

Underused Excel Features

By

Neale Blackwood CPA

a4@iinet.net.au

a4accounting.com.au



A4 ACCOUNTING
EXCEL CONSULTING, TRAINING AND WEBINARS

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1. Introduction

Each new version of Excel adds new features to the product. When you upgrade to the new version you may not be aware of all the new features. These features can be easily missed because they can just be a single button or icon on the ribbon.

Unfortunately most training seems to focus on doing the same task in the new version, but it fails to demonstrate the new features.

If you are self-taught you might not have learnt about all of the useful features in Excel. Excel has many built-in features that can save you a lot of time and effort. These features are not always obvious when you are using Excel. The terminology Excel uses can also be confusing.

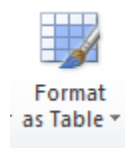
This session will cover some of the features that I see people under using in Excel. Usually when I show these features to users they get quite excited about their time-saving potential.

The features are not listed in any particular order. Whilst some of them may not assist you in your procedures now, it can be worthwhile knowing that these features exist and what they do, in case you need them in the future.

There are a few shortcuts shared throughout this session as well.

This session covers eight features, but there are still more and these will follow in further sessions.

2. Format As Table



This button, which is on the Home ribbon, was added to Excel in Excel 2007. It is actually a feature that was in Excel 2003, where it was called Lists.

The functionality and formatting was updated in Excel 2007 and it was tweaked a little more in Excel 2010.

If you use data tables or pivot tables then I highly recommend that you start to use the Format as Table feature in your files.

Unfortunately most people think that the feature is just about formatting, but there are many other advantages to using this feature. Some of those are listed below.

- Autofilter icons are automatically added to the column headings
- Field names become column headings as you scroll down the page
- Tables automatically extend as you add rows (records)
- Tables automatically extend as you add columns (fields)
- Formulas automatically copy down the column when created or modified
- Table format expands as you add columns or rows
- Table names (structured references) are automatically created and work the same as range names
- Pivot Tables based on formatted tables, when refreshed, automatically have their data extended as rows or columns are added
- A new ribbon tab is displayed when the table is selected. This allows you to name your table and to add totals and control formatting.
- Additional right click options when you right click within the table
- Some keyboard shortcuts work differently within tables and make tasks easier
- A Pivot Table based on a formatted table will have its source data automatically expand when the Pivot Table is refreshed
- You can't use a merged cell in a table (I consider that an advantage)

Limitations of Tables

- You have to be careful copying/dragging formulas that contains table names because if you use the Fill Handle to drag a formula, the fields are treated like relative references and move as you drag. In most cases this is not what you expect.

- Can't use Subtotal (on the Data ribbon tab) on a Formatted Table
- Can't share a workbook containing a Formatted Table
- Can't use a multi-cell array formula in a table
- Sheet protection can affect table functionality
- In some cases you can't copy a sheet containing a formatted table

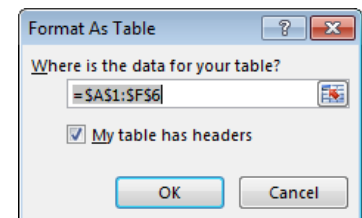
	A	B	C	D	E	F
1	Code	Product	Colour	Weight (g)	Cost	Price
2	1234	Widget	Blue	645	0.34	0.90
3	2345	Widget	Pink	327	0.28	0.70
4	3456	Widget	Orange	651	0.70	1.80
5	4567	Gadget	Blue	347	0.13	0.30
6	5678	Gadget	Pink	346	0.86	2.20

PRACTICE:

1. Click anywhere within the above table in the Format_As_Table sheet. Click the Format as Table icon on the Home ribbon.

2. A gallery of colour schemes is displayed – click a colour scheme.

3. The Format As Table dialog is displayed confirming the data range. Providing the data has no blank rows, or blank columns, Excel should estimate the range correctly. Click OK.



4. Excel will apply the format to the table and add the filter icons to the column headings.

	A	B	C	D	E	F
1	Code	Product	Colour	Weight (g)	Cost	Price
2	1234	Widget	Blue	645	0.34	0.90
3	2345	Widget	Pink	327	0.28	0.70
4	3456	Widget	Orange	651	0.70	1.80
5	4567	Gadget	Blue	347	0.13	0.30
6	5678	Gadget	Pink	346	0.86	2.20

5. Entering a new code in cell A7 will automatically extend the table.

6. Enter the word Margin in cell G1. This will extend the table to the right.

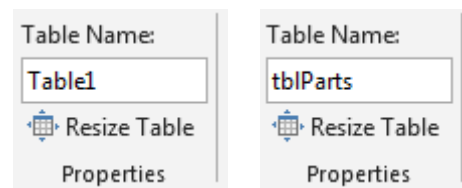
7. In cell G2 type = and use your mouse to select cell F2. Note what happens to the formula. This is called a “structured reference” but I prefer to call it a table name.

F	G
Price	Margin
0.90	=[@Price]

8. You can finish the formula by subtracting the Cost amount in cell E2 – watch what happens when you press Enter to accept the formula.

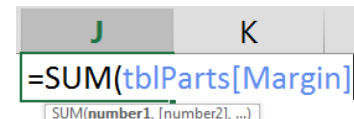
9. Note the formula was copied down, even to the new row that only has a code in it. The square brackets refer to structured references.
10. If you modify any formula in the column Excel will update each other formula when you press Enter.
11. The @ symbol instructs Excel to refer to the field on the same row as the formula it is used in. In Excel 2007 the symbol used was #.
12. The table is given a default name eg Table1, but you can change that to a more descriptive name. When you have a cell selected within the table the Design ribbon tab is visible.

13. On the far left of the Design ribbon tab is the Table Name box – you can click inside it and modify the name. I use the prefix of tbl for my table names. Eg tblParts, tblSales.



14. The Table Name and table names (structured references) can also be used in normal formulas outside of the table. In cell J1 enter

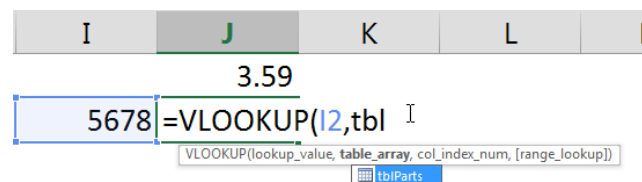
=SUM(



Then click cell G2 then hold the Ctrl key and press the Space Bar. This will select the whole column and enter the table reference in the formula. Press Enter to accept the formula – this will also add the closing bracket to the formula. The advantage with using this type of reference is that as the table expands the reference to the range expands with it.

15. When using the VLOOKUP function it is best practice to use a table name or range name as the reference for the table within the function. In cell I2 enter 5678. In cell J2 enter the following start of a formula

=VLOOKUP(I2,



Start typing tbl and notice that the Table Name is displayed. Since it is

highlighted in blue you can press the Tab key to enter it. Using the tbl prefix ensures all the Table are listed together. This ensures the reference to the table doesn't change as you copy the formula within the spreadsheet. Usually you have to use a fixed reference for the table. Using the table name avoids having to use the \$ signs. The final formula is shown below.

=VLOOKUP(I2,tblParts,2,0)

Keyboard shortcut - if you want to create a table using the default table format you can use Ctrl + t whilst selecting a cell within the table – this takes you straight to the dialog in step 3 above.

Removing the Table

If you need to remove the formatted table features – eg you might need to insert subtotals, then you can use an icon on the Design ribbon table that reverts the Table back to a normal range.

Note: it doesn't remove the formats that have already been applied. It removes all the table features.



To remove the formatted table features you can use the Convert to Range icon on the Design ribbon tab.

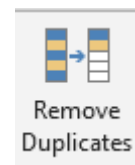
3. Removing Duplicates

When working with large data sets sometimes you need to remove duplicated rows. Depending on the size of your data this can be time-consuming. A new feature was added in Excel 2010 which simplifies the process and allows you to control which columns are considered when determining if a row is duplicated.

The system works by keeping the first row and deleting the subsequent rows. There is no control over which rows are deleted. When determining if rows match, case is not used to differentiate entries.

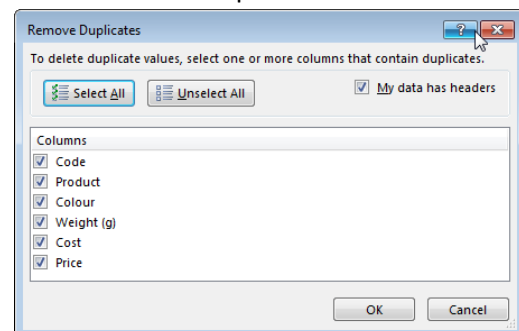
PRACTICE:

1. The table in the Duplicates sheet has a number of duplicated rows. We can use the Remove Duplicates feature which is in the Data ribbon tab to get rid of those duplicated rows.



2. You do not need to format the table to enable you to use remove duplicates.

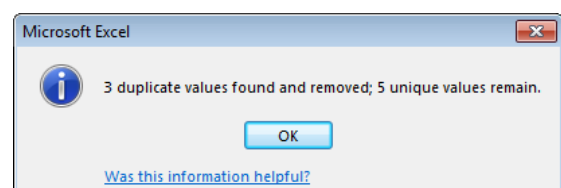
3. Click any cell inside the table and click the remove duplicates icon.



4. The Remove Duplicates dialogue is displayed and all of the field (column) names are ticked.
5. In most cases you would tick all of the columns because this instructs Excel to use all columns to identify duplicates. This means that the entries in each column must match to be deemed a duplicate.

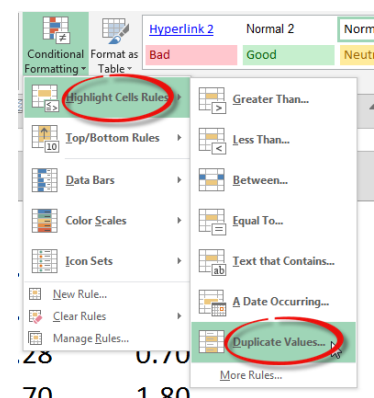
6. You can click OK to remove the duplicates.

7. Excel will display a dialogue telling you how many duplicate rows were removed and how many unique values are left.



8. You can use the Undo (Ctrl + z) feature to reverse the process.

If you are just working with a single column, you may find the duplicates option under conditional formatting useful as it can highlight the entries that are duplicated.



4. Grouping Rows and Columns

Grouping is the most overused term in Excel. It refers to at least four totally different features in Excel. Grouping rows and columns is useful when you need to hide one or more rows or columns, but then need to unhide them simply and easily.

This is useful if you have workings in rows or columns that do not need to be visible in the normal operation of the sheet.

The beauty of using grouping is that an icon is displayed on the outside of the grid to show that rows or columns are hidden. That same icon makes hiding and unhiding easy. You can build in a hierarchy to the grouping and there is also an automated method of grouping if you have existing formulas in place.

Workings

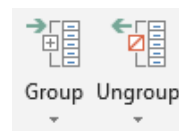
When creating reports I typically use the first few rows and the first few columns to hold my workings. I then hide these columns when I am using the file. I will open up the workings rows and columns to maintain or change the report.

Non-Printing

If rows or columns are hidden then the entries in the hidden cells are not printed when you print a sheet.

The icons for grouping are in the Data ribbon tab.

I prefer to use the following two keyboard shortcuts



Apply grouping - Alt + Shift + right arrow

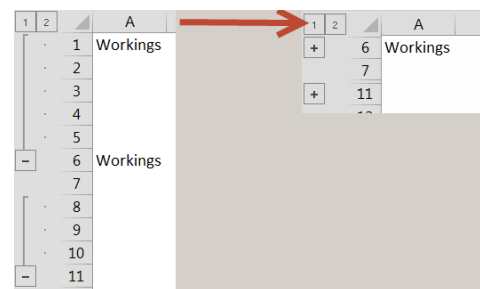
Remove grouping – Alt + Shift + left arrow

In the Grouping_1 sheet select the rows 1 to 5 and press Alt + Shift + right arrow. Note the icons on the left-hand side of the grid. The small minus sign allows you to hide the rows.

The small numbers in the top left allow you to hide and unhide multiple levels in one step. For example we can select the rows 8 to 10 and then group them.

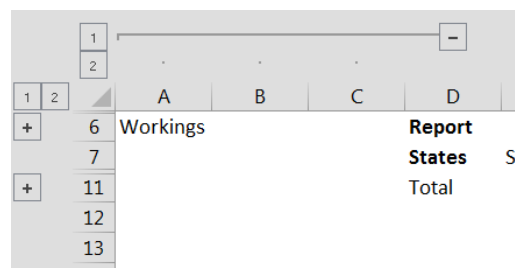
Pressing the small number 1 in the top left will hide both grouped rows in one step.

If you have grouped rows or columns you can select other rows or columns and press the F4 key to repeat the action.



Select columns A to C and group those (Alt + Shift + right arrow). You will notice icons above the grid including the small numbers. These work in the same way as the numbers that control the rows.

It is best practice to use grouping to hide rows or columns on your sheets so that the users can see that rows and columns are hidden. When you hide rows and columns manually it is hard to identify that they are hidden. This may cause problems if users aren't aware there are hidden rows or columns if they make changes to the sheet.



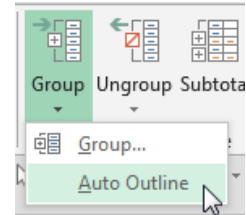
Automated Grouping – Auto Outline

If you have an existing report you may be able to apply grouping automatically based on the formulas in that report. Excel looks at the SUM and SUBTOTAL functions to determine the levels within the report. Hence you can create a hierarchy within the report automatically.

The feature that does this is called Auto Outline and it is available in the drop down in the Group option in the Data ribbon tab.

In the Grouping_2 sheet select the range A1:C26 and click auto outline option.

Excel will apply grouping based on the formulas in the report.

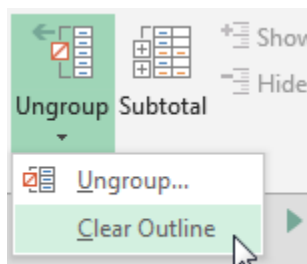


Notice the three levels of grouping. Clicking the small number 1 will show the least amount of detail.

Clicking small number 3 will show the most about the detail.

This feature also applies to columns if you are going across the page and have subtotals.

Note: You can't use Undo to remove the outline. You must use the Clear Outline option under Ungroup in the Data ribbon tab – see below.



	1	2	3		A	B	C
	1				State	Customer Category	Amount
	2			•	NSW	Retail	11,011
	3			•	NSW	Wholesale	13,514
	4			•	NSW	Internet	22,559
	5			•	NSW	Government	28,177
	6						75,261
	7						
	8			•	QLD	Retail	15,133
	9			•	QLD	Wholesale	23,543
	10			•	QLD	Internet	14,456
	11			•	QLD	Government	24,301
	12						77,433
	13						
	14			•	VIC	Retail	10,919
	15			•	VIC	Wholesale	18,479
	16			•	VIC	Internet	18,424
	17			•	VIC	Government	22,143
	18						69,965
	19						
	20			•	WA	Retail	15,225
	21			•	WA	Wholesale	15,115
	22			•	WA	Internet	18,942
	23			•	WA	Government	28,592
	24						77,874
	25						
	26				TOTAL		300,533
	27						

5. Inserting Subtotals

The SUBTOTAL function is the best function to use for all your subtotalling needs. If you have existing tables you can sort by the column you want to base the subtotal on, and have Excel automatically insert all the subtotals for you with the click of a few buttons.

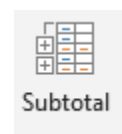
WARNING: this feature does not work with formatted tables

Note: the SUBTOTAL function can perform a number of different calculations based on the number at the start of the function. The number 9 is the most common number used as it relates to the SUM function.

We want to create subtotals for states in the Subtotals sheet

Before using the subtotal option you need to ensure that the data is sorted by the column that you want to base the subtotal on. In our case that is the State column. I have already sorted by the State column.

In the Subtotals sheet click anywhere inside the table and click the Data ribbon tab and the Subtotal icon on the far right hand side of the ribbon.



The Subtotal dialog will open.

It has guessed that we will use the State column as the basis for the subtotal but if it gets this wrong you can change it in the drop down.

It defaults to using the SUM function but the drop down has other options as well e.g. average and count.

It will also guess the columns to subtotal. If it misses a column you can tick that column to add a subtotal to it.

Clicking OK will insert the subtotals and also add grouping to the report based on those subtotals.

Note that the formatting is not extended.

Also note that whilst the total text in column A is bold the actual subtotal figure is not bold.

If you would like to make the totals bold you can click the small number 2 in the grouping numbers. Select C6:C22 and then press Alt + ; (Alt + semi-colon). This selects just the visible cells. Then press Ctrl + b to apply the bold format to just the visible cells.

If you wanted to copy just the totals you can also use the visible cells shortcut on the whole table range A1:C22 by pressing Alt + ; (Alt + semi-colon) then press Ctrl + c and then paste where you want.

This only pastes the values, it does not paste the formulas.

	A	B	C
1	State	Customer Category	Amount
2	NSW	Retail	11,011
3	NSW	Wholesale	13,514
4	NSW	Internet	22,559
5	NSW	Government	28,177
6	NSW Total		75,261
7	QLD	Retail	15,133
8	QLD	Wholesale	23,543
9	QLD	Internet	14,456
10	QLD	Government	24,301
11	QLD Total		77,433
12	VIC	Retail	10,919
13	VIC	Wholesale	18,479
14	VIC	Internet	18,424
15	VIC	Government	22,143
16	VIC Total		69,965
17	WA	Retail	15,225
18	WA	Wholesale	15,115
19	WA	Internet	18,942
20	WA	Government	28,592
21	WA Total		77,874
22	Grand Total		300,533
23			

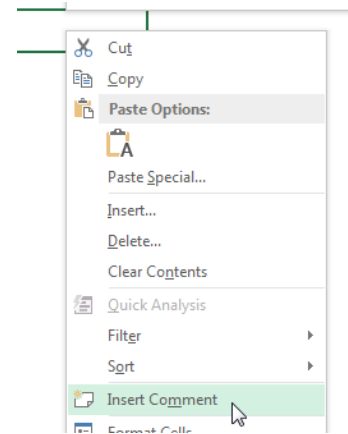
The Remove All button in the Subtotal dialog will remove the subtotals from the table.

6. Cell Comments and Text Boxes

Cell Comments

When documenting and adding instructions to a spreadsheet, cell comments and Text Boxes can be useful. Cell comments are like a sticky note for a cell. They appear when the mouse is pointed at the cell. The cell will have a small red triangle in the top right corner of the cell to signify that there is a cell comment on that cell.

You can add a comment to a cell by right clicking the cell and using Insert Comment.

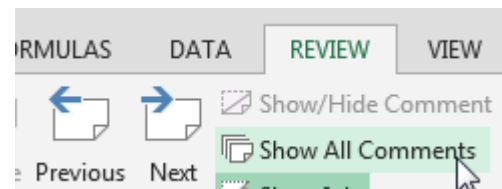


Keyboard Shortcut

Shift + F2 will insert or edit a cell comment.

There are a number of features that allow you to show and hide all of the cell comments in one step.

In the Review ribbon tab you can use the Show All Comments icon to make all comments visible in one step.



There are also Previous and Next icons that allow you to go through the cell comments on a sheet.

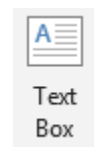
Clicking the Show All Comments icon again will hide all of the comments.

You can also right click the cell and use the Show Comment to make that comment permanently visible.

Text Boxes

If you need to permanently display a lot of text then consider using a Text Box. They are easy to create; easy to move on the sheet and can display large amounts of text. They even have some basic formatting options available.

The icon to insert a Text Box is on right side of the insert Ribbon tab.



Keyboard Shortcut

Alt n x

These keys are pressed in sequence, not held down.

To insert the Text Box on the sheet you first need to draw it above the grid and then click inside it to enter the text. Whilst editing inside the Text Box you can use a number of formatting options.

You can click and hold on the Text Box border and use the mouse to move it around. With the Text Box selected you can also use the arrow keys to move it.

You can link a Text Box to a cell if you need to have a flexible message appear.

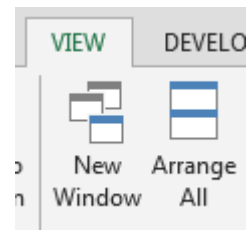
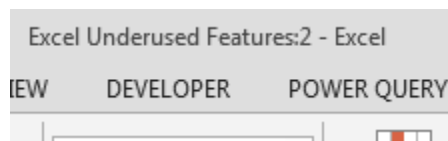
To link a Text Box to a cell, select the Text Box and then click in the Formula Bar and type = and then click the cell that you want to link it to. Changing the cell contents will change the text in the Text Box. You can't have text in the Text Box and link to a cell. Linking to a cell overwrites any text in the Text Box.

7. Using Windows (Excel 2010 and earlier)

This option applies mainly to Excel 2010 and earlier versions and it is useful if you need to have sheets displayed side by side within a Window. You can even set them up to scroll at the same time.

This feature works differently between Excel 2010 and later versions as they have changed the interface to allow you to put separate files on separate screens. This was possible in previous versions, but it was difficult and had a drawback to it.

In the View ribbon tab the New Window icon. This will make a small change to the screen, it adds a number to the end of the file name in the Excel title bar see below.



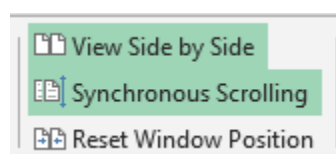
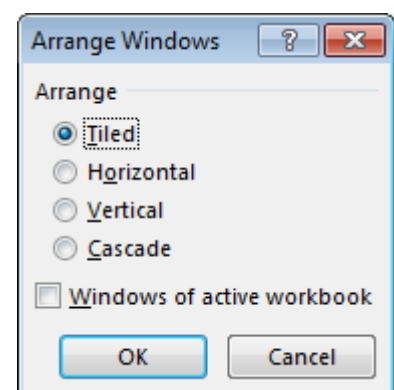
This number is important because you should close the Windows down based on the highest number. The reason you do that is that when you open a new Window some settings in that Window are default. If you close down a lower number window you may lose some settings e.g. Freeze Panes and sheet grid lines

The Arrange All icon is the easiest way to display sheets side-by-side top and bottom. Clicking the Arrange All icon displays the options available.

Ticking the Windows of active workbook option will display only the sheets from the current workbook which can be useful to copy and paste between sheets.

In each Window you can select different sheets so that you can see both sheets at the same time.

You can use the Synchronise Scrolling option to scroll both Windows at the same time if you have clicked the View Side by Side option.



You need to click the X to close Windows down – this is different between Excel 2010 and later versions.

Remember to always close the highest numbers down first, to preserve your View settings.

8. Page Break Preview

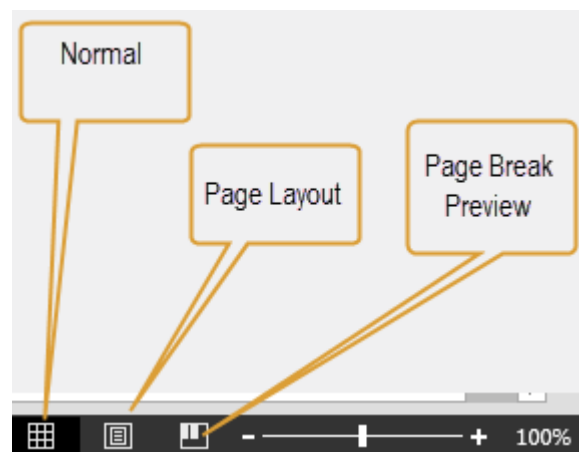
This feature has been around for quite a number of Excel versions and some people are unaware of the advantages of its use. As a side issue there is a new type of print view that was added in Excel 2007 that most users are completely unaware of. This new view can also be useful in some circumstances. We'll look at both.

Page Break Preview

Page Break Preview is a view of the sheet that allows you to see what will be printed and what won't be printed. What won't be printed is in the grey section of the screen and what will be printed is in the white section of the screen surrounded by the blue page lines.

The page numbers are shown as watermarks to the screen but they do not print.

The easiest way to access the Page Break Preview is to click on the small icon on the bottom right hand corner of the screen - see image on right, which also has the other View icons identified.

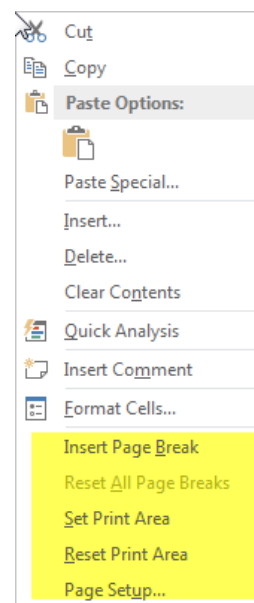


When you apply Page Break Preview typically the zoom percentage drops to enable you to see more of the sheet on the screen

When you are on a page using Page Break Preview you have extra right click options that are dedicated to printing. See bottom of image on right.

These offer quick ways to amend print options like removing or adding page breaks or to reset all of the page breaks.

The blue lines on the screen show you where the current page breaks are. Any dotted blue lines are those page breaks that Excel is estimating based on the current sheet print settings. If you point to one of the dotted lines you will see that it has a double headed arrow cursor and you can click, hold and move to adjust the page break.



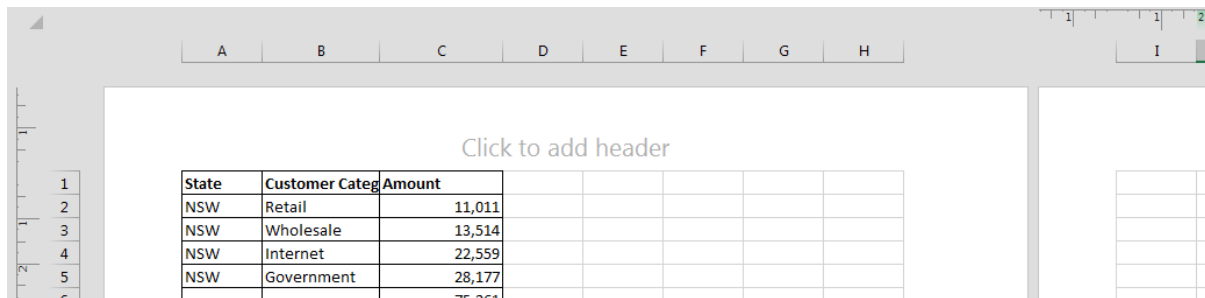
	A	B	C	D	E	F	G	H
1	State	Customer	Amount					
2	NSW	Retail	11,011					
3	NSW	Wholesale	13,514					
4	NSW	Internet	22,559					
5	NSW	Government	28,177					
6			75,261					
7								
8	QLD	Retail	15,133					
9	QLD	Wholesale	23,543					
10	QLD	Internet	14,456					
11	QLD	Government	24,301					
12			77,433					
13								
14	VIC	Retail	10,919					
15	VIC	Wholesale	18,479					
16	VIC	Internet	18,424					
17	VIC	Government	22,143					
18			69,965					
19								
20	V.A.	Retail	15,225					
21	V.A.	Wholesale	15,185					
22	V.A.	Internet	18,342					
23	V.A.	Government	28,532					
24			77,874					
25								
26		TOTAL	300,533					
27								
28								
29								
30								
31								
32								
33								
34								

WARNING: if you drag the blue dotted line page breaks down, or to the right, then be aware that you may be affecting the print percentage that Excel uses across the whole sheet.

When you move a blue dotted line down, or to the right, you are instructing Excel to fit the sheet to the page size and the only way to do that is to adjust the percentage that Excel uses. If you drag the dotted blue line up, or to the left, it should not affect the percentage.

Page Layout

This is the new view added in Excel 2007 and it makes Excel look like Word. It shows the page as printed. If you are trying to see what the print out will look like, this is the best view to review as it is the most accurate in terms of matching to the printed output.

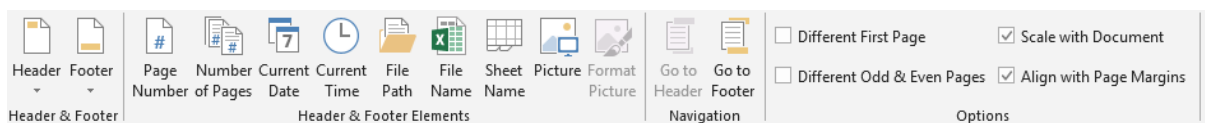


Click to add header		
State	Customer Category	Amount
NSW	Retail	11,011
NSW	Wholesale	13,514
NSW	Internet	22,559
NSW	Government	28,177
		75,261

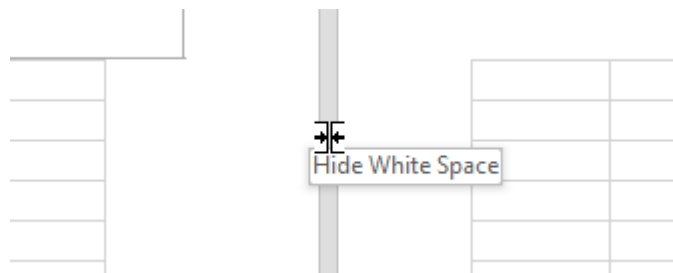
This shows the page as it will be printed.

You can also click directly in the Header and Footer sections to add and edit.

When you click the Header or Footer section a new Design ribbon is visible - see below.



You can point the mouse between the pages (see image on right) and double click to hide the margins (white space)—this will also hide the Header and Footer sections.



This view is handy to see what the output will look like, but is not useful for development purposes.

9. Shapes and Smart Art

Excel 2007 introduced a feature called Smart Art. This is also available in Word and PowerPoint.

There are a couple of things you can do with shapes that can be quite useful and can help you create an easy-to-use interface for your user. For example you can run macros off an image. You can also add a hyperlink to an image so that a person can click the image and it can take them to a different sheet in the workbook or even a page on the Internet.

When displaying your numbers you may find it is more descriptive to use images to show how the numbers interact. As we saw earlier you can link a Text Box to a cell's contents. The same applies to most shapes.

When dealing with Smart Art you can't link to them to cells. However you can use a hack to create the Smart Art and then convert it to an image, which you can then link to a cell.

Shapes

Shapes are in the Insert ribbon tab.

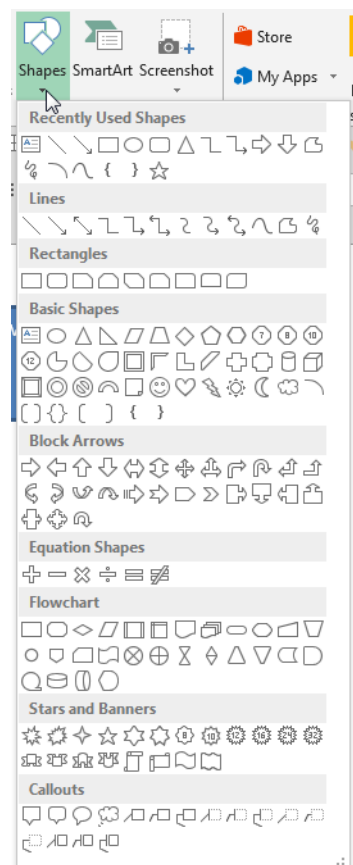
Excel has lots of shapes available - see image on right.

It even has Flowchart shapes that you may have used in computer programming.

Like a Text Box you can link shapes to a cell.

If you right click a shape you can also add a hyperlink.

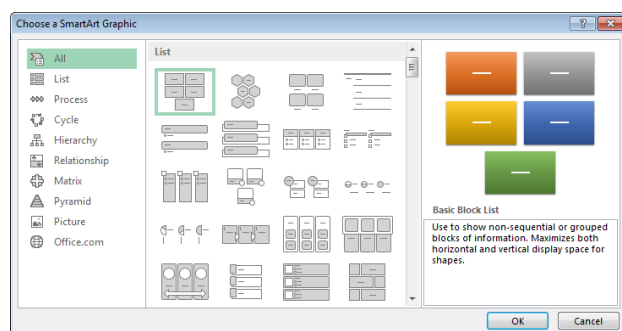
To return after following a hyperlink you can press, in sequence, F5 and then press Enter.



SmartArt

If you are trying to illustrate a process or a concept then the SmartArt options may be of assistance. The icon is next to Shapes in the Insert ribbon tab.

These are pre-formatted diagrams that allow you to show processes, concepts, relationships and other ideas.



There is a hack that allows you to link a cell to a SmartArt drawn shape. You have to convert the SmartArt to a shape.

With a SmartArt drawing selected you can click the Convert To Shapes icon on the far right of the Design ribbon tab.

They can then be used and changed just like a normal shape.

