1,713.80					
13/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,085.60					
18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50					
12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90					
14/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50					
18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50					
12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90					
18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50					
07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40					
08/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60					
18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30					
14/06/2011	Leeds	North	Hot Drinks	Cappuccino	540	£1.90	£1,026.00					
01/10/2011	Leeds	North	Hot Drinks	Cappuccino	578	£1.90	£1,098.20					
12/08/2010	Glasgow	North	Hot Drinks	Cappuccino	902	£1.90	£1,713.80					
14/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,085.60					
18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50					
01/02/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90					
15/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50					
16/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50					
12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90					
12/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50					
07/02/2011	Glasgow	North	Hot Drinks	Cappuccino	636	£1.90	£1,208.40					
05/03/2010	Leeds	North	Hot Drinks	Cappuccino	384	£1.90	£729.60					
18/03/2011	Bath	South	Hot Drinks	Cappuccino	997	£1.90	£1,894.30					
04/06/2011	Leeds	North	Hot Drinks	Cappuccino	540	£1.90	£1,026.00					
10/10/2011	Leeds	South	Hot Drinks	Cappuccino	578	£1.90	£1,098.20					
14/08/2010	Glasgow	North	Hot Drinks	Cappuccino	902	£1.90	£1,713.80					
15/06/2010	Bath	South	Hot Drinks	Cappuccino	582	£1.90	£1,085.60					
16/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50					
12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90					
18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50					
18/10/2011	Manchester	North	Hot Drinks	Cappuccino	695	£1.90	£1,320.50					
12/08/2010	Leeds	South	Hot Drinks	Cappuccino	811	£1.90	£1,540.90					
18/10/2011	Glasgow	North	Hot Drinks	Cappuccino	615	£1.90	£1,168.50					
Total					26583		£50,567.70					

Figure 425 – using a slicer

Having clicked on the button for Cappuccino – the slicer springs into action and shows me just the Cappuccino rows.

12.3.4 Add another slicer

Figure 426 – you can have more than one slicer

Follow the same steps to add a slicer, only this time select a different field.

In the image above I now have one slicer for the Item column and one for the Centre.

12.3.5 Filter on a second field

The screenshot shows a sales dataset in a table with columns: Date, Centre, Area, Category, Item, Number Sold, Cost per Item, and Sales. Two filters are applied via slicers:

- Item Slicer (Top Right):** Filters for Cappuccino.
- Centre Slicer (Bottom Right):** Filters for Leeds.

The filtered data shows sales for Cappuccino in Leeds only.

Figure 427 – keep on refining the filter field by field

Simply click on the field on which you want to filter.

In the image above, I have applied two filters, one on the Item field and one on the Centre field – so now I am looking at the sales of Cappuccino in Leeds only.

12.3.6 Remove the filter applied via slicer



Figure 428 – clear the slicer – click the little red x

Click the red x next to the Filter icon at the top of the slicer.

12.4 Customize a slicer

If you have more than one slicer you might want to change the colour of the second one to make it easier to differentiate.

12.4.1 Format a slicer

Category	Item	Number Sold	Cost per Item	Sales
Hot Drinks	Cappuccino	384	£1.90	£729.60
Hot Drinks	Latte	153	£1.85	£283.05
Hot Drinks	Machiatto	181	£1.95	£352.95
Hot Drinks	Cappuccino	193	£1.90	£368.40
Hot Drinks	Cappuccino	193	£1.90	£368.40
Hot Drinks	Latte	193	£1.90	£368.40
Hot Drinks	Machiatto	193	£1.95	£368.40
Milkshake	Vanilla	181	£1.95	£352.95
Cold Drinks	Coca Cola	46	£0.85	£39.10
Hot Drinks	Cappuccino	181	£1.90	£352.95
Hot Drinks	Machiatto	181	£1.95	£352.95
Milkshake	Vanilla	546	£2.50	£1,365.00
Cold Drinks	Coca Cola	46	£0.85	£39.10
Hot Drinks	Cappuccino	193	£1.90	£368.40
Hot Drinks	Machiatto	193	£1.95	£368.40
Milkshake	Vanilla	225	£1.99	£447.75

Figure 429 – change the colour of a slicer

1. Click on the slicer to select it
2. Click on the style you want to apply from the Slicer Styles gallery



Figure 430 – two slicers in different colours

12.5 Delete a slicer

12.5.1 To delete a slicer

Click on the slicer and press the Delete Key on the keyboard.

The slicer will be gone!

13 Grouping and outlining

13.1 Outlining

If you have a spreadsheet with totals of certain groups of data you can outline those groups so that you can expand and collapse them. You need to have some subtotals applied, and in the following chapter we will see how to get Excel to apply subtotals automatically.

My data assumes that totals have already been generated.

13.1.1 Data with totals

A	B	C	D	E	F	G	H	I
1	Date	Centre	Area	Category	Item	Number	Cost per	Sales
2	10/10/2011	Bath	South	Cold Drink	Coca Cola	654	£0.85	£555.90
3	11/11/2010	Bath	South	Cold Drink	Coca Cola	118	£0.85	£100.30
4	18/03/2011	Bath	South	Hot Drinks	Cappuccin	997	£1.90	£1,894.30
5	14/11/2011	Bath	South	Hot Drinks	Latte	267	£1.85	£493.95
6	10/10/2011	Bath	South	Milkshake	Strawberry	565	£2.50	£1,412.50
7	11/11/2010	Bath	South	Milkshake	Strawberry	938	£2.50	£2,345.00
8	Bath Total						£6,801.95	
9	14/06/2011	Glasgow	North	Cold Drink	Apple Juic	170	£1.00	£170.00
10	14/02/2011	Glasgow	North	Cold Drink	Coca Cola	492	£0.85	£418.20
11	11/11/2010	Glasgow	North	Cold Drink	Apple Juic	355	£1.00	£355.00
12	07/02/2011	Glasgow	North	Hot Drinks	Cappuccin	636	£1.90	£1,208.40
13	12/08/2010	Glasgow	North	Hot Drinks	Cappuccin	902	£1.90	£1,713.80
14	10/10/2011	Glasgow	North	Hot Drinks	Latte	101	£1.85	£186.85
15	18/10/2011	Glasgow	North	Hot Drinks	Americano	571	£1.90	£1,084.90
16	14/11/2011	Glasgow	South	Milkshake	Strawberry	344	£2.50	£860.00
17	14/09/2011	Glasgow	North	Milkshake	Vanilla	200	£2.50	£500.00
18	Glasgow Total						£6,497.15	
19	14/11/2011	London	South	Cold Drink	Orange Jui	626	£0.85	£532.10
20	18/10/2011	London	South	Hot Drinks	Machiato	56	£1.95	£109.20
21	12/08/2010	London	South	Hot Drinks	Machiato	907	£1.95	£1,768.65
22	11/11/2010	London	South	Hot Drinks	Latte	447	£1.85	£826.95
23	18/10/2011	London	South	Hot Drinks	Latte	657	£1.85	£1,215.45
24	14/06/2011	London	South	Hot Drinks	Latte	617	£1.85	£1,141.45
25	11/11/2010	London	South	Hot Drinks	Americano	92	£1.90	£174.80
26	12/08/2010	London	South	Milkshake	Strawberry	337	£2.50	£842.50
27	18/10/2011	London	South	Milkshake	Vanilla	149	£2.50	£372.50
28	12/08/2010	London	South	Milkshake	Chocolate	916	£1.99	£1,822.84
29	London Total						£8,806.44	
30								

Figure 431 – group some or all of the data

Here are some of the rows of data for Coffee Island sales. I have totals for the sales of each centre showing here. If I group the data I can collapse it and see just the outlines.

13.1.2 Group data

Figure 432 – select what you want to group first

1. Select the data to group – in this case A2:H7
2. Click on the Data Ribbon Tab
3. Click on the drop down under Group
4. Select Rows or Columns (in my example Rows)
5. Click OK

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Inés Arézaga Esteva (Spain), 25 years old
Education: Chemical Engineer

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Continue to create groups for each set of data.

Date	Centre	Area	Category	Item	Number	Cost	per I	Sales
2 10/10/2011	Bath	South	Cold Drink	Coca Cola	654	£0.85	£556.90	
3 11/11/2010	Bath	South	Cold Drink	Coca Cola	118	£0.85	£100.30	
4 18/03/2011	Bath	South	Hot Drinks	Cappuccin	997	£1.90	£1,894.30	
5 14/11/2011	Bath	South	Hot Drinks	Latte	267	£1.85	£493.95	
6 10/10/2011	Bath	South	Milkshake	Strawberry	565	£2.50	£1,412.50	
7 11/11/2010	Bath	South	Milkshake	Strawberry	938	£2.50	£2,345.00	
8 Bath Total								£6,801.95
9 14/06/2011	Glasgow	North	Cold Drink	Apple Juic	170	£1.00	£170.00	
10 14/02/2011	Glasgow	North	Cold Drink	Coca Cola	492	£0.85	£418.20	
11 11/11/2010	Glasgow	North	Cold Drink	Apple Juic	356	£1.00	£356.00	
12 07/02/2011	Glasgow	North	Hot Drinks	Cappuccin	636	£1.90	£1,208.40	
13 12/08/2010	Glasgow	North	Hot Drinks	Cappuccin	902	£1.90	£1,713.80	
14 10/10/2011	Glasgow	North	Hot Drinks	Latte	101	£1.85	£186.85	
15 18/10/2011	Glasgow	North	Hot Drinks	Americano	571	£1.90	£1,084.90	
16 14/11/2011	Glasgow	South	Milkshake	Strawberry	344	£2.50	£860.00	
17 14/09/2011	Glasgow	North	Milkshake	Vanilla	200	£2.50	£500.00	
18 Glasgow Total								£6,497.15
19 14/11/2011	London	South	Cold Drink	Orange Jui	626	£0.85	£532.10	
20 18/10/2011	London	South	Hot Drinks	Machiat	56	£1.95	£109.20	
21 12/08/2010	London	South	Hot Drinks	Machiat	907	£1.95	£1,768.65	
22 11/11/2010	London	South	Hot Drinks	Latte	447	£1.85	£826.95	
23 18/10/2011	London	South	Hot Drinks	Latte	657	£1.85	£1,215.45	
24 14/06/2011	London	South	Hot Drinks	Latte	617	£1.85	£1,141.45	
25 11/11/2010	London	South	Hot Drinks	Americano	92	£1.90	£174.80	
26 12/08/2010	London	South	Milkshake	Strawberry	337	£2.50	£842.50	
27 18/10/2011	London	South	Milkshake	Vanilla	149	£2.50	£372.50	
28 12/08/2010	London	South	Milkshake	Chocolate	916	£1.99	£1,822.84	
29 London Total								£8,806.44
30								
31								
32								

Figure 433 – more than one group

Here is my data with an outline that I created manually. I grouped each set of data.

I now have the small 1 and 2 icons at the top left of the screen (1)

Also note the lines and the minus signs in the new grey margin (2)

13.1.3 View the totals

Date	Centre	Area	Category	Item	Number	Cost	per I	Sales
1 10/10/2011								£6,801.95
8 Bath Total								£6,497.15
18 Glasgow Total								£8,806.44
29 London Total								
30								
31								
32								

Figure 434 – collapse to see totals

Click on the 1 in the top left corner and the groups will collapse so that you can see just the total rows.

13.1.4 View a particular set of data

	A	B	C	D	E	F	G	H	I
1	Date	Centre	Area	Category	Item	Number	Cost per	Sales	
2	10/10/2011	Bath	South	Cold Drink	Coca Cola	654	£0.85	£555.90	
3	11/11/2010	Bath	South	Cold Drink	Coca Cola	118	£0.85	£100.30	
4	18/03/2011	Bath	South	Hot Drinks	Cappuccin	997	£1.90	£1,894.30	
5	14/11/2011	Bath	South	Hot Drinks	Latte	267	£1.85	£493.95	
6	10/10/2011	Bath	South	Milkshake	Strawberry	565	£2.50	£1,412.50	
7	11/11/2010	Bath	South	Milkshake	Strawberry	938	£2.50	£2,345.00	
8	Bath Total							£6,801.95	
18	Glasgow Total							£6,497.15	
29	London Total							£8,806.44	
30									

Figure 435 – expand a particular set of data

To expand a particular set of data, and see how it is made up, click the plus sign next to the total.

Here you can see all the rows that belong to the Bath group.

13.1.5 Remove an Outline

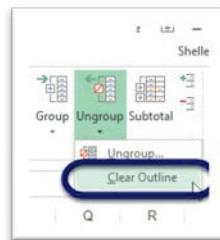


Figure 436 – clear the outline here

1. Click inside the data
2. Click on Un-group
3. Select Clear Outline

13.2 Create an automatic outline

You can make Excel create an outline automatically for you too.

13.2.1 Auto outline

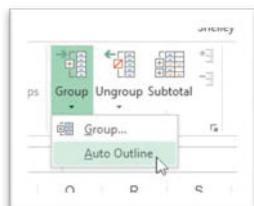


Figure 437 – Excel will create an automatic outline

1. Click inside your data
2. Click on the drop down under Group
3. Click on Auto Outline

Your data will now have two outlines, one for rows and one for columns.

13.2.3 Auto Outline Groups

Date	Centre	Area	Category	Item	Number	Cost per	Sales
1						£6,801.95	
8	Bath Total					£6,497.15	
18	Glasgow Total					£8,806.44	
29	London Total						
0							
1							
32							

Figure 438

In my Auto Outlined data I now have more of the small icons in the top left of the spreadsheet, one set is for the rows, and one for the columns. (1)

I also have a minus icon on the far right – I can collapse the columns here and Excel will hide all the columns except the Sales column which makes it easier to read (2)

I also have the plus signs in the left margin to expand and collapse the groups. (3)

14 Subtotals

14.1 Why use subtotals?

Subtotals are one of my all-time favorite features in Excel and have been around for quite a while. I am always amazed at how many people have no idea how useful they are.

In the section on grouping and outlining data, see page 120, we wanted to see totals for certain groups of data. To do this we had to use the following process:

- Sort the data by the item on which you want to group
- At the end of each group of data add a row
- In each of the new rows, type the text to describe what it is
- In the column we want totals for, create the Sum on the total row
- Then add the grouping and outlining.

Phew! So much work!



The Subtotals Command does ALL of that automatically with one exception – you have to sort the data first. Excel is very clever and sometimes seems like magic, however it cannot read your mind. So if you want to summarize the types of drink sold you first need to sort the data on that column. Do you want to see subtotals for the centre where the drinks were sold? Sort on that column.

The data does need to be arranged in columns with repeating data so that it can be summarized. In my Coffee Island Sales worksheet, I can summarize by item, centre or area. All I have to do is sort it first!

14.2 Sort first

Sort the data by the column you want to summarize.

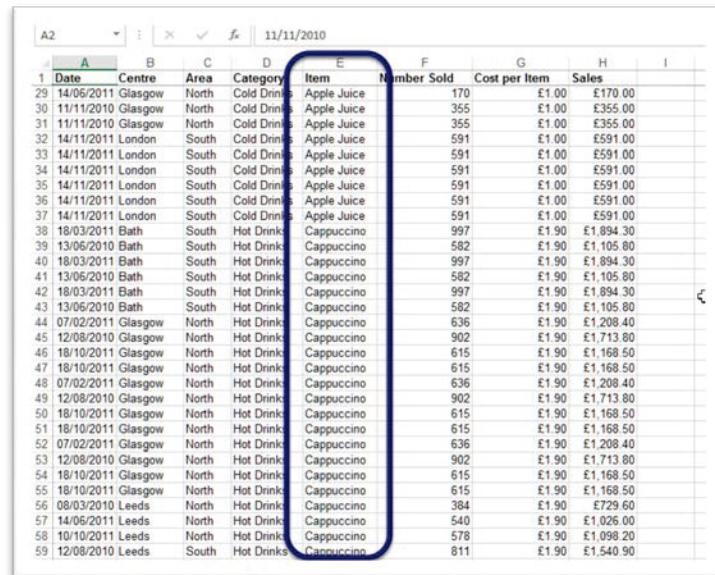
14.2.1 Sort

Date	Centre	Area	Category	Item	Number	
11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90 £207.10
11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90 £207.10
11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90 £207.10
11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90 £207.10
11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90 £207.10
11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90 £207.10
11/11/2010	Bath	South	Hot Drinks	Americano	109	£1.90 £207.10
18/10/2011	Glasgow	North	Hot Drinks	Americano	571	£1.90 £1,084.90
18/10/2011	Glasgow	North	Hot Drinks	Americano	571	£1.90 £1,084.90
18/10/2011	Glasgow	North	Hot Drinks	Americano	571	£1.90 £1,084.90
11/11/2010	London	South	Hot Drinks	Americano	92	£1.90 £174.80
11/11/2010	London	South	Hot Drinks	Americano	92	£1.90 £174.80
11/11/2010	London	South	Hot Drinks	Americano	92	£1.90 £174.80
18/10/2011	Manchester	North	Hot Drinks	Americano	120	£1.00 £120.00

Figure 439 – sort the data

1. Click into the column to sort by (1)
2. Click on the Data Ribbon Tab
3. Click the Sort AZ to sort alphabetically (2)

14.2.2 Data sorted by item



Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales
29/10/2011	Glasgow	North	Cold Drinks	Apple Juice	170	£1.00	£170.00
30/10/2011	Glasgow	North	Cold Drinks	Apple Juice	355	£1.00	£355.00
31/10/2011	Glasgow	North	Cold Drinks	Apple Juice	355	£1.00	£355.00
32/10/2011	London	South	Cold Drinks	Apple Juice	591	£1.00	£591.00
33/10/2011	London	South	Cold Drinks	Apple Juice	591	£1.00	£591.00
34/10/2011	London	South	Cold Drinks	Apple Juice	591	£1.00	£591.00
35/10/2011	London	South	Cold Drinks	Apple Juice	591	£1.00	£591.00
36/10/2011	London	South	Cold Drinks	Apple Juice	591	£1.00	£591.00
37/10/2011	London	South	Cold Drinks	Apple Juice	591	£1.00	£591.00
38/10/2011	Bath	South	Hot Drnk	Cappuccino	997	£1.90	£1,894.30
39/10/2011	Bath	South	Hot Drnk	Cappuccino	582	£1.90	£1,105.80
40/10/2011	Bath	South	Hot Drnk	Cappuccino	997	£1.90	£1,894.30
41/10/2011	Bath	South	Hot Drnk	Cappuccino	582	£1.90	£1,105.80
42/10/2011	Bath	South	Hot Drnk	Cappuccino	997	£1.90	£1,894.30
43/10/2011	Bath	South	Hot Drnk	Cappuccino	582	£1.90	£1,105.80
44/10/2011	Glasgow	North	Hot Drnk	Cappuccino	636	£1.90	£1,208.40
45/10/2011	Glasgow	North	Hot Drnk	Cappuccino	902	£1.90	£1,713.80
46/10/2011	Glasgow	North	Hot Drnk	Cappuccino	615	£1.90	£1,168.50
47/10/2011	Glasgow	North	Hot Drnk	Cappuccino	615	£1.90	£1,168.50
48/10/2011	Glasgow	North	Hot Drnk	Cappuccino	636	£1.90	£1,208.40
49/10/2011	Glasgow	North	Hot Drnk	Cappuccino	902	£1.90	£1,713.80
50/10/2011	Glasgow	North	Hot Drnk	Cappuccino	615	£1.90	£1,168.50
51/10/2011	Glasgow	North	Hot Drnk	Cappuccino	615	£1.90	£1,168.50
52/10/2011	Glasgow	North	Hot Drnk	Cappuccino	636	£1.90	£1,208.40
53/10/2011	Glasgow	North	Hot Drnk	Cappuccino	902	£1.90	£1,713.80
54/10/2011	Glasgow	North	Hot Drnk	Cappuccino	615	£1.90	£1,168.50
55/10/2011	Glasgow	North	Hot Drnk	Cappuccino	615	£1.90	£1,168.50
56/03/2012	Leeds	North	Hot Drnk	Cappuccino	384	£1.90	£729.60
57/04/2011	Leeds	North	Hot Drnk	Cappuccino	540	£1.90	£1,026.00
58/10/2011	Leeds	North	Hot Drnk	Cappuccino	578	£1.90	£1,098.20
59/12/2010	Leeds	South	Hot Drnk	Cappuccino	811	£1.90	£1,540.90

Figure 440 – Sorted data

14.3 Subtotals command

Now that the data is sorted, I want to add subtotals to each group of Items.

14.3.1 Insert subtotals

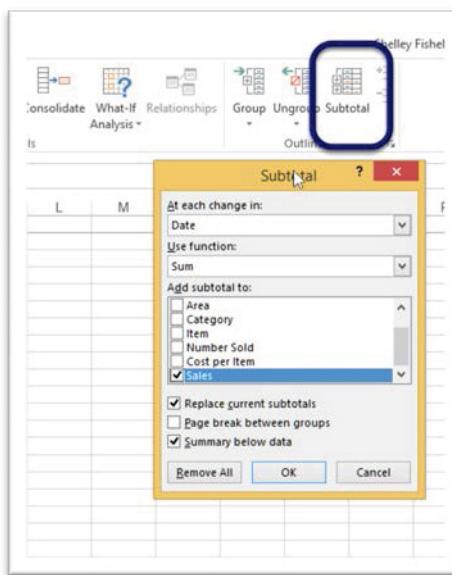


Figure 441 – Subtotals on the Data Ribbon

1. Click inside the data list – this is very important, if you don't Excel does not find any headings.
2. Click on Subtotal
3. Then Complete the dialog box

14.3.2 Subtotal dialog box

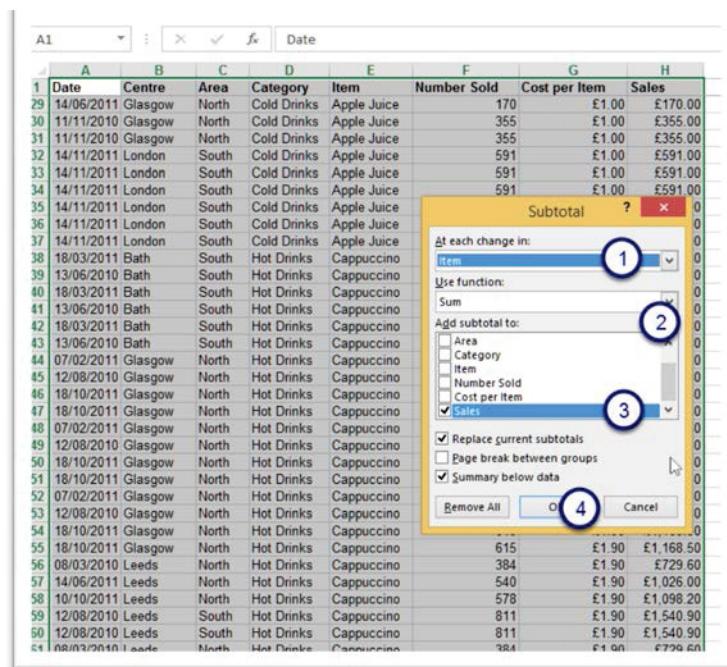


Figure 442 – set the criteria here

1. Change the – **At each change in** to the field name you want to summarize by – in my case Item
2. Choose the **function** you want to use – I have selected Sum
3. Tick the box for the column you want to summarize – I have ticked the Sales column, you may have more than one column to summarize just tick all the boxes
4. Click OK

What about the other options in the dialog box?

Replace current subtotals – I used the Sum function to total the sales of each type of Item. However I might want to add an Average Sales. If I leave Replace current subtotals ticked, the Sum will be removed and the Average function will replace it. If I would like to see both the Sum and the Average, I need to untick that box.

Page Break between groups – when printing your subtotals you might want each different group to print on a separate page, tick this box to do that.

Summary below data – this makes sure that the summary row is below the group of data – best to leave this ticked.

14.3.3 Grand total

1	Date	Centre	Area	Category	Item	Number	Cost per	Sales
						Grand Total		
37								
38								
39								
40								

Figure 443 – see the grand total only

Click the Number 1 in the top left corner to see just the grand total which Excel added to the data.

14.3.4 Subtotals

1	Date	Centre	Area	Category	Item	Number	Cost per	Sales
						Grand Total		
4					Americano Total		£1,259.70	
7					Apple Juice Total		£525.00	
11					Cappuccino Total		£4,816.50	
13					Chocolate Total		£1,822.84	
17					Coca Cola Total		£1,074.40	
23					Latte Total		£3,864.65	
26					Machiatto Total		£1,877.85	
28					Orange Juice Total		£532.10	
33					Strawberry Total		£5,460.00	
36					Vanilla Total		£872.50	
37					Grand Total		£22,105.54	

Figure 444 – see just the subtotals

Click the Number 2 in the top left corner to see all the subtotals and the grand total



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14.3.5 See all data

	Date	Centre	Area	Category	Item	Number Sold	Cost per Item	Sales
8	18/03/2011	Bath	South	Hot Drink	Cappuccino	997	£1.90	£1,894.30
9	07/02/2011	Glasgow	North	Hot Drink	Cappuccino	636	£1.90	£1,206.40
10	12/08/2010	Glasgow	North	Hot Drink	Cappuccino	902	£1.90	£1,713.00
11	12/08/2010	London	South	Milkshake	Chocolate	916	£1.99	£1,822.50
12	12/08/2010	London	South	Milkshake	Chocolate Total			
13					Chocolate Total	916	£1.99	£1,822.50
14	10/10/2011	Bath	South	Cold Drink	Coca Cola	654	£0.85	£555.90
15	11/11/2010	Bath	South	Cold Drink	Coca Cola	118	£0.85	£100.30
16	14/02/2011	Glasgow	North	Cold Drink	Coca Cola	492	£0.85	£418.20
17					Coca Cola Total			
18	14/11/2011	Bath	South	Hot Drinks	Latte	267	£1.85	£493.95
19	10/10/2011	Glasgow	North	Hot Drinks	Latte	101	£1.85	£186.85
20	11/11/2010	London	South	Hot Drinks	Latte	447	£1.85	£826.95
21	18/10/2011	London	South	Hot Drinks	Latte	657	£1.85	£1,215.45
22	14/06/2011	London	South	Hot Drinks	Latte	617	£1.85	£1,142.45
23					Latte Total			
24	18/10/2011	London	South	Hot Drinks	Machiatto	56	£1.95	£105.20
25	12/08/2010	London	South	Hot Drinks	Machiatto	907	£1.95	£1,768.65
26					Machiatto Total			
27	14/11/2011	London	South	Cold Drink	Orange Jui	626	£0.85	£532.10
28					Orange Juice Total			
29	10/10/2011	Bath	South	Milkshake	Strawberry	565	£2.50	£1,412.50
30	11/11/2010	Bath	South	Milkshake	Strawberry	938	£2.50	£2,345.00
31	14/11/2011	Glasgow	South	Milkshake	Strawberry	344	£2.50	£860.00
32	12/08/2010	London	South	Milkshake	Strawberry	337	£2.50	£842.50
33					Strawberry Total			
34	14/09/2011	Glasgow	North	Milkshake	Vanilla	200	£2.50	£500.00
35	19/10/2011	London	South	Milkshake	Vanilla	149	£2.50	£372.50
36					Vanilla Total			
37					Grand Total			£22,105.54
38								

Figure 445 – see all data

Click the Number 3 in the top left corner to see all the data.

14.4 Remove subtotals

When you have finished working with subtotals or if you want to see the data totaled by different columns, remove the current subtotals. The data returns to a list and you are now free to re-sort it or get on with something else.

14.4.1 Remove subtotals

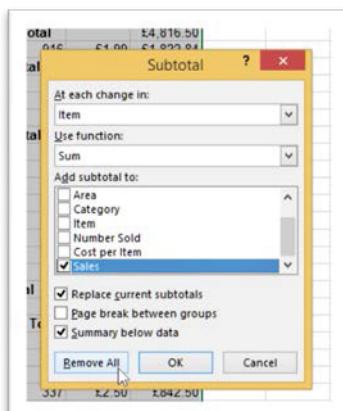


Figure 446 – remove when finished

1. Click inside the data – if you don't Excel will not recognize the subtotals and will not be able to remove them
2. Click on Subtotals
3. Click on Remove All

15 Apply conditional formatting

15.1 Conditional formatting

Conditional formatting is another one of those really handy tools. Format your data so that you can highlight all entries over a certain value, or below a certain value. Use fancy formatting to show data that matches your criteria. There are several types of Conditional Formatting to choose from.

- **Highlight Cells Rules** – pick this to show cells that match a particular number/text value/date.
- **Top/Bottom Rules** – pick this one, for example, to find the Top 10, Top 10%, Bottom 10 or Bottom 10%.
- **Data Bars** – these shade the cells based on top and bottom values, so the greater the value the more shading in the cell. You can pick the colour scheme to suit.
- **Colour Scales** – use Colour Scales to apply a scale from smallest to largest and set what each colour means.
- **Icon Sets** – Use Icon Sets to show crosses and ticks, traffic lights etc as symbols in the highlighted cells.

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15.1.1 Highlight cells rules

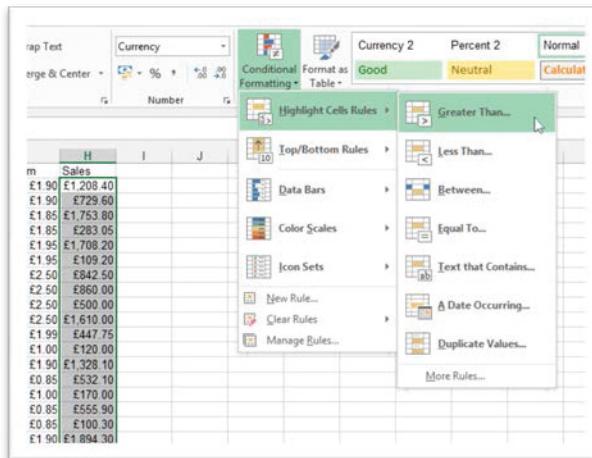


Figure 447 – apply a rule to highlight cells

1. Select the cells to which you want to apply the formatting
2. Click on Conditional Formatting
3. Click on Highlight Cells Rules
4. Choose Greater Than

15.1.2 Add the criteria

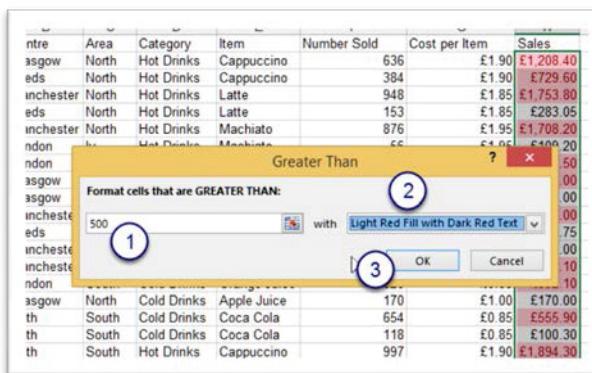


Figure 448 – what criteria should it highlight?

1. Type in the criteria you want to match – in my example I am looking for cells where the value is greater than 500
2. Pick one of the formats – I have left it at the default format of Light Red Fill with Dark Red Text (you can pick a different one or create a custom format)
3. Click OK

15.1.3 Remove conditional formatting

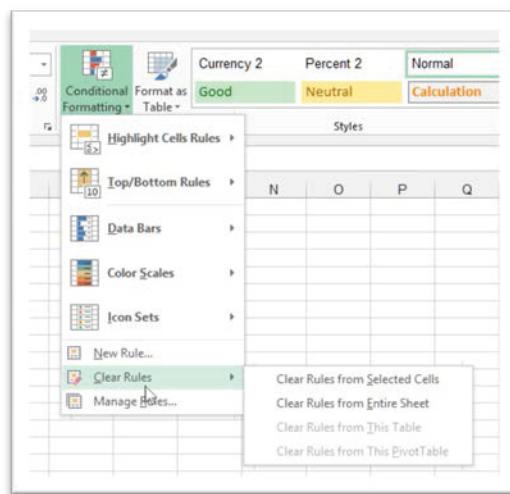


Figure 449 – clear conditional formatting when done

1. Highlight the cells with the formatting
2. Click Conditional Formatting
3. Select Clear Rules
4. Make a choice of Clear Rules from Selected Cells or Clear Rules from Entire Sheet

15.2 Top and bottom rules

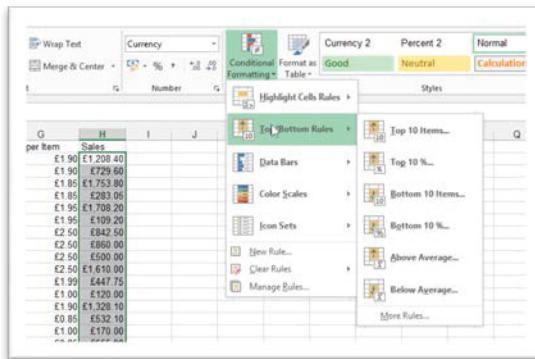


Figure 450 – top 10, bottom 10 etc

1. Select the cells
2. Click Conditional Formatting
3. Click on Top/Bottom Rules

15.2.1 Add/pick criteria

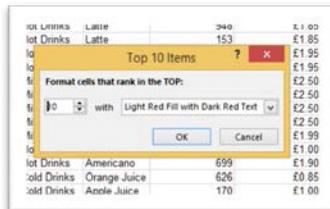


Figure 451 – set criteria

I picked Top 10 Items

Click OK

	Number Sold	Cost per item	Sales
2	636	£1.90	£1,208.40
3	384	£1.90	£729.60
	948	£1.85	£1,753.80
	153	£1.85	£283.05
	876	£1.95	£1,708.20
	56	£1.95	£109.20
	337	£2.50	£842.50
	344	£2.50	£860.00
	200	£2.50	£500.00
	644	£2.50	£1,610.00
	225	£1.90	£447.75
	120	£1.00	£120.00
	659	£1.90	£1,228.10
	606	£1.00	£606.00
	170	£1.00	£170.00
	654	£0.85	£555.90
	118	£0.85	£100.30
	997	£1.90	£1,884.30
	907	£1.95	£1,768.65
	267	£1.85	£493.95
	112	£1.90	£212.80
	565	£2.50	£1,412.50
	938	£2.50	£2,345.00
	149	£2.50	£372.50
	916	£1.99	£1,822.84
	492	£0.85	£418.20
	540	£1.90	£1,026.00
	578	£1.90	£1,098.20
	447	£1.85	£826.95
	657	£1.85	£1,215.45
	902	£1.90	£1,713.80
	...		

Figure 452 – top 10 values formatted

In this case, the Top 10 values have been formatted.

Try out the other options in the list and see what results you get.

15.3 Data bars

Data bars will shade the cells according to their values.

15.3.1 Apply data bars

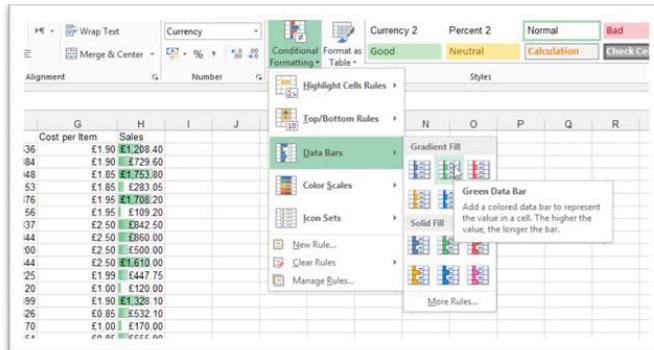


Figure 453 – data bars fill the cells with colour

1. Select the cells you want to use
2. Click Conditional Formatting
3. Click Data Bars
4. Select the colour scheme to suit

You will see the colour applied to the selected cells.

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15.3.2 Remove conditional formatting

1. Select the cells with the formatting
2. Click Conditional Formatting
3. Click Clear Rules
4. Select Clear from Selected Cells or Clear from Entire Sheet

15.4 Colour scales

Colour scales apply shading to cells using a predefined scale of colour from hot to cold or within a colour palette.

15.4.1 Apply colour scales

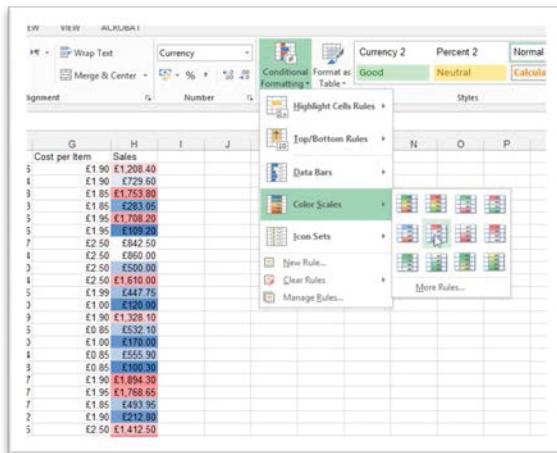


Figure 454 – colour scales are great for presentations

1. Select the data to which you want to apply the format
2. Click Conditional Formatting
3. Click Colour Scales
4. Select the colour scale you want to use

The format will be applied.

15.4.2 Remove conditional formatting

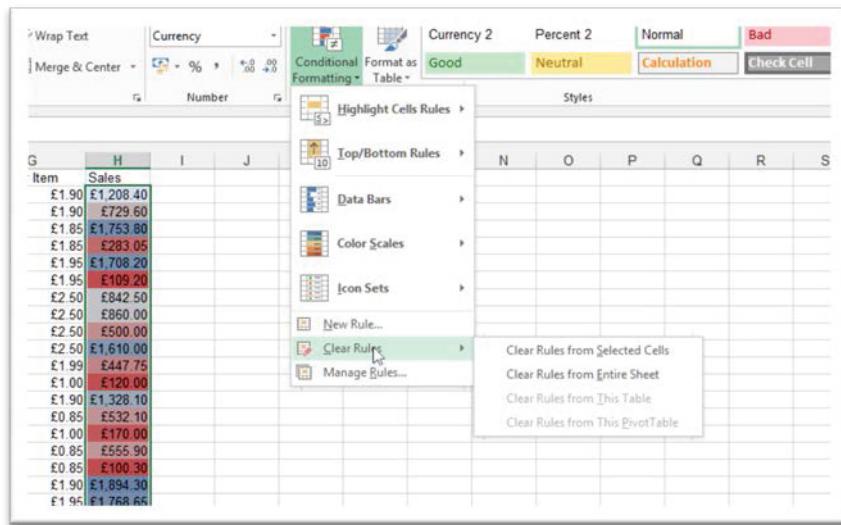
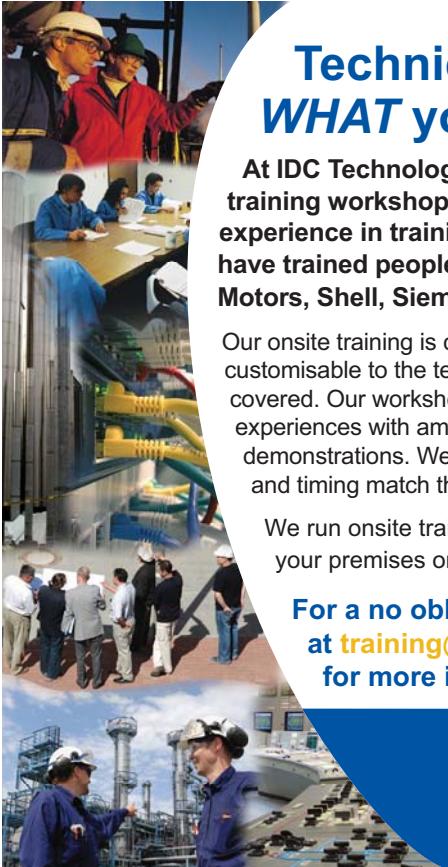


Figure 455 – clear conditional formats

1. Select the cells from which you want to remove Conditional Formatting
2. Click Conditional Formatting
3. Click on Clear Rules
4. Choose whether to Clear Rules from Selected Cells or Clear Rules from Entire Sheet



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15.5 Icon sets

Icon sets can be used to really jazz up your data. Use them when you need to show a visual image – useful when the data is added to a presentation.

15.5.1 Apply icon sets

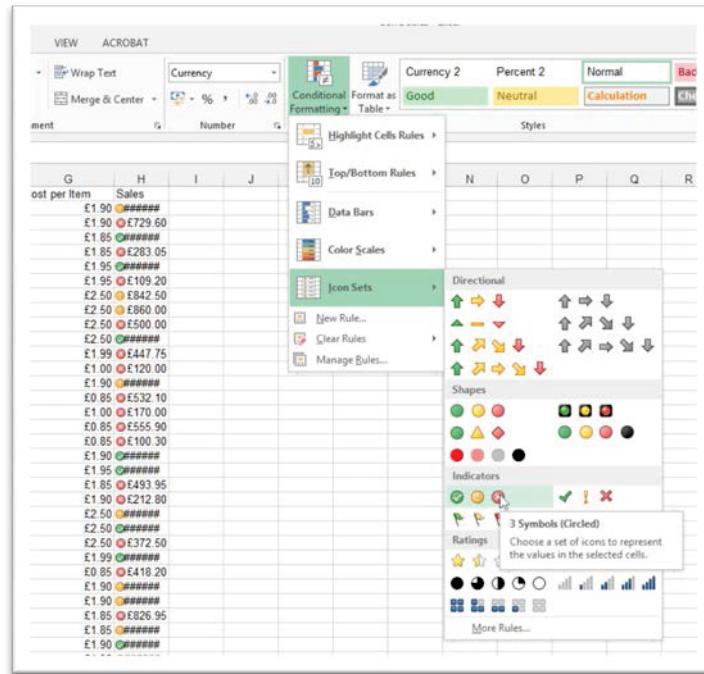


Figure 456 – icon sets add fun to a dull spreadsheet

1. Select the data to which you want to apply Conditional Formatting
2. Click Conditional Formatting
3. Click on Icon Sets
4. Pick the Icon Set you want to use

You may notice hash symbols in some of the cells – the reason for this is that the column is not wide enough to display both the values and the icon. To rectify simply re size the column width.

15.5.2 Show the icon only

There may be times such as when adding the data to a presentation, or showing it to your boss, that you want to hide the numbers and just show the icons.

In order to do this, you will need to edit the rule.

15.5.3 Edit the rule

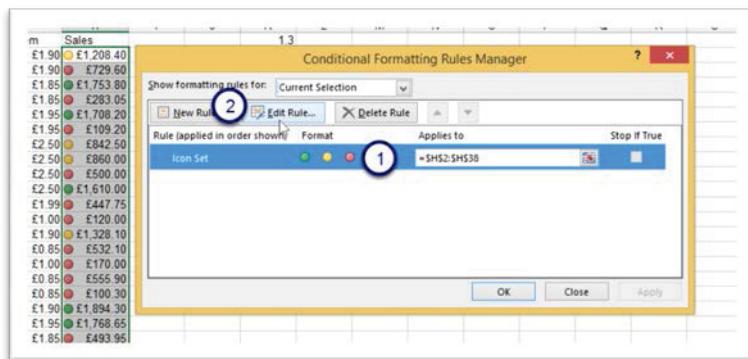


Figure 457 – edit the rule here

1. Select the data with the rule applied
2. Click Conditional Formatting
3. Click Manage Rules (near the bottom)
4. In the dialog box click on the rule you want to Edit (1)
5. Click Edit Rule (2)

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15.5.4 Edit formatting rule dialog box

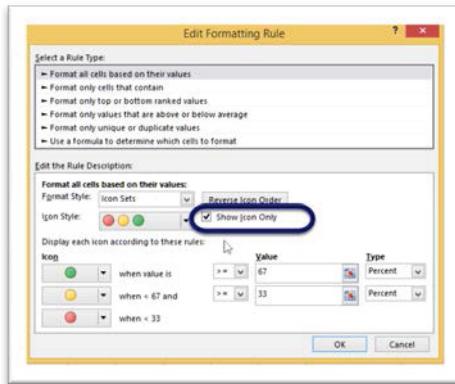


Figure 458 – change elements of the rule

This is where you can change different elements of the rule such as changing the icons used or how they work.

1. For our purposes – check the box Show Icon Only
2. Click OK
3. Then click OK again

m	Sales
	£1.90
	£1.90
	£1.85
	£1.85
	£1.95
	£1.95
	£2.50
	£2.50
	£2.50
	£2.50
	£1.99
	£1.00
	£1.90
	£0.85
	£1.00
	£0.85
	£0.85
	£1.90
	£1.95
	£1.85
	£1.90
	£2.50
	£2.50
	£2.50
	£1.99
	£1.90
	£0.85
	£1.90
	£1.90
	£1.85
	£1.85
	£1.90

Figure 459 – here are my icons

Back in the spreadsheet the data has gone and only the icons are showing.

15.5.5 Remove conditional formatting

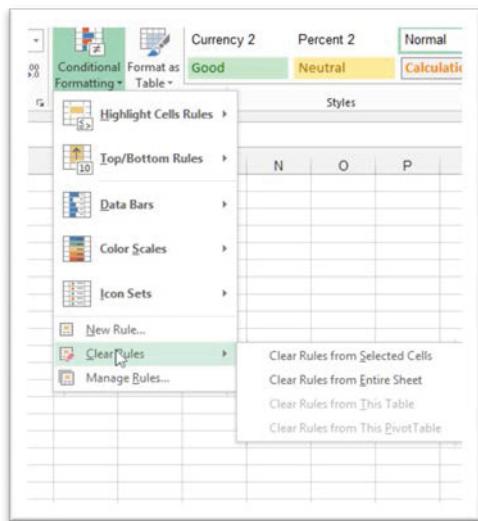


Figure 460 – clear conditional formatting

1. Select the data with the formatting
2. Click on Conditional Formatting
3. Click on Clear Rules
4. Choose from Clear Rules from Selected Cells or Clear Rules from Entire Sheet

The advertisement features a collage of five images: a man working at a desk, a woman smiling, a modern building at night, a man holding a folder, and a woman holding a laptop. In the bottom right corner, there is a dark blue banner with the 'oticon' logo and the tagline 'PEOPLE FIRST'.

www.job.oticon.dk

15.6 Clear rules

When you have finished presenting your data, you may want to remove the conditional formatting. Here is how.

15.6.1 Remove conditional formatting

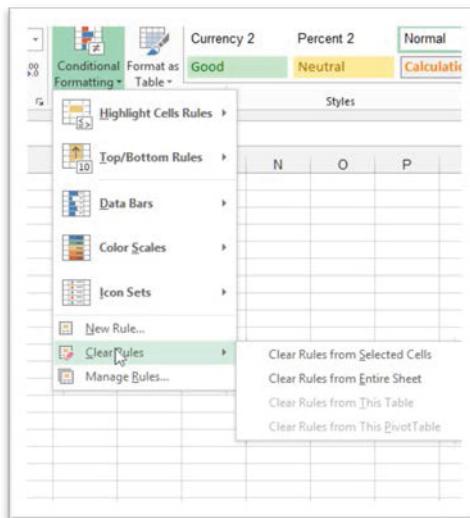


Figure 461 – clear rules from selection or entire sheet

1. Select the data with the formatting
2. Click on Conditional Formatting
3. Click on Clear Rules
4. Choose from Clear Rules from Selected Cells or Clear Rules from Entire Sheet

15.7 Use a formula to control conditional formatting

To add conditional formatting to show a range of colours – where a cell has a value greater than 100% turn it green, where it has a value less than 90% it is red and if in between it is amber.

15.7.1 Change the colour fill

	B	C	D
1	567	102%	
2	45	60%	
3	356	95%	

Figure 462 – use a formula in conditional formatting

Here I apply the conditional format to the cells in column B. I tell them to look at the cell in column C and depending on the percentage shown, the colour will change.

I apply three formats to the cells one on top of the other.

$=$C1>=1$ – if C1 is greater than or equal to 1 the format goes Green
 $=$C1>0.9$ if C1 is greater than 0.9 the format is amber
 $=$C1<0.9$ if C1 is less than 0.9 then the format goes red

15.7.2 Apply the first condition

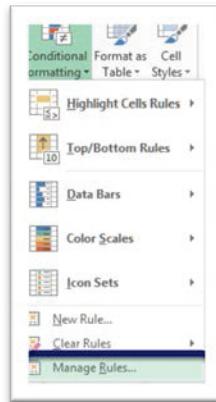


Figure 463 – set first condition

Select the cells to which you want to apply the conditional formatting and then click on Conditional Formatting and select Manage Rules.

15.7.3 Add a rule

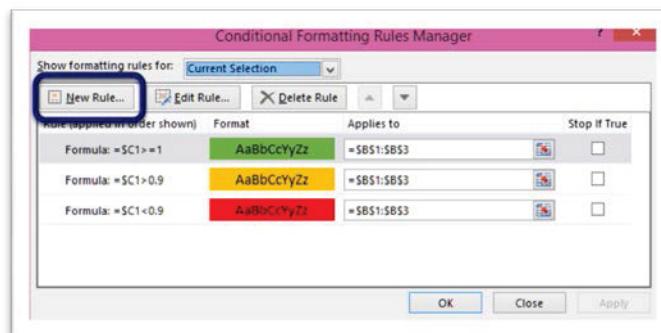


Figure 464 – add a rule

1. Click New Rule

15.7.4 Use a formula

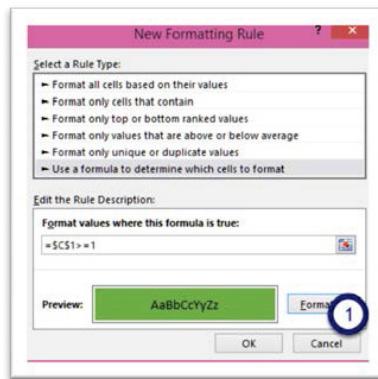


Figure 465 – set the formula

2. Type in the formula you want to use in this case
3. Format the values where this formula is true – C1 is greater than or equal to 1
4. Click the format button (1) and set the format of the cell to a fill of green

15.7.5 Format the cell

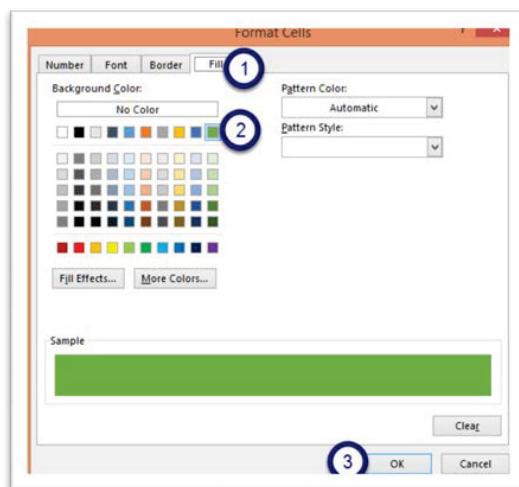


Figure 466 – choose the formatting

1. Click on Fill
2. Select the colour
3. Click OK

15.7.6 Repeat for the other conditions

Go back and add the other two rules to the selected cells.

Remember when creating the rules to make sure that only the column reference is fixed, otherwise as you copy the format down the column, it will not work correctly.

16 Sparkline charts

16.1 Sparkline line chart

Spark lines are small charts of the data that are displayed in one cell. They print with the worksheet so they are always visible. Spark lines can help you see a picture of how your data is performing.

I have a spreadsheet with Average Temperatures for the UK in each month for the years 2001 to 2013. I now want to see some charts to give me a visual of the numbers.

16.1.1 Data without spark lines

Calendar month	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
January	3.9	6.1	4.9	5.5	6.4	4.5	6.9	6.4	3.3	1.5	3.9	5.5	3.9
February	4.8	7.2	4.5	5.6	4.5	4.2	6.0	5.4	4.4	2.8	6.3	4.4	3.4
March	5.5	7.6	7.8	6.6	7.2	5.0	7.1	6.1	6.9	6.1	6.8	8.5	3.0
April	7.8	9.4	9.9	9.6	8.8	8.5	11.2	7.9	9.7	8.9	11.7	7.3	7.4
May	12.4	11.9	12.1	12.1	11.2	11.8	11.9	13.0	11.9	10.8	12.3	11.6	10.6
June	13.0	14.3	15.9	15.3	15.4	15.8	14.9	14.0	14.8	15.3	14.0	13.6	13.9
July	16.7	15.9	17.5	15.7	16.6	19.3	15.2	16.3	16.2	17.0	15.3	15.4	18.2
August	16.7	17.0	18.0	17.4	16.1	16.2	15.5	16.2	16.6	15.3	15.4	16.6	16.9
September	14.1	14.5	14.3	14.8	15.0	16.4	13.9	13.5	14.2	14.0	15.1	13.2	13.9
October	13.6	10.3	9.0	10.6	13.0	12.8	11.0	9.8	11.5	10.4	12.4	9.5	12.5
November	7.9	8.8	8.4	8.0	6.4	8.1	7.5	7.0	8.4	5.4	9.5	6.7	6.4
December	4.1	6.0	5.0	5.7	4.8	6.4	5.0	3.7	3.1	-0.3	5.9	4.8	6.4
	10.1	10.7	10.6	10.6	10.5	10.7	10.5	9.9	10.1	8.9	10.7	9.8	9.7

Figure 467 – data without sparklines

I am going to add the spark lines in a new column in between the month and the first column of numbers. So the first job is to insert a new column between Column A and Column B.

16.1.2 Create a line spark line

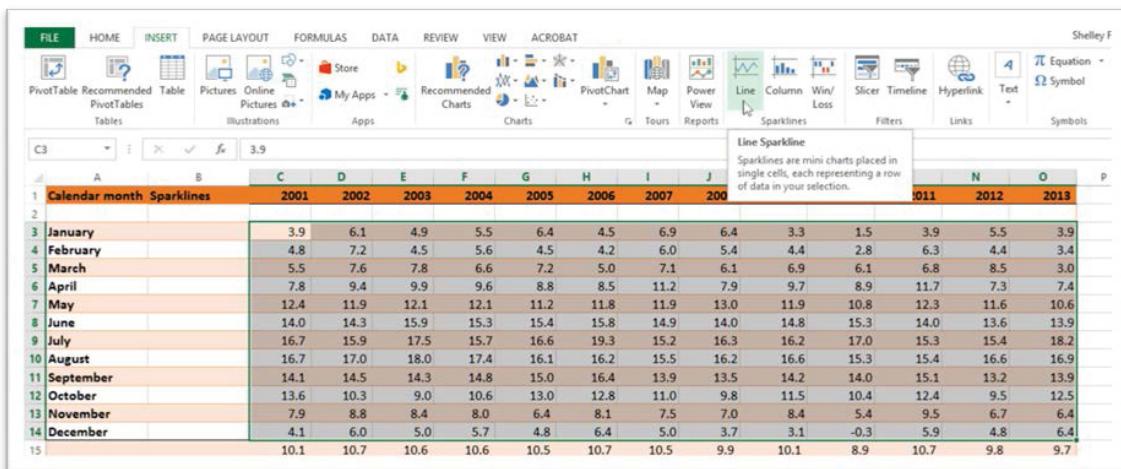


Figure 468 – create a spark line

I have added the empty column and it is the new Column B.

1. Select the data that will be shown in the spark lines
2. Click on the Insert Ribbon Tab
3. In the Spark Lines Group click on the type of spark line you want to create – in this example I will select Line

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16.1.3 Select the location for the spark lines

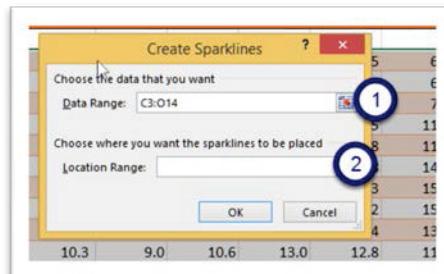


Figure 469 – set location for the sparkline

1. In the dialog box that pops up, confirm that the data range is correct – it should be as you selected it! (1)
2. Then select the range of cells where the spark lines will be placed. You can click the small box to the right of the Location Range (2) to collapse the box and enable you to select on the spreadsheet.
3. Click OK

16.1.4 Spark lines appear

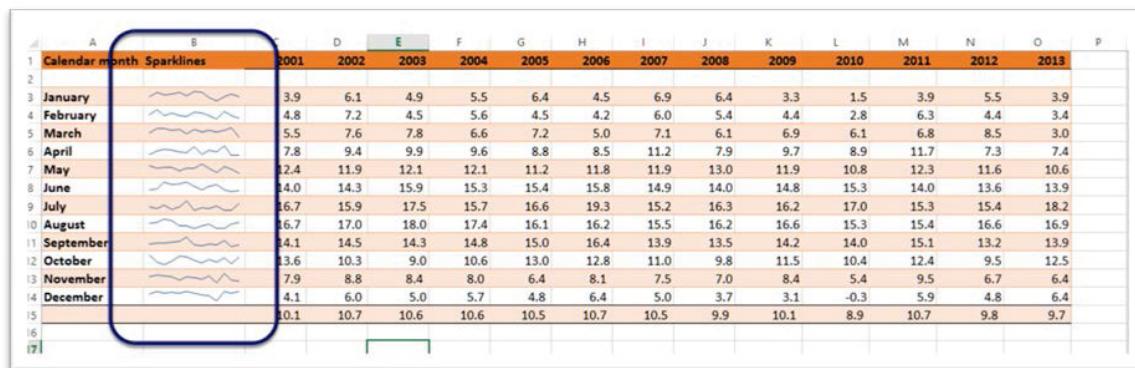


Figure 470 – sparklines appear!

Here you can see the spark lines in Column B.

It is possible to edit the spark lines to make them a different colour, show High, Low, First, Last Points and set the marker colour.

16.1.5 Change spark line style

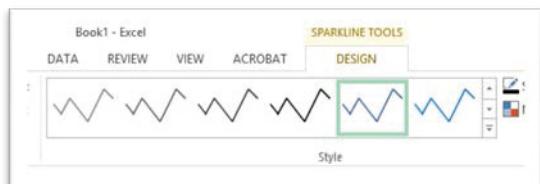


Figure 471 – change the style

1. Click into the spark lines on the spreadsheet
2. Select a different style from the Style Box

16.1.6 Show markers on spark lines



Figure 472 – add markers

To show markers, tick the boxes in the Show Group for the markers you want to see, a sample will be shown in the Style Group so you can see what it looks like.

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16.1.7 Edit markers

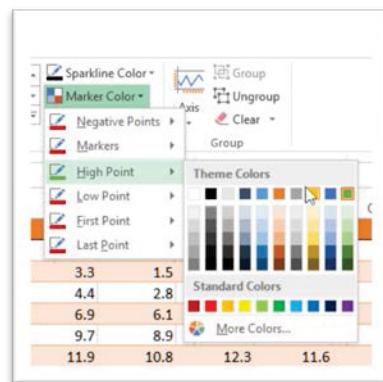


Figure 473 – edit the markers

To change the colour of the markers so that they show up on the spark line easily:

1. Click on Marker Colour
2. Select the Marker to change
3. Choose a colour

16.2 Column spark lines

Here is the same data with column spark lines instead of line. Create them exactly the same way, just click on column Spark line.

16.2.1 Column spark line

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Calendar month	Sparklines	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
2	January		3.9	6.1	4.9	5.5	6.4	4.5	6.9	6.4	3.3	1.5	3.9	5.5	3.9	
3	February		4.8	7.2	4.5	5.6	4.5	4.2	6.0	5.4	4.4	2.8	6.3	4.4	3.4	
4	March		5.5	7.6	7.8	6.6	7.2	5.0	7.1	6.1	6.9	6.1	6.8	8.5	3.0	
5	April		7.8	9.4	9.9	9.6	8.8	8.5	11.2	7.9	9.7	8.9	11.7	7.3	7.4	
6	May		12.4	11.9	12.1	12.1	11.2	11.8	11.9	13.0	11.9	10.8	12.3	11.6	10.6	
7	June		14.0	14.3	15.9	15.3	15.4	15.8	14.9	14.0	14.8	15.3	14.0	13.6	13.9	
8	July		16.7	15.9	17.5	15.7	16.6	19.3	15.2	16.3	16.2	17.0	15.3	15.4	18.2	
9	August		16.7	17.0	18.0	17.4	16.1	16.2	15.5	16.2	16.6	15.3	15.4	16.6	16.9	
10	September		14.1	14.5	14.3	14.8	15.0	16.4	13.9	13.5	14.2	14.0	15.1	13.2	13.9	
11	October		13.6	10.3	9.0	10.6	13.0	12.8	11.0	9.8	11.5	10.4	12.4	9.5	12.5	
12	November		7.9	8.8	8.4	8.0	6.4	8.1	7.5	7.0	8.4	5.4	9.5	6.7	6.4	
13	December		4.1	6.0	5.0	5.7	4.8	6.4	5.0	3.7	3.1	-0.3	5.9	4.8	6.4	
14			10.1	10.7	10.6	10.6	10.5	10.7	10.5	9.9	10.1	8.9	10.7	9.8	9.7	

Figure 474 – sparklines as columns

Edit the column spark line in exactly the same way as the line spark line.

16.3 Creating a win/loss spark line chart

Setting up a win/loss spark line is a little different. The data sets upon which it is based consist of -1, 1, and 0 for no line. So your first job is to set up the data.

I have picked July and August temperatures and put a -1 in the cell where one month was lower and a 1 in the cell in which the corresponding month was higher. So in 2001 July had a lower average temperature than August.

16.3.1 Data for win/loss spark line

July	-1	-1	1	-1	-1	1	-1	1	-1	1	1	-1	0
August	1	1	-1	-1	1	-1	1	-1	1	-1	-1	1	1

Figure 475 – set the data first

Negative numbers signify a loss and positive numbers a win. If you don't want to show anything for a particular column put a 0 in there.

16.3.2 Win/loss sparkline

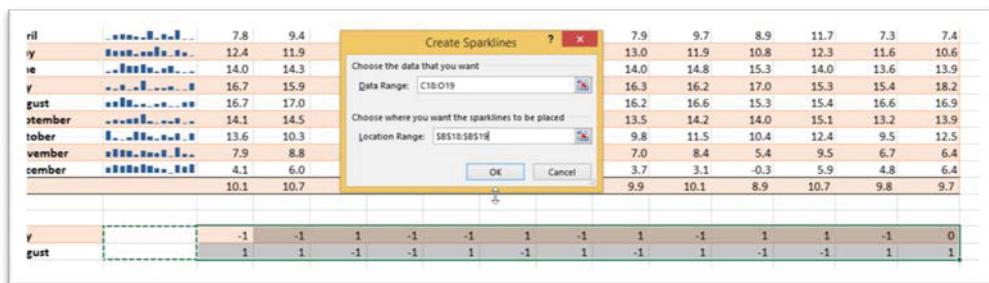


Figure 476 – win loss sparklines are a bit different

The steps are the same:

1. Select the data for the Spark Line Chart
2. Click on the Insert Ribbon Tab
3. Click on Win/Loss Spark Line Icon
4. Complete the dialog box including where you want the spark lines to be placed
5. Click OK

16.3.3 Spark lines appear

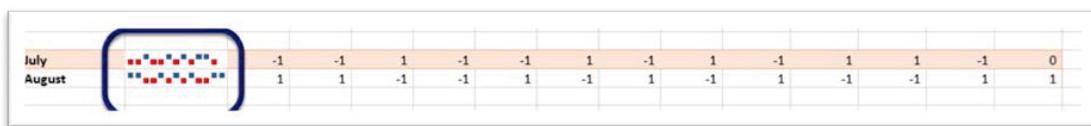


Figure 477 – here they are

In this image, positive numbers are showing up in Blue and negative in Red

16.4 Remove a spark line chart

You may want to remove the spark lines from your spreadsheet once they have served their purpose.

16.4.1 Remove a spark line

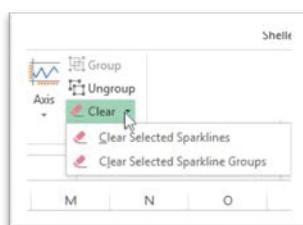


Figure 478 – clear a sparkline

1. Click in to the cells where the spark lines appear
 2. Click on Clear
 3. Make your selection based on whether you are removing a single spark line or a whole group.

17 Text functions

17.1 Text functions – an introduction

Text functions in Excel allow you to change the formatting of text, join text up, split text down and lots of other things. In this chapter are some of the text functions that are particularly useful when working with data.

Imagine you have imported data to Excel from another source and it has come in with leading or trailing spaces, use the trim function to remove them.

You have a volunteer at your organization whose job it is to input names and addresses from a written list into a spreadsheet. They forget to use a first capital letter on the name field, use Proper to rectify this.

If the Post Code should all be in UPPER CASE and has been typed in lower case or a MiXture – you can use UPPER to make all text in Upper Case and the Lower function will turn text written in UPPER case to lowercase.

The Mid, Left and Right Functions, allow you to pull out a specified number of characters from a text entry from the left, the right or the middle of the text.

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Working with a database, you may have a First Name field and a Last Name field, however when writing to your list or creating labels for an event, you require a Full Name field. Use the Concatenate Function to join two fields together.

17.2 Concatenate

If you keep your contact list in an Excel spreadsheet you may well have it listed in columns such as First Name Surname etc. You really need a column called FullName and Excel can populate this for you using the Concatenate function.

17.2.1 Data ready to join up

	A	B	C	D	E
1	First Name	Last Name	FullName	Date Joined	Email Address
2	John	Smith		12/01/2014	john@smith.com
3	Diane	Lister		12/01/2014	diane@lister.com
4	Lisa	Jones		13/01/2014	lisa.jones@theitrainingsurgery.com
5	Jessica	Rabbit		13/01/2014	jessica@disney.com
6	Bugs	Bunny		13/01/2014	bugs@bunny.com
7					

Figure 479 – set the column up first

I have added the FullName field to Column C

	A	B	C	D
1	First Name	Last Name	FullName	Date Joined
2	John	Smith	=con	12/01/2014
3	Diane	Lister	CONCATENATE	Joins sever
4	Lisa	Jones	CONFIDENCE.NORM	lisa.jones@
5	Jessica	Rabbit	CONFIDENCE.T	jessica@di
6	Bugs	Bunny	CONVERT	bugs@bun
7			CONFIDENCE	
o				

Figure 480 – start the function

As this is a function:

1. Type an = sign
2. Start to type Concatenate – Excel will pop up a helpful tip on screen, double click with the mouse over Concatenate (it save typing it all in !)

17.2.2 Build the function

	A	B	C
1	First Name	Last Name	FullName
2	John	Smith	=CONCATENATE(A2&" "&B2)
3	Diane	Lister	12/01/2014 diane@lister.com
4	Lisa	Jones	13/01/2014 lisa.jones@theitrainir
5	Jessica	Rabbit	13/01/2014 jessica@disney.com
6	Bugs	Bunny	13/01/2014 bugs@bunny.com
7			
8			
9			
10			

Figure 481 – build the function

Inside the brackets you must add instructions to tell Excel what to do.

1. Click on the first cell to add – this is the First Name cell A2
2. Then type an & – this tells Excel we are going to add something to cell A2
3. Now I really want a space in between the First Name and Last Name so I have to let Excel know this – type “space bar” a space surrounded by double quotation marks. Whenever text goes inside a formula like this it goes inside double quotation marks.
4. Then type another & – to add something else
5. Finally click on the second cell reference -B2 in this example
6. Close the brackets
7. Press Enter

This is what you see in the formula bar =CONCATENATE(A2&" "&B2)

Next you can use auto fill to copy it to the rest of the cells in the column

17.2.3 Copy to the rest of the cells

	A	B	C
1	First Name	Last Name	FullName
2	John	Smith	John Smith
3	Diane	Lister	Diane Lister
4	Lisa	Jones	Lisa Jones
5	Jessica	Rabbit	Jessica Rab
6	Bugs	Bunny	Bugs Bunny
7			
8			

Figure 482 – copy it down

Now I have a full list of FullName.

17.3 Trim

Remove leading or trailing spaces.

17.3.1 Data with leading and trailing spaces

A	B	C	D	E	F	G
1 Import	Trim					
2 Helen						
3 Jane						
4 Norman						
5 Edward						
6 Jackie						
7 Tom						
8 Ellen						
9 Joseph						
10 Janice						
11 Joshua						
12						
13						

Figure 483 – data all wrong

In this list you can clearly see that there are some leading spaces and if I were to sort this list anything with a leading space would be at the top of the list so not a good sort.

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17.3.2 Trim function

A	B	C	D
1	Import	Trim	Value
2	Helen	=TRIM(A2)	
3	Jane		TRIM(text)
4	Norman		
5	Edward		
6	Jackie		
7	Tom		
8	Ellen		
9	Joseph		
10	Janice		
11	Joshua		
12			
13			

Figure 484 – type in the formula

1. In the column next to the one to trim
2. Type an = sign
3. Then start to type Trim – a label will pop up which you can double click to select
4. Click on the cell to trim – in this case A2
5. Press Enter

17.3.3 Copy to the rest of the column

A	B	C	D
1	Import	Trim	Value
2	Helen	Helen	
3	Jane	Jane	
4	Norman	Norman	
5	Edward	Edward	
6	Jackie	Jackie	
7	Tom	Tom	
8	Ellen	Ellen	
9	Joseph	Joseph	
10	Janice	Janice	
11	Joshua	Joshua	
12			

Figure 485 – copy down

You can now use auto fill to copy this formula to the rest of the cells. Note that the leading spaces have gone and everything lines up.

However there is one more step to make sure that the data is nice and clean. I want to remove the formula and keep just the results. I will use Paste Special to do this.

A	B	C	D	E	F	G
1 Import	Trim	Value				
2 Helen	Helen	Helen				
3 Jane	Jane	Jane				
4 Norman	Norman	Norman				
5 Edward	Edward	Edward				
6 Jackie	Jackie	Jackie				
7 Tom	Tom	Tom				
8 Ellen	Ellen	Ellen				
9 Joseph	Joseph	Joseph				
10 Janice	Janice	Janice				
11 Joshua	Joshua	Joshua				
12						
13						
14						
15						
16						

Figure 486 – Paste Special to the rescue

1. Select all the cells
2. Right click and Copy
3. Then Click into the first cell where you would like the results to show up
4. Right Click and choose Values from the Paste Options – this pastes the result not the formula
5. Press Enter. As the whole range was selected all the values are pasted.

You can now cut and paste the values into the original cells keeping the data nice and clean.

17.4 Upper

Upper case converts text to Upper Case. Simple!

17.4.1 The upper function

A	B	C	D	E	F	G	H
1 Names		Upper		Lower		Proper	
2 Helen		HELEN					
3 Ima							

Figure 487 – convert text to Upper Case

1. Click into the cell which will hold the changed text
2. Type an = sign
3. Type Upper
4. In the brackets click on the cell with the wrongly formatted text
5. Press Enter

See your text change to upper case. Now use auto fill to copy to the rest of the cells.

17.5 Lower

Lower case is handy if you forget to turn off the Caps Lock key. It turns all text to Lower Case.

17.5.1 Lower function

C	D	E	F
Upper		Lower	
HELEN		helen	
JANE			
NORMAN			

Figure 488 – convert text to lower case

1. Click into the cell to hold the newly formatted text
2. Type an = sign
3. Type Lower
4. Inside the brackets click on the cell to change (C2 in my example)
5. Press Enter

Now use auto fill to copy it to the rest of the cells in the range.

The image is a composite of two parts. On the left, a man in a dark suit stands in a field of tall grass, holding a large, detailed map over his head. He is also holding a smaller map in his left hand. The background is a clear blue sky with some clouds. On the right, there is a promotional graphic for TomTom. It features the TomTom logo at the top, followed by the tagline "WHERE DO YOU WANT TO BE?". Below this, there is a paragraph of text about the company's history and values. Further down, it says "Founded in 1991 and headquartered in Amsterdam, we have 3,600 employees worldwide and sell our products in over 35 countries." At the bottom, there is a call to action: "For further information, please visit [tomtom.jobs](#)".

17.6 Proper

If you left the Caps Lock key on, and want to reformat text to have an initial capital letter, then use Proper. It works on all lowercase too.

17.6.1 Proper function

				G	H
D	E	F	Lower	Proper	
			helen	Helen	
			jane		
			norman		
			edward		
			jackie		
			tom		
			ellen		
			joseph		
			janice		
			lambert		

Figure 489 – convert to first capital letter

1. Click into the cell to hold the newly formatted text
2. Type an = sign
3. Type Proper
4. Inside the brackets click on the cell to change (E2 in my example)
5. Press Enter

Now use auto fill to copy it to the rest of the cells in the range.

17.7 Right

The Right function allows you to pick up and extract as many characters from the right of a cell as you specify. So if you want to extract the last 4 letters, it would be =Right(A2,4)

17.7.1 Right funtion

	E	F	G	H	I	J
J	Lower	Proper	Helen	Right		
	helen			elen		
	jane					

Figure 490 – pick characters from the right

1. Click into the cell where you want the answer to display
2. Type an = sign
3. Type Right (
4. Click on the cell to extract from (G2 in this example)
5. Type a , (comma)
6. Type the number of characters to extract (in our case 4)
7. Press Enter

17.8 Left

The Left function allows you to extract a number of characters that you specify from a cell.

17.8.1 Left function

		=LEFT(G2,3)	
F	G	H	I
Proper	Left	Hel	

Figure 491 – extract number of characters from the left

1. Click into the cell where you want the answer to display
2. Type an = sign
3. Type Left (
4. Click on the cell to extract from (G2 in this example)
5. Type a , (comma)
6. Type the number of characters to extract (in our case 4)
7. Press Rnter



.....

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17.9 Mid

The Mid function picks up a number of characters that you specify from the middle of a cell. You tell the function where to start from and how many characters you want to extract.

17.9.1 Mid

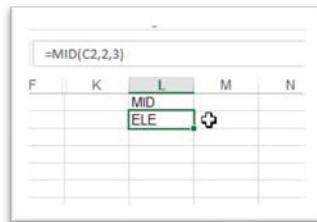


Figure 492 – extract from the middle

1. Click into the cell where you want the answer to display
2. Type =Mid(
3. Click on the Cell you want to extract from (C2)
4. Type a comma
5. Type where Excel should start from (in this example from the second character)
6. Type a comma
7. Type the number of characters to extract (3 in our case)
8. Press Enter

18 Quick analysis

18.1 Quick analysis

Quick analysis is a new feature in Excel 2013. Quick analysis looks at the data you have selected and offers you various options to analyze and summarize the data. Once you get used to using it, you will wonder what you did before!

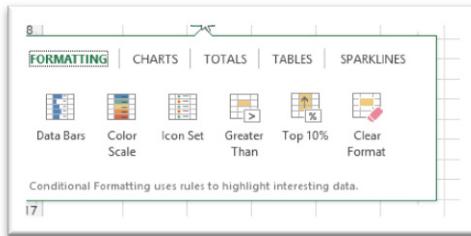


Figure 493 – various quick analysis options

There are five main types of analysis and within each type you will be offered more options.

Formatting – here you can find various conditional formats – Excel will guess which are best suited to the data selected

Charts – A selection of charts will be suggested

Totals – Various calculations

Tables – A selection of tables will be found here

Spark lines – Excel will offer you spark lines to be added to adjacent cells

18.2 Quick analysis Formatting

18.2.1 Formatting

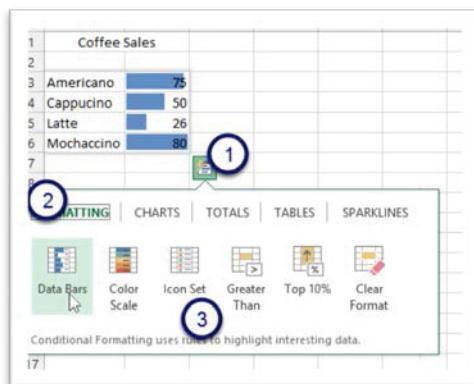


Figure 494 – format data quickly

1. Click the Quick Analysis Smart Tag
2. Click on Formatting
3. Choose from the formats offered – Excel will preview the chosen format on the selected data so you can flip between them before making a decision

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18.3 Quick analysis totals

With the totals quick analysis you are offered a selection of functions that can be performed on the data. Choose whether to add them underneath the data or in a column to the right

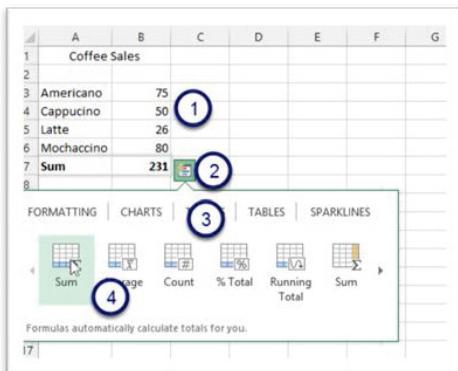


Figure 495 – quick summaries

1. Select the data
2. Click the Quick Analysis Smart Tag
3. Click on Totals
4. Choose the type of total you want to add – Here I selected a Sum note that Excel added a total row to the data with the word Sum and also added the formula to the data

A photograph of two young adults, a man and a woman, smiling and looking up, possibly at a building. The background shows a city skyline. Overlaid on the image are several yellow text boxes with promotional information:

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18.4 Quick analysis Charts

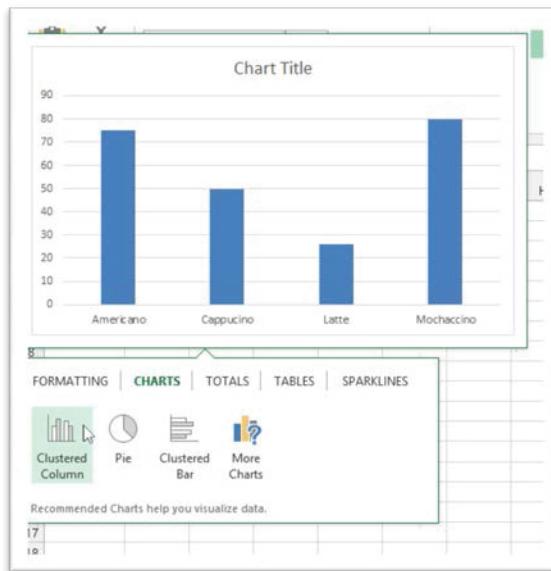


Figure 496 – charts are offered too

1. Select the data
2. Click on the Quick Analysis Smart Tag
3. Click on Charts
4. Hover over the different charts to see a preview of how they will look – to select one click on it
5. The chart is then placed on the spreadsheet – see below

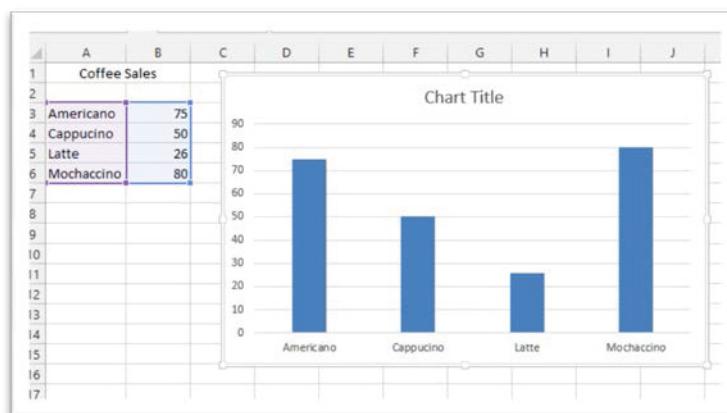


Figure 497 – chart

18.5 Quick analysis Tables

Instead of selecting the data and choosing Format as Table from the Home Ribbon you can use quick analysis to get a standard table or a quick pivot table

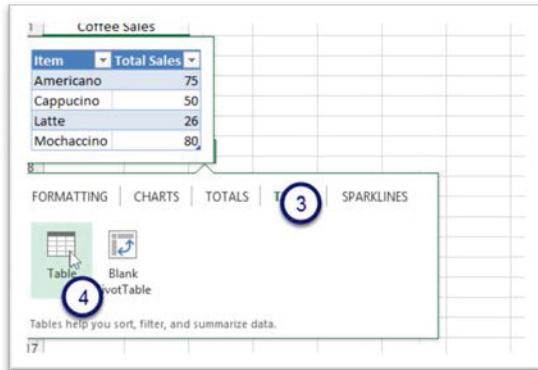


Figure 498 – quick tables

1. Select the data
2. Click the Quick Analysis Smart Tag
3. Click on Tables
4. Click Table and a preview will be placed over the data – click to insert

If you choose Blank Pivot Table, you will find a new blank pivot table inserted on a new worksheet ready for you to build

18.6 Quick analysis sparklines

Get Excel to add spark lines directly from the Quick Analysis Smart Tag

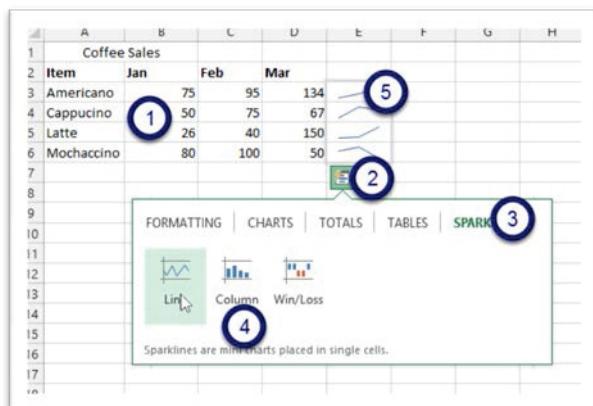


Figure 499 – quick sparklines

1. Select the data
2. Click the Quick Analysis Smart Tag
3. Click on Spark lines
4. Choose the spark line that you want to use
5. Spark lines will be added to the adjacent column

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19 Macros

19.1 What is a Macro

A macro is a recording of a series of tasks. Usually repetitive things that can take time and follow the same sequence of events. By recording them into a macro the whole sequence can be performed at the click of a button. For example if you always want to change the spreadsheet to landscape and print three copies – record a macro add it to a button and hey presto just play it back each time.

19.1.1 Developer ribbon

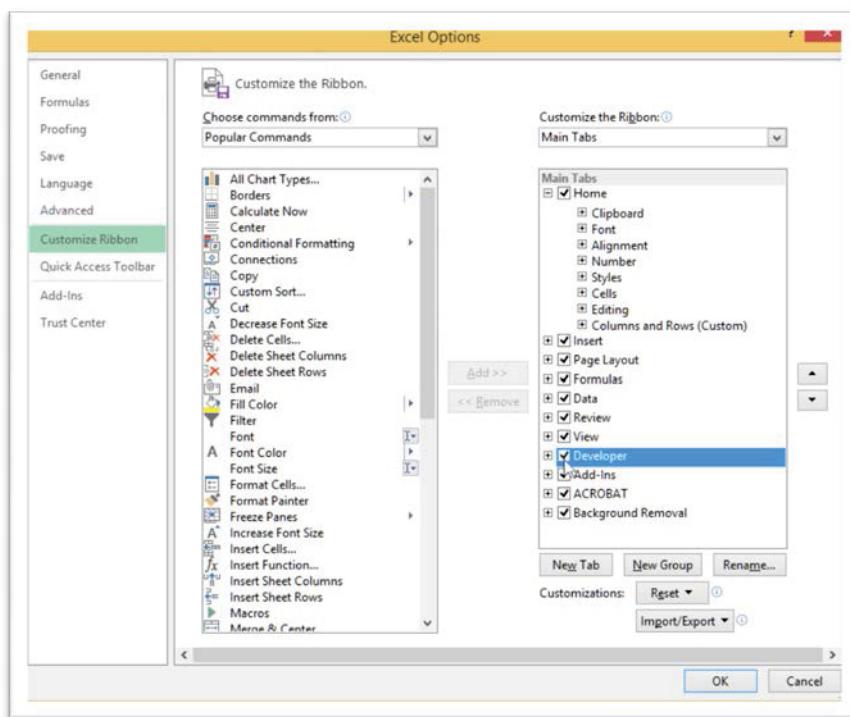


Figure 500 – Developer Ribbon

In order to record a Macro you must display the Developer Ribbon if it is not already showing.

To do so:

1. Click the File Menu
2. Click Options
3. Click customize the Ribbon
4. Place a tick next to the Developer Ribbon
5. Click OK

19.2 Macro security

There is one other thing you must check before you get started with macros and that is the Macro Security. You must let Excel know that you are willing to work with macros.

As macros can potentially run malicious code, you must let Excel know that you would like to run them but you want a little warning to pop up and check in with you before you do.

19.2.1 Enable Macro Security



Figure 501 – enable macro security

On the Developer Ribbon click on Macro Security in the Code Group

19.2.2 Disable all macros with notification

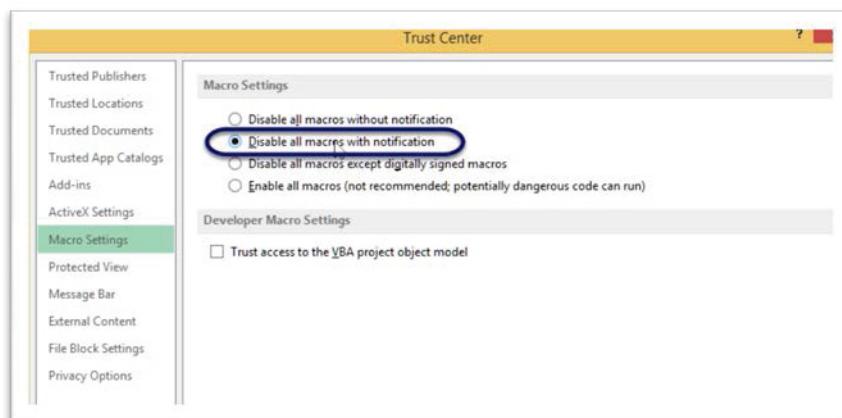


Figure 502 – make sure to set Disable with Notification set

Make sure that the Macro Settings show Disable all macros with notification – this means that Macros will not run unless you enable them. A notification will pop up and alert you.

19.3 Get ready

Now you are almost ready to record a macro. First of all though you need to decide where to store the Macro when it is recorded.

This Workbook (default):

Places the macro on a separate sheet called a module behind the scenes of the current workbook. Macros stored here will only be available when this workbook is open. The benefit of storing the macro in the current workbook is that it will be available to anyone who has access to the workbook, whether shared or sent to them.

New Workbook:

Opens another workbook and puts the macro there (sometimes used when testing out bits of a macro's code).

Personal Macro workbook:

Creates a special hidden workbook that opens whenever Excel is run on your local machine. The macros stored here are available whenever you use Excel regardless of which workbook you are in. If you store your macros here, they will not be available to others if you share a workbook. You will need to add the macro to the workbook you are sharing in order for it to be available to others.

Having decided where to store it, it is a good idea to practice the steps you are going to record – in fact it is quite a good idea to write them down. As you start recording, the Macro Recorder notes every move you make and also the time it takes – it simply records everything. You want to record the macro with as little fuss as possible. If you make a mistake and correct it, the recorder records that too!

So for my previous example of printing the spreadsheet landscape and three copies the steps go like this.

Switch to landscape – press Alt + P + o and down arrow and Enter to change to landscape

Press Control + P

Tab into the number of copies and type 3

Press Enter to print

When testing out you will end up printing and then again when you record the macro. That is because we have to perform the steps in order to record them.

You will note that I used the keyboard to create the macro not the mouse. That's because the Macro Recorder records the keyboard moves.

19.3.1 Relative or absolute referencing

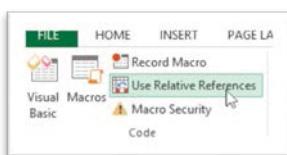


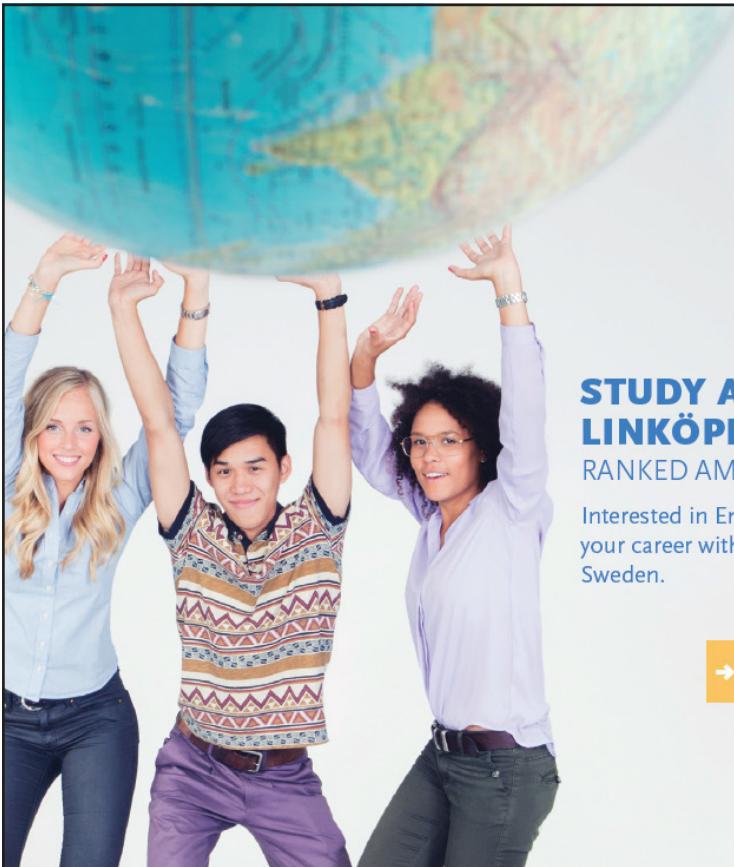
Figure 503 – relative or absolute

Relative References – this means that the macro will perform the actions you record in relation to the starting cell.

Absolute References – this means that the macro will record starting from the same cell every time.

Let's say that you are recording a macro to reformat a spreadsheet. You need to cut information from one place, paste it into another and then repeat the process down several rows. If you record this with Absolute References switched on the macro will record over itself the whole time – if you programmed it to begin in A3 then it will return to A3 each time.

If however you program it with Relative Reference on – then it will work relative to the cell in which your cursor is when you start the macro each time.



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19.4 Get set and go

Here we go to record the macro just mentioned.

19.4.1 Record Macro

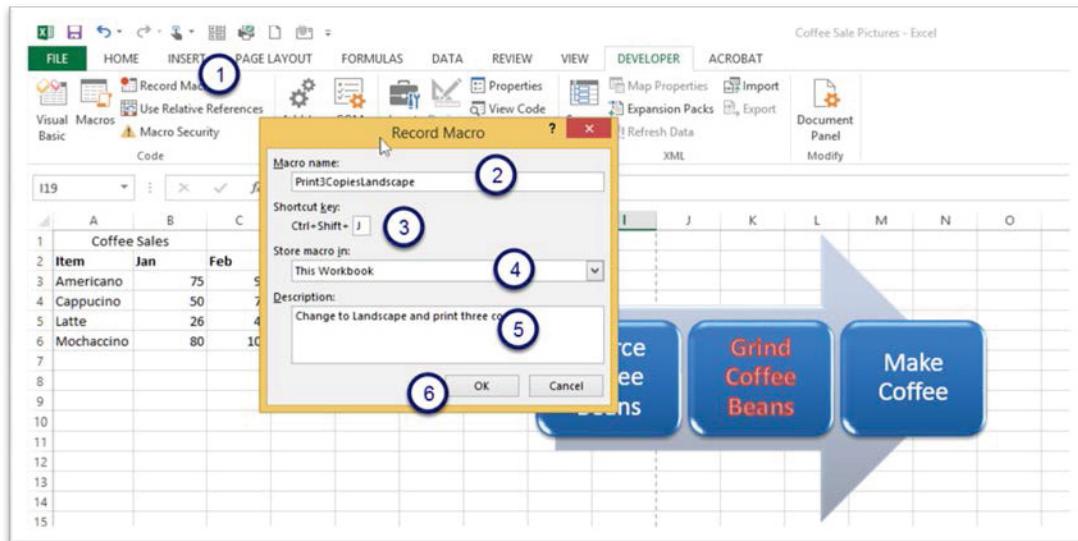


Figure 504 – record a macro

1. Click Record Macro in the Code Group
2. Name the Macro – names must not have any spaces in them. Use capital letters or underscore characters to differentiate between words
3. Assign a keyboard shortcut
4. Pick where to store the macro
5. Type a description – this is optional
6. Click OK to begin recording

19.4.2 Finish recording

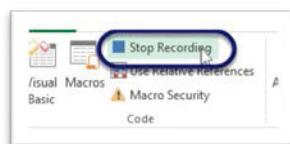


Figure 505 – stop recording

Once you have performed the sequence of steps for the macro click Stop Recording – this button said Record Macro earlier.

19.5 Run the macro

Now that you have recorded your macro you want to use it. When you created the macro you assigned a keyboard shortcut to it. Now all you have to do is press the keyboard shortcut. For the macro I just recorded the Keyboard Shortcut is Control + Shift + J.

You may however want to add the macro to a button on the Quick Access Toolbar.

19.5.1 Put the macro on The Quick Access Toolbar

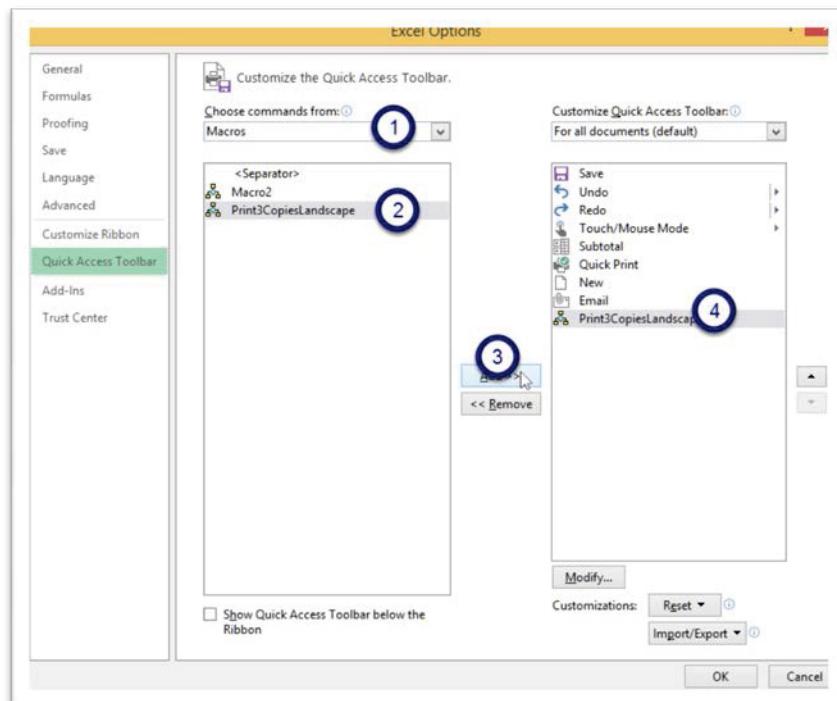


Figure 506 – add a button to the Quick Access Toolbar

Click the drop down arrow on the right of the Quick Access Toolbar

Select More Commands

1. Change the Choose commands from to show macros
2. Click on the macro you want to add to the Quick Access Toolbar
3. Click Add
4. The macro is now on the Quick Access Toolbar

19.5.2 Modify the button

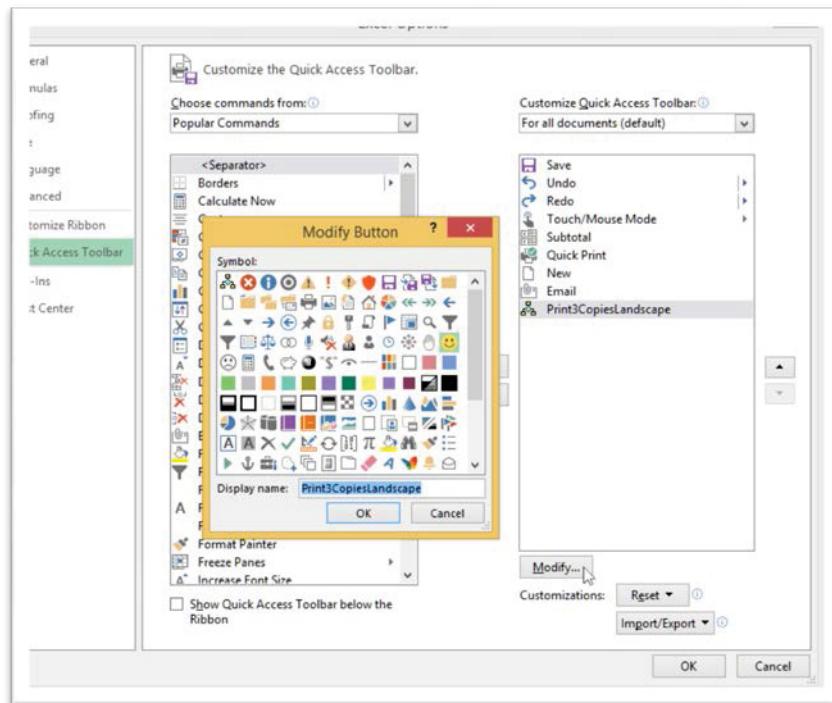


Figure 507 – modify the button

The icon for a macro is the same no matter how many you add so it makes sense to modify the button to something that you recognize.

1. Click Modify
2. Pick an icon
3. Change the text to display if required
4. Click OK
5. Click OK

19.5.3 New macro button

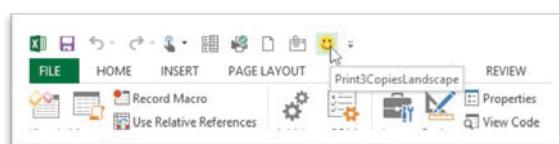


Figure 508 – new macro button

Here is my new macro button – it has a happy face and the tooltip shows the name – Print3CopiesLandscape.

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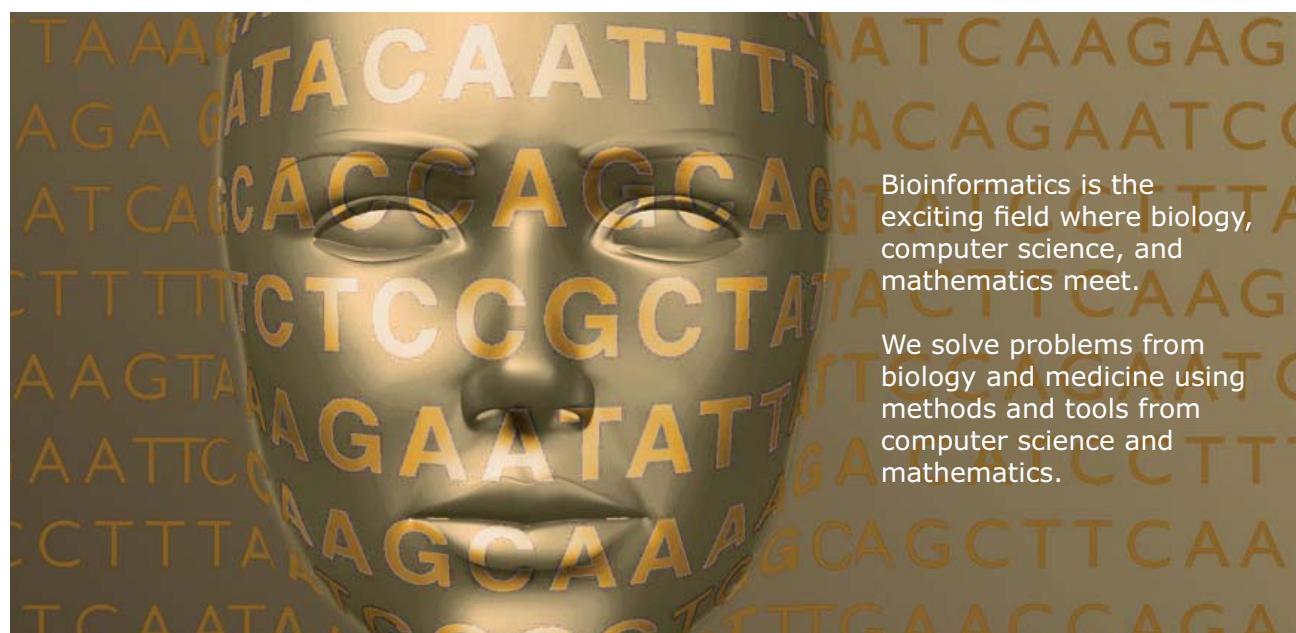
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