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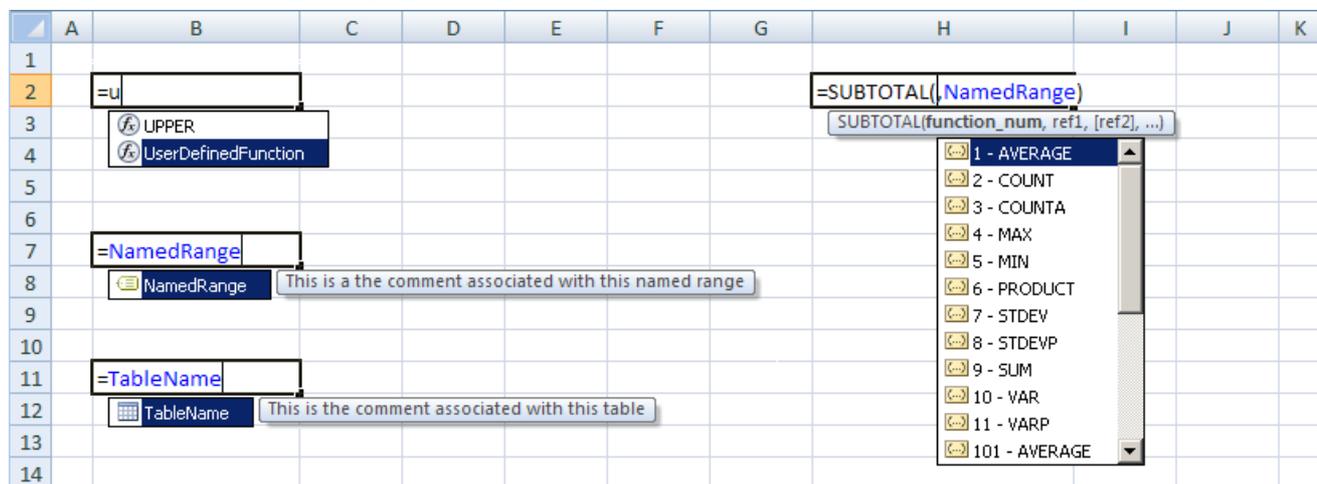
Tutorials and Add-ins for Microsoft Excel, Word and PowerPoint

August 2009 - Letter from the Editor

Welcome to the ninth edition of the BetterSolutions.com newsletter. Our last newsletter was over twelve months ago so there is a lot to catch up on. We have got plenty of new content planned with a clear focus on updating the website to include more 2007 screenshots and examples. There will also be a concerted effort to improve the documentation on the following subjects: XML, Analysis ToolPak, Pivot Tables and Charts as well as hopefully uploading whole sections on Access and SharePoint in the near future. We have also started building a dedicated Finance section which is helping us to understand and document all the financial worksheet functions. This issue contains an article on expanding column widths, examples of the RATE and IRR functions as well as a summary of the Excel 2007 View tab.

Formula AutoComplete

One of the most noticeable changes in Excel 2007 is the new formula auto complete and the additional tooltips. This makes it a lot easier to enter your formulas because it displays a list of all the available functions and range references. As soon as you start typing the auto complete will display a list of functions starting with those particular letters. As you can see from the screen shots the auto complete does not only contain built-in worksheet functions but also displays user defined functions, named ranges, table names as well as function enumerations. The items in the auto complete list are always displayed in ascending alphabetical order and different icons are used to identify the different objects. Another new feature in Excel 2007 is the ability to associate comments with your named ranges and tables. The comments will be displayed automatically as a tooltip when that named range or table name is highlighted.



support@betersolutions.com

This email address is the one you should use when you have any problems or questions with Microsoft Office and you want some FREE help and advice. Sending us your questions will not only mean that you get a reply quickly but will also allow us to publish the answers in the next issue which will help other people as well. We spend a lot of time checking and testing the information to ensure that it is accurate but if you do spot any mistakes or anything that is wrong then please tell us. We are always looking for ways to improve our products and services and always welcome constructive criticism.

News and Related Information

Genuine Microsoft Software

Software written and distributed by Microsoft and its partners is properly licensed and fully supported by Microsoft. However there is a lot of software in the market today that is not genuine. To help Microsoft distinguish between its own software and counterfeit software most of its applications and operating systems have to be registered after they have been purchased. This validation process not only reassures you that the software you are using is genuine but also ensures you will receive all the latest updates and ongoing improvements. Microsoft Office has a built-in component called Office Genuine Advantage (OGA) which requires you to activate your software either online or over the telephone. You will be reminded to activate the first time you open a Microsoft Office application and you must activate your copy within the first 25 launches for Office 2007. For Office 2003 and Office XP you must activate within the first 50 launches. Activation is extremely easy and will take you less than a minute to complete. Once completed you will be able to download lots of FREE add-ins, templates, tools and updates straight from the Microsoft Office Online website. You will need to repeat the validation process if Office is reinstalled. You can validate your copy of Office by visiting the following web page: <http://www.microsoft.com/genuine/office/validate.aspx>

You may also have come across the Windows Genuine Advantage (WGA) program. This is very similar to the OGA but applies to your Windows operating systems. You will be prompted to validate your copy of Windows if you want to download anything from the Microsoft Download Centre. The validation process is very simple and will only take a couple of minutes. Once completed you will be able to download service packs and general updates straight from the Microsoft website. You will need to repeat the validation process if Windows is reinstalled. You can validate your copy of Windows by visiting the following web page: <http://www.microsoft.com/genuine/validate/>

<http://technet.microsoft.com>

This site contains all the latest information and articles about Microsoft products and technologies and has been designed as a resource for IT professionals. It includes: virtual labs, webcasts, downloads, forums etc. The website is divided into several sections.

Library – Lots of technical documentation covering all the different products. There is an Office section relating to Microsoft Office 2007 but the information here is more relevant for a system administrator.

Learn – This includes details about different training resources and certification.

Troubleshooting – This is linked to the Support Knowledge Base.

Community – Contains lots of blogs, forums including a monthly newsletter.

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Your Questions and Problems

Excel – How can I add “st”, “nd”, “rd” and “th” to the end of my numbers?

It is possible to add ordinals to your numbers (to create 1st, 2nd, 3rd, 4th etc) by using built-in worksheet functions. The formula you need to use is quite complicated and uses the following five functions: IF, OR, VALUE, RIGHT and CHOOSE. This can be seen in cell “B8”. Most of the ordinal values need a “th” on the end although there are a few exceptions. If the number has a 1 at the end then it needs a “st”. If the number has a 2 at the end then it needs a “nd”. If the number has a 3 at the end then it needs a “rd”.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1													
2		1	First	1st		6	Sixth	6th		11	Eleventh	11th	
3		2	Second	2nd		7	Seventh	7th		12	Twelfth	12th	
4		3	Third	3rd		8	Eighth	8th		13	Thirteenth	13th	
5		4	Fourth	4th		9	Ninth	9th		14	Fourteenth	14th	
6		5	Fifth	5th		10	Tenth	10th		15	Fifteenth	15th	
7													
8		=B2&IF(OR(VALUE(RIGHT(B2,2))={11,12,13}),"th",											
9		IF(OR(VALUE(RIGHT(B2))={1,2,3}),CHOOSE(RIGHT(B2),"st","nd","rd"),"th"))											
10													
11													

Excel – What is the correct format for external workbook references?

When you include external workbook references in your worksheets they will have a very specific syntax. If either (or both) the WorkbookName or the WorksheetName contain spaces then these must be enclosed in single quotation marks. If the workbook is closed (or cannot be found) then the FolderPath will also be included. When the folder path is included the FolderPath, WorkbookName and WorksheetName are always enclosed in single quotation marks.

	A	B	C	D	E
1					
2		=FolderPath[WorkbookName]WorksheetName!CellReference		=[Book1]Sheet1!\$A\$1	
3				=[Book1.xlsx]Sheet1!\$A\$1	
4		=C:\Temp\[Book3.xlsx]Sheet1!\$A\$1		=[Workbook Name.xlsx]Sheet1!\$A\$1	
5		=C:\Temp\[Workbook Name.xlsx]Worksheet Name!\$A\$1		=[Workbook Name.xlsx]Worksheet Name!\$A\$1	
6					

Excel – How can I install an add-in for everyone?

The (Tools > Add-ins) dialog box or (Office > Excel Options)(Add-ins tab) in Excel 2007 lets you see what add-ins are available and to control which ones are loaded. These settings are user specific which means that when different users log on to the same computer they could see different add-ins. If you have a third party “.xla” add-in that you want installed and made available to anyone who logs on to that computer then you need to save your add-in in the following folder:

Excel 2007: C:\Program Files\Microsoft Office\Office12\Library\

Excel 2003: C:\Program Files\Microsoft Office\Office11\Library\

Excel 2002: C:\Program Files\Microsoft Office\Office10\Library\

Excel – Why do my URLs automatically become hyperlinks?

Any hyperlinks or internet URLs you enter in a worksheet will be automatically changed into hyperlinks by default. For those of us that find this really annoying you can turn this off from (Tools > AutoCorrect Options)(AutoFormat as you type tab) or (Office > Excel Options)(Proofing tab) in Excel 2007.

When correcting spelling in Microsoft Office programs

- Ignore words in UPPERCASE
- Ignore words that contain numbers
- Ignore Internet and file addresses
- Flag repeated words
- Enforce accented uppercase in French
- Suggest from main dictionary only

Expanding Column Widths

You may not have noticed but your column widths often expand automatically when you enter or format certain values. A column width will expand automatically when the cell has been formatted with the "General" number format and you enter or edit a particular value. A column width can also expand when you are changing the number format. Column widths are not automatically adjusted when data is copied or moved. The default column width in a new worksheet is 8.43.

Numbers

All numbers are stored with a precision of 15 significant digits. If you enter more than fifteen significant digits the extra digits are converted to zero automatically (i.e. the number is rounded down). Numbers with less than 9 digits are displayed in full. Numbers with 9 or 10 digits are displayed in full and have the column width increased. Numbers with more than 11 digits are displayed in scientific notation and have the column width increased. Numbers with more than 15 digits are rounded down, displayed in scientific notation and have the column width increased.

	A	B	C	D	E	F	G
1							
2		Digits	Entered	Displayed	Cell	Width	
3	8	12345678	12345678	12345678	12345678	8.43	
4	9	123456789	123456789	123456789	123456789	9.29	
5	10	1234567890	1234567890	1234567890	1234567890	10.29	
6	11	12345678901	12345678901	12345678901	12345678901	11.29	
7	12	123456789012	1.23457E+11	123456789012	123456789012	11.71	
8	13	1234567890123	1.23457E+12	1234567890123	1234567890123	11.71	
9	14	12345678901234	1.23457E+13	12345678901234	12345678901234	11.71	
10	15	123456789012345	1.23457E+14	123456789012345	123456789012345	11.71	
11	16	1234567890123456	1.23457E+15	1234567890123450	1234567890123450	11.71	
12							

Decimals and Fractions

Numbers entered with decimals also increase the column width when they have more than 7 decimals. Numbers with more than 9 digits are displayed in scientific notation. Numbers containing fractions could also cause the column width to increase automatically. Fractions with more than 15 digits are rounded down and displayed with no fraction. The same is true for numbers entered with commas, dollar signs, or percent signs.

	A	B	C	D	E	F	G
13							
14		Decimals	Entered	Displayed	Cell	Width	
15	7	1234,567	1,234,567	1234567	1234567	8.43	
16	8	1234,5678	12,345,678	12345678	12345678	9.43	
17	9	1234,56789	123,456,789	123456789	123456789	10.43	
18	6	0.000001	0.000001	0.000001	0.000001	8.43	
19	7	0.0000001	0.0000001	0.0000001	0.0000001	9.29	
20	8	0.00000001	0.00000001	0.00000001	0.00000001	10.29	
21	9	0.000000001	0.000000001	0.000000001	0.000000001	11.29	
22	10	0.0000000001	1E-10	0.0000000001	0.0000000001	8.43	
23	9	111111111 1/2	111111111 1/2	111111111.5	111111111.5	12.57	
24	15	111111111111111 1/2	111111111111111 1/2	111111111111111	111111111111111	18.71	
25	16	1111111111111111 1/2	1111111111111110 1/2	1111111111111110	1111111111111110	19.71	
26							

Dates

Entering and editing dates can also cause the column width to increase automatically. Be aware that the date displayed is not always the same and is dependent on the format that is entered.

	A	B	C	D	E	F	G
27							
28		Entered	Displayed	Cell	Width		
29		1 Jan 2009	01-Jan-09	01/01/2009	8.43		
30		1 January 2009	01-Jan-09	01/01/2009	8.43		
31		1/1/09	01/01/2009	01/01/2009	9.43		
32		31/12/2009	31/12/2009	31/12/2009	9.43		
33							

Function – RATE

The arguments for this function are: **RATE(nper, pmt, pv [,fv] [,type] [,guess])**

This function returns the interest rate for a series of equal cash flows at regular intervals. This function can be used to calculate the interest rate of an annuity. An annuity is when fixed payments are made at regular intervals.

- the interest rate returned is based on the period specified.
- the interest rate returned is compounded according to the period specified. For example if your repayments/deposits are made yearly then the interest rate will be a yearly compounded interest rate. If your repayments/deposits are monthly then the interest rate will be a monthly compounded interest rate.
- each payment is made at the end of the period, unless the 'type' argument is set to 1.
- all the arguments must be expressed in the same unit of time (years, months, days etc).
- the interest is assumed to be re-invested immediately at the same rate.

For those of you who are not familiar with compound interest it refers to adding the accumulated interest to the principal amount so that you can earn interest on the interest you have already accumulated. Most interest is compounded but when it isn't it is referred to as simple interest.

Loan repayments and saving deposits

What interest rate have you been charged if you pay off a £400 loan in 2 years making annual payments of £300 at the end of each year? The number of periods is 2. The fixed repayment is -300 since we are repaying £300 every year. The minus sign indicates that the £300 is cash you are paying out. The original loan amount is 400 and the final balance is 0 as the loan is being paid off. The interest rate returned will be a yearly interest rate, that is compounded yearly.

	A	B	C	D	E
1					
2	nper		2	Number of periods	
3	pmt		-300	Fixed repayment	
4	pv		400	Original loan amount	
5	fv		0	Final Balance	
6	type		0	Payment Type	
7					
8			31.87%	=RATE(C5,C6,C7,C8,C9)	
9					

10					
11	nper		3	Number of periods	
12	pmt		-200	Fixed deposit	
13	pv		0	Opening Balance	
14	fv		800	Final Balance	
15	type		1	Payment Type	
16					
17			15.09%	=RATE(C2,C3,C4,C5,C6)	
18					

What interest rate have you received if you deposit £200 at the start of each year and after 3 years you have £800? The number of periods is 3. The fixed deposit is -200 since we are depositing £200 every year. The opening balance is 0 since there is no upfront amount in the savings account. The final balance is 800 since we have accumulated £800 at the end of the 3 years.

The payment type is 1 indicating that the payments are made at the start of each period. The interest rate returned will be a yearly interest rate, that is compounded yearly.

	A	B	C	D	E
1					
2	nper		96	Number of periods	
3	pmt		-120	Fixed deposit	
4	pv		600	Opening Balance	
5	fv		20000	Final Balance	
6	type		1	Payment Type	
7					
8			14.63%	=RATE(C2,C3,C4,C5,C6)*12	
9					

What interest rate would you need if after 8 years of depositing £120 a month you wanted to have saved £20,000, starting with an initial deposit of £600? As payments are made monthly all the arguments need to be in monthly denominations. The number of periods is 96 (8 x 12). The fixed deposit is -120 since we are depositing £120 a month. The opening balance is 600 since you have an initial deposit of £600. The final balance is 20,000 because we want to

have accumulated £20,000 at the end of the 8 years. The interest rate returned will be a monthly interest rate compounded monthly. Multiplying the interest rate by 12 will give you a yearly interest rate, that is compounded monthly.

Function – IRR

The arguments for this function are: **IRR(values [,guess])**

This function returns the interest rate for a series of equal or unequal cash flows at regular intervals. This function can also be used to calculate the interest rate of an annuity. This function is slightly more advanced than the RATE() function because it has the ability to handle both equal and unequal cash flows at regular intervals.

- the interest rate returned is always a yearly interest rate.
- the interest rate returned is always compounded yearly.
- each payment is made at the end of the period.
- there must be at least one positive payment and one negative payment.
- the interest is assumed to be re-invested immediately at the same rate.
- the order of the payments is very important, so make sure they are in the correct order.

Loan repayments and saving deposits

What interest rate have you been charged if you pay off a £400 loan in 2 years making annual payments of £300 at the end of each year? There are three cash flows that have to be considered. The original amount borrowed and then the two repayments. The minus sign indicates that the £300 is cash you are paying out. The interest rate returned is a yearly interest rate, compounded yearly. This interest rate is the same as that returned from the RATE() function on page 5.

	A	B	C	D	E
1					
2		Period	Cash Flow		
3	0		400	Amount borrowed	
4	1		-300	Payment after 1 year	
5	2		-300	Payment after 2 years	
6					
7			31.87%	=IRR(D3:D5)	
8					
9		Period	Cash Flow		
10	0		-200	Saved start of 1 year	
11	1		-200	Saved start of 2 year	
12	2		-200	Saved start of 3 year	
13	3		800	Received end of 3 years	
14					
15			15.09%	=IRR(C12:C15)	
16					

What interest rate have you received if you deposit £200 at the start of each year and after 3 years you have £800? There are four cash flows that have to be considered. The interest rate returned is a yearly interest rate, compounded yearly. This interest rate is the same as that returned from the RATE() function on page 5.

16				
17		Period	Cash Flow	
18	0		500	Amount borrowed
19	1		-250	Payment after 1 year
20	2		-350	Payment after 2 years
21	3		-150	Payment after 3 years
22				
23			25.11%	=IRR(C12:C15)
24				

What interest rate have you been charged if you pay off a £500 loan in 3 years? Making a payment of £250 at the end of the first year, a payment of £350 at the end of the second year and a payment of £150 at the end of the third year. There are four cash flows that have to be considered. This interest rate could not have been calculated using the RATE() function because the cash flows are unequal.

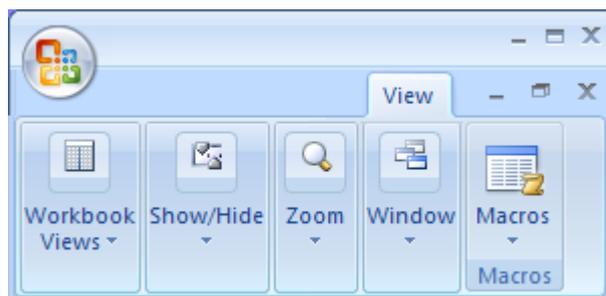
Guess argument

In most cases you will not have to provide a guess because the default value which is 0.1 (or 10%) is sufficient. In some situations there may be more than one possible interest rate in which case using a different guess can result in a different interest rate. This function uses an iterative technique to calculate the interest rate. If a result cannot be found after 20 iterations then #NUM is returned.

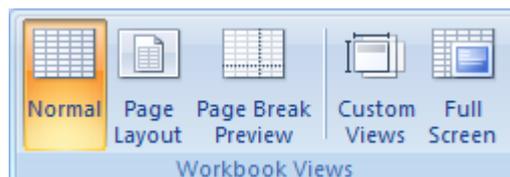
This function is often described as the “discount rate that generates a zero net present value”. The interest rate returned by this function is calculated using the NPV() function iteratively calculating the interest rate that will give a NPV of zero.

Excel 2007 - View Tab

At a quick glance all of these commands will look familiar however there are several new features hidden amongst them. The new Page Layout is one of the biggest changes. The Macros group may seem a little out of place at first but this functionality is not to be confused with the Developer tab. The Macros drop-down only allows you to view and run macros that are currently available.

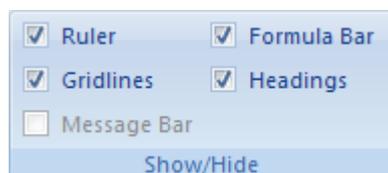


Workbook Views



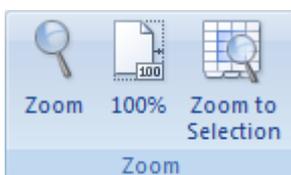
This group contains all the commands relating to the different ways you can display your worksheets or workbook. The Normal view and the Page Break Preview view are the familiar (View > Normal) and (View > Page Break Preview) commands. The Page Layout view is a new feature which makes it a lot easier to see what your worksheet will look like when it is printed. It is important to realise that this is a fully editable view. Anything you can do in the Normal view you can also do in this view. There are also new shortcuts to these 3 different views in the bottom right corner next to the status bar. The “Custom Views” command displays the old (View > Custom Views) dialog box. This command is not available when the active workbook contains any tables. The “Full Screen” is the old (View > Full Screen) and instead of displaying an annoying toolbar to help you back to the normal screen you can just press the ESC key. The only way to display your workbook in print preview is to use (Office > Print > Print Preview) or to use the Quick Access toolbar.

Show/Hide



The Show/Hide group contains some of the application and worksheet specific commands that were previously found on the View drop-down menu and in the (Tools > Options) dialog box. The “Ruler” checkbox is a new feature that allows you to toggle the display of the ruler when displaying a worksheet in Page Layout view. The “Gridlines” checkbox toggles the display of gridlines on the active worksheet and is from the (Tools > Options)(View tab) under the Window Options heading. The “Message Bar” checkbox is a new feature which replaces all pop-up messages. For example if macros have been disabled you won’t see the annoying ‘macros are disabled’ popup but instead you will see a message appear in between the ribbon and the formula bar. This checkbox allows you to toggle the display of these messages. The “Formula Bar” checkbox toggles the display of the formula bar and is from the View drop-down menu and the (Tools > Options)(View tab) under the Show heading. The “Headings” checkbox is from the (Tools > Options)(View tab) and toggles the display of the row & column headers. These are now a bit easier to access but I am disappointed not to see a checkbox for “Show Page Breaks” or “R1C1 Notation”. Show Page Breaks can only be accessed from (Office > Excel Options)(Advanced tab) and then scrolling to the “Display options for this workbook”. R1C1 Notation can only be accessed from the (Office > Excel Options)(Formulas tab). You can no longer toggle the display of the status bar.

Zoom



This group contains commands that relate to adjusting the display percentage of the active worksheet. The “Zoom” command is the familiar (View > Zoom). The “100%” command lets you quickly return to a view of 100%. The “Zoom to Selection” command is a new feature and lets you quickly zoom into the current selection. There is also a new zoom slider in the bottom right corner, next to the status bar.

Window

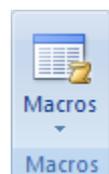


This contains commands relating to workbooks. Every workbook you open in Excel can be thought of as a window. It is also

possible to open multiple windows of the same workbook. The “New Window” command is the old (Window > New Window) which creates a new window of the active workbook. The “Arrange All” command is the old (Window > Arrange) which displays the Arrange Windows dialog box and lets you arrange the open windows in different ways. The “Freeze Panes” drop-down applies to the active worksheet and displays the options: freeze panes, freeze top row and freeze first column. The freeze panes command is the old (Window > Freeze Panes) and the other two are new. The “Split” command is the old (Window > Split) which inserts a split into the active window. The “Hide” command is the old (Window > Hide) which hides the active window. The “Unhide” command is the old (Window > Unhide) which displays the Unhide dialog box allowing you to unhide previously hidden windows.

The “View Side by Side” command is the old (Window > Compare Side by Side) allowing you to scroll both windows together. The “Synchronous Scrolling” command allows you to toggle the synchronous scrolling on and off and is only available when you are viewing windows side by side. This was previously found on the Compare Side by Side toolbar. The “Reset Window Position” command will reset the position of the windows to be arranged horizontally which is useful if the windows have been moved or resized. This is also only available when you are viewing windows side by side. This was previously found on the Compare Side by Side toolbar. The “Save Workspace” command was previously available by displaying the (File > Save As) dialog box and changing the file type to workspace. The “Switch Windows” drop-down displays all the workbooks that are open in that particular session. In Excel 2003 this was displayed at the bottom of the Window menu. The quickest way to jump between your windows though is to use the (Ctrl + Tab) shortcut key.

Macros



This group is displayed by default and is not related to whether the Developer tab is displayed or not. This drop-down button contains the options: commands view macros, record macro and use relative references. These have all been taken from the Visual Basic toolbar and (Tools > Macro) submenu. None of this functionality has changed. Pressing the button above the drop-down arrow is a shortcut to the view macros command. This displays the familiar (Tools > Macro > Macros) dialog box. The “Record Macro” command lets you record your steps so it can be played back later. The use relative references command allows you to toggle between recording absolute cell references or relative cell references. This is also from the Visual Basic toolbar and Macro submenu. These three commands are more than sufficient for those of us who just record a macro and then need to run it. If you want to edit macros or do anything more complicated then you should have the Developer tab displayed as well. The Developer tab contains additional commands relating to Visual Basic and can be displayed by selecting (Office > Excel Options)(Popular tab, “Show Developer tab in Ribbon”).

View Tab Summary

The best new feature is definitely the new Page Layout view. Any pages that will not be printed will be displayed in grey making it very easy to see what will be printed before it is printed. Using the Page Layout view in combination with the new zoom slider lets you quickly see how all of your information fits across multiple pages. This view is very similar to the Print Layout view in Word 2007.