

# Excel 2016 Introduction

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# **EXCEL 2016 INTRODUCTION**

Excel 2016 Introduction

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# 1 INTRODUCTION

Excel 2016 is a powerful spreadsheet application that allows users to produce tables containing calculations and graphs. These can range from simple formulae through to complex functions and mathematical models. It can also be used in a powerful way to handle data. The pivot table and PowerPivot tools allow fast and easy access to reporting your data in a meaningful way without having to revert to full database programs like Access.

## 1.1 HOW TO USE THIS GUIDE

This manual should be used as a point of reference following attendance of the introductory level Excel 2016 training course. It covers all the topics taught and aims to act as a support aid for any tasks carried out by the user after the course.

It may also be used as a self-help tutorial following the sections in the order presented will allow the user to build their skills in a logical fashion and by the end of this manual allow them to use Excel in a reasonably competent fashion.

The manual is divided into sections, each section covering an aspect of the introductory course. The table of contents lists the page numbers of each section and the table of figures indicates the pages containing tables and diagrams. It is suggested that new users follow the order of topics as listed to allow them to build their skills in a logical fashion.

### **Objectives**

Sections begin with a list of objectives each objective working towards the section completion. It is suggested that you mark off those topics that you are familiar with following the training.

### **Instructions**

Those who have already used a spreadsheet before may not need to read explanations on what each command does, but would rather skip straight to the instructions to find out how to do it. Look out for the arrow icon which precedes a list of instructions.

### **Appendices**

The Appendices list the Tabs mentioned within the manual with a breakdown of their functions and tables of shortcut keys.

## Keyboard

Keys are referred to throughout the manual in the following way:

**ENTER** – Denotes the return or enter key, **DELETE** – denotes the Delete key and so on.

Where a command requires two keys to be pressed, the manual displays this as follows:

**CTRL + [P]** – this means press the letter “**P**” while holding down the Control key.

## Commands

When a command is referred to in the manual, the following distinctions have been made: When Ribbon Tab and Group commands are referred to, the manual will refer you to the Tab and Group –

**E.G.** Choose **HOME** from the Ribbon, in the **FONT** group, and then **B** for bold.

When dialog box options are referred to, the following style has been used for the text –

**E.G.** In the **PAGE RANGE SECTION** of the **PRINT** dialog, click the **CURRENT PAGE OPTION**

**E.G.** Dialog box buttons are emboldened – “Click **OK** to close the **PRINT** dialog box and launch the print.”

## Notes

Within each section, any items that need further explanation or Points for extra attention devoted to them are denoted by shading. For example:










“Excel will not let you close a file that you have not already saved changes to without prompting you to save.”

## Tips

If attending a training course, or simply wish to make notes, At the end of each section there is a page for you to make notes on and a “Useful Information” heading where you will find tips and tricks relating to the topics described within the section.

## 2 THE BASICS

**By the end of this section you will be able to:**

-  Understand and use common Windows elements
-  Recognise Excel screen elements
-  Launch Excel
-  Understand the concept of a spreadsheet
-  Work with Ribbon and Tabs
-  Use Menus, Galleries and dialog Boxes
-  Get Help

### 2.1 WINDOW ELEMENTS

Excel is an application that runs under the Windows graphical user interface. When launched, Excel sits in its own “window” – the box that surrounds the application elements. The window can be moved, sized, closed, minimised and maximised using the features common to the Windows environment – these are listed below:

**WINDOW BORDER** The box that surrounds the Excel screen when it is not maximised is called the window border. When the mouse is over the border, the pointer changes from a single to a double-headed arrow – clicking and dragging with this shape allows the window to be resized.

**TITLE BAR** The coloured bar that appears at the top of the Excel window. The title bar tells you which application you are using and if the workbook you are in is maximised, it will also contain the name of the workbook. If the Excel window is not maximised, by positioning the mouse over the title bar and clicking and dragging, you can move the Excel window to a new location on the screen.



**Picture 1** Title bar

**MAXIMISE BUTTON** When working in a workbook, the Excel screen contains two windows, an application window and a workbook window. You can maximise both windows to capitalise on the space you have on-screen. If you would like the window that your Excel application is in to fill up the whole screen, click the outermost maximise button. You may find that the workbook you are in can still be bigger – click the inner maximise button to fill the remaining space within the Excel application window.



**Picture 2** Maximise

**MINIMISE BUTTON** This button is very useful if you need to temporarily switch from Excel into another application without closing Excel down completely. Click the minimise button to shrink Excel to an icon on the task bar; you will then be able to view other icons and applications you may wish to access. When you are finished and ready to continue, click the Excel icon from the task bar to resume. The innermost minimise button will minimise the current workbook window.



**Picture 3** Minimise

**RESTORE BUTTON** This button only appears when a window is maximised. A maximised window has no border and you cannot see what is behind it. If you want to put the window back inside its border so that you can move and size it, click the restore button.



**Picture 4** Restore

**CLOSE BUTTON** This button is used to close a window. If you click the close button for a workbook window you close the document. The last button will close the Excel application.



**Picture 5** Close

**DIALOG BOX LAUNCHER** this button launches dialog boxes specific to the part of the ribbon you see them the group will be named such as font, clipboard, etc. the dialog box Launcher can be found to the bottom right of a Group. **N.B.** not all groups have a launcher.



**Picture 6** Dialog box launcher

The **RIBBON DISPLAY OPTIONS** allows you to minimise, auto hide or maximise your ribbon depending on your monitor size. Just click and make a choice



**Picture 7** Ribbon options

The buttons below are only available when online and logged into your **MICROSOFT ACCOUNT** this needs to be set up initially prior to using these features, Although, not having an account will not affect the basic use of excel just the sharing of files to the cloud, consistent office settings across many machines and saving to your online storage. They are located at the top right of your screen below the window buttons.



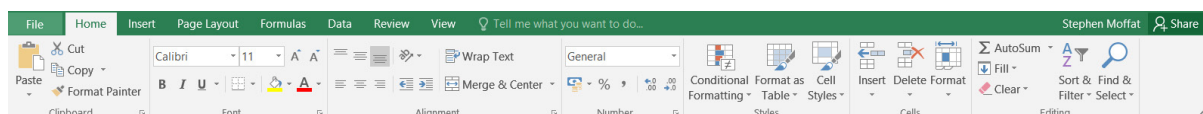
**Picture 8** Sharing and account access

## Menus

Menus are not so obvious to see in excel but they can be found within the ribbon on occasion. The Ribbon and the Tabs and will be mostly used and as such will be constantly referred to throughout the manual

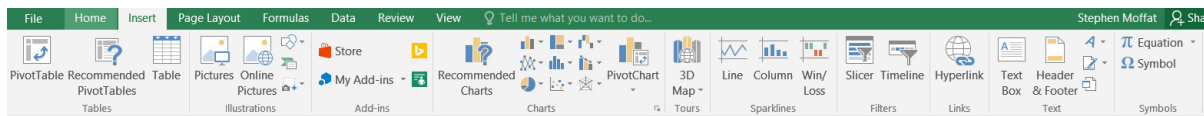
## Ribbon and tabs

The **RIBBON** contains tabs that show different commands with respect to what you wish to do. The **HOME** Tab shows basic commands of formatting. It is the default tab and will contain some of the most often used tools



**Picture 9** Home tab

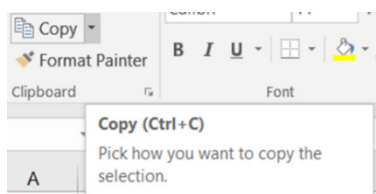
The **INSERT** Tab allows the insertion of any object. Just click on the named Tab to see list of commands that you can perform by clicking on the appropriate icon.



**Picture 10** Insert tab

## Icons

By holding your mouse over an icon, a helpful hint will appear to show you what that command will do. Clicking will apply that command



**Picture 11** Icon help text

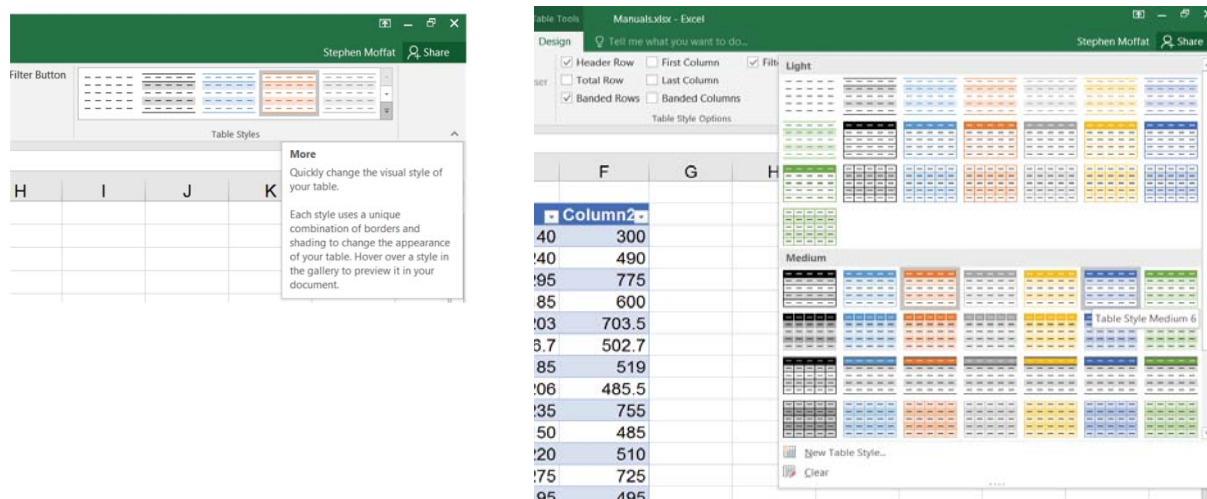
Any Icon on the ribbon with a down arrow offers other options and sometimes a dialog box. such as the down arrow on the table button. Any option within the menu that has a series of dots after it will usually display a dialog box



**Picture 12** Drop down option

### Galleries

Galleries are a range of choices offered when using a particular feature. Click on the bottom right corner of a gallery to open it and show many more preset options than originally seen, plus the ability in many occasions to create, edit or save new ones



Picture 13 Gallery usage

### Dialog box

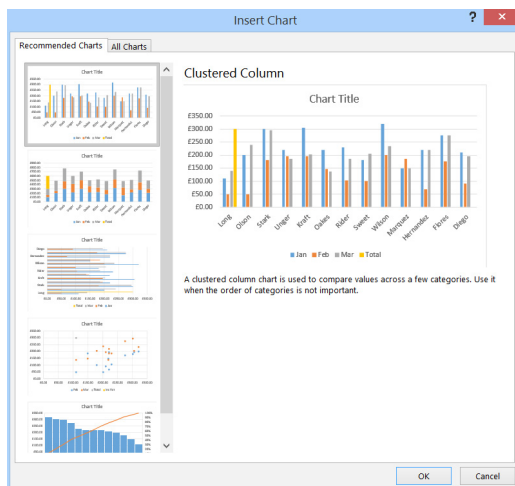
To open a dialog box, use a **DIALOG BOX LAUNCHER**, or a button from the ribbon when the dialog box is open, make a choice from the various options and click **OK** at the bottom of the dialog box.



Picture 14 Dialog box launcher

Look at a **GROUP** type on the ribbon such as **FONT** and in the bottom right hand corner of that group you may see a small box with an arrow, clicking this is another method to call up a dialog box, this time, directly from the ribbon. Many dialog boxes may be more familiar if you have used Excel before.

**E.G.** Choosing to insert a chart from the **INSERT** Tab's **RECOMMENDED CHART** button and this will open a **DIALOG BOX** directly and offer a number of varieties of charts to insert.



Picture 15 Dialog box

If you wish to change your mind and close the dialog box without making a choice, then click on **CANCEL**. The dialog box will close without any choice being applied.

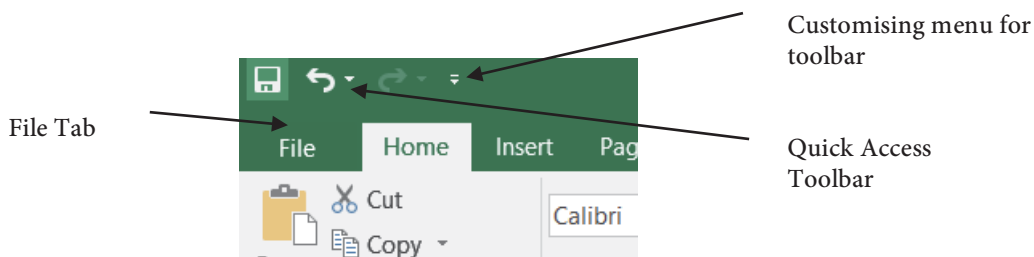
If you would like help while the dialog box is open, then click on the “?” “in the top right hand corner of the dialog box this will bring up a **HELP** window that will display the relevant topics.

### File tab

The **FILE** Tab is the Tab that deals with anything to do with your file within excel and has many important commands and options. Such as excel settings, opening, saving, printing and closing files. This will be looked into much further later in the manual.

### Toolbars

There are **only** two toolbars within the new version of Office 2016 there is the **QUICK ACCESS TOOLBAR** seen here next to the **FILE** Tab, and there is the **MINI** toolbar



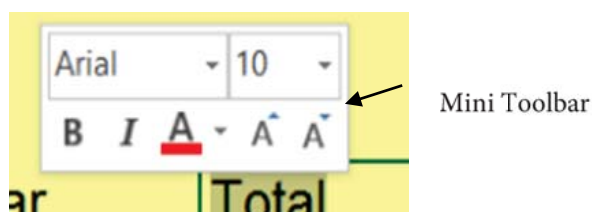
Picture 16 Quick access toolbar

### Quick access toolbar

By default, there are only three buttons on the quick access toolbar but these can be edited and other regularly used buttons can be placed there. Using the drop down menu next to the quick access toolbar will allow the customisation of this toolbar adding your most often used commands.

### Mini toolbar

Whenever text is selected within excel a small formatting toolbar will appear above the highlighted text it will disappear if the mouse cursor is moved away from the toolbar and will reappear when the mouse cursor is moved over the highlighted text again. You can also make it appear with added commands by right clicking on anything selected

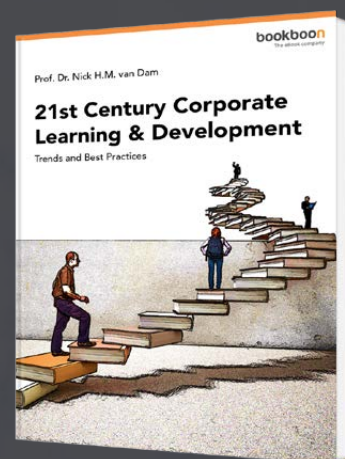


Picture 17 Mini toolbar

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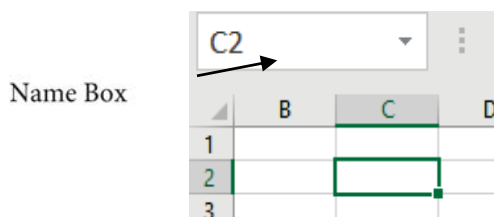
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## Name box

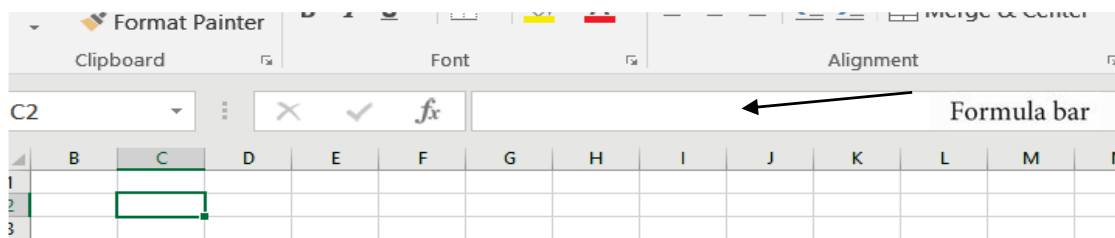
The name box is the small white box to the left of the formula bar as we will discover later has a number of useful features such as navigation, the creation and selection of named cells and ranges. Entering a cell reference and pressing return will navigate you to the specific cell entered. Using the drop down arrow to the right of it will allow you to select any specified names in the workbook. When creating functions, the box will have a different appearance and will allow you to choose the most popular functions used in that workbook.



**Picture 18** Name box

## Formula bar

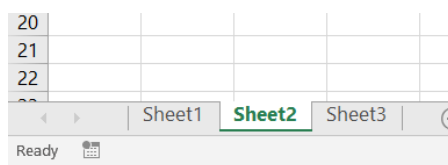
The formula bar is the white bar to the right of the name box and is used for entering and editing data. Creating and editing functions and formulae. The construction of Formulae and functions can be seen in this bar even when the cell containing the formula is showing a calculated value. (Unless cell is formatted to hidden and the sheet protected). The **fx** button on the left of the bar is a tool to create functions and formulae.



**Picture 19** Formula bar

## Worksheets

You use worksheets to list and analyse data. You can enter and edit data on several worksheets simultaneously and perform calculations based on data from multiple worksheets. When you create a chart, you can place the chart on the worksheet with its related data or on a separate chart sheet. The names of the worksheets appear on tabs at the bottom of the workbook window. The name of the active sheet is bold.



**Picture 20** Sheet tabs

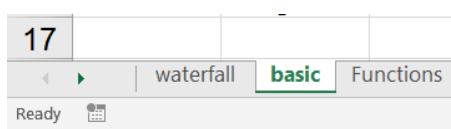
## Status bar

The Status bar, across the bottom of the window, displays different information at different times. To the left is an indicator, which will display Ready, Edit etc. depending on the mode in which the user is currently working. If menus are being accessed, this area will usually give details on the currently highlighted menu option. If you are in the middle of a task – copying data for example – this area will often display messages and prompts instructing you on what to do next. On the right of the status bar are buttons for different views and a slider for controlling the zoom



**Picture 21** Zoom and view controls

To the Left on the Status bar, keyboard status indicators reveal whether the Num Lock etc. are switched on.

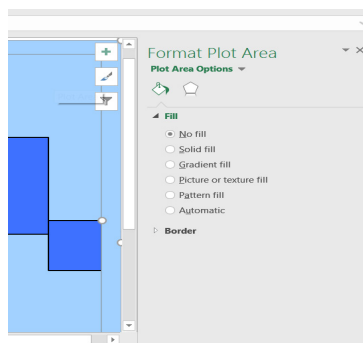


**Picture 22** Status indicators

## Task pane

A task pane is a window that collects commonly used actions in one place. The task pane enables you to quickly create or modify a file, perform a search, or view the clipboard.

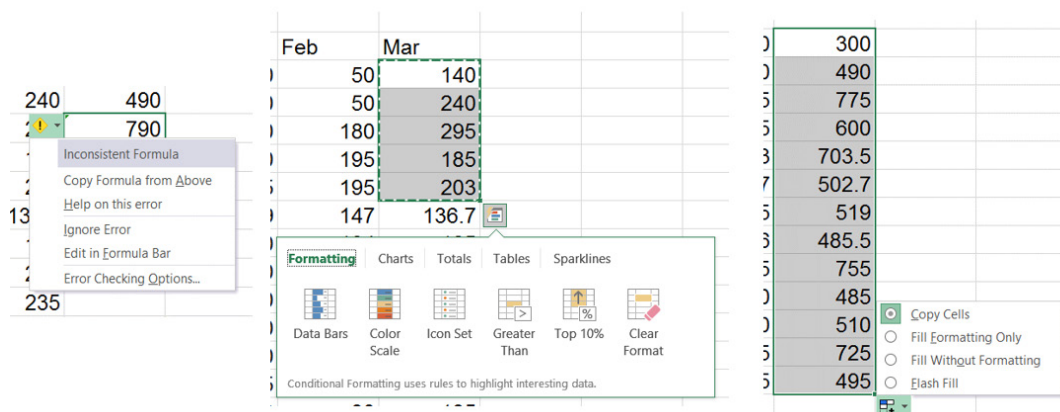
It is an area that you can either, dock along the right or left edge of the window or float anywhere on the screen. It displays information, commands and controls for choosing options. You can collapse or expand options using the little arrows to the left of a title and select the option with a single click.



**Picture 23** Task pane

### Smart tags

Smart Tags, first introduced in Microsoft Office XP, make it easier for you to complete some of the most common tasks and provide you with more control over automatic features.



**Picture 24** Smart tag examples

You do not have to complete any additional steps to make the Smart Tags appear or disappear in Excel. The **Paste Options**, **AutoFill Options**, **Trace Error** and **Insert** smart tags appear automatically to allow you to quickly choose actions and remain in place until you begin another action. For example, when you complete a paste operation, the **PASTE OPTIONS** button remains in place alongside your text until you begin typing new text.

This feature alerts you via a smart Tag of a possible error in a cell. You can select a command to resolve the error, ignore it, or access further Error Checking options.

The example above Left shows the use of a smart tag where a formula has been written into a cell with a possible error it is not the same as adjacent formulae a cell reference may have been missed. The smart tag initially looks like a small green tag in the top left corner of a cell. When moving over this a tag should appear when you click on the tag a menu unfolds giving you certain options.

### Size of workbook

The old versions of excel were sizable having **256** columns and **16384** rows (office 95 etc.).

However:

2016 offers **16384** columns and **1,048,576** Rows which is vastly more useful for handling larger bodies of data. Because of the use of XML to arrange the data in the file it is far more efficient and so the file size of similar bodies of data between the versions means that 2016 offers a much more compact and smaller file size.

### New features

Many of the New features in 2016 will be introduced as we go through the manual but to highlight the most important ones such as the new PowerPivot. Installed as standard and a reintroduction to demographics using 3D maps in Power view.

An integration with Apps through the Microsoft store and a one click transformation of data to graphics are among the highlights.

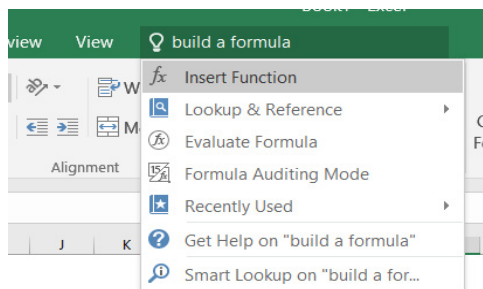


*However, many of these new features requires internet access through your Microsoft account. To use them ensure you have an account set up and are logged in with internet access to use them.*

## 2.2 GETTING HELP

### 2.2.1 MICROSOFT EXCEL HELP

Excel offers several quick ways to get help when performing particular tasks. You can select from a list of topics provided by Help, or you can even type a help request in plain English, and Excel will supply the answer using the *ANSWER WIZARD*.



**Picture 25** Accessing help: tell me...

#### Tell me...

##### ⇨ Answer wizard

1. Type in the box what you wish to do and the automatic search suggests topics when you see the topic you wish, select it with a mouse click. It may directly take you to the tool you need or offer help on the topic.

##### ⇨ To access help window

Help is only available when online in office 2016



**Picture 26** Help button

#### Mouse

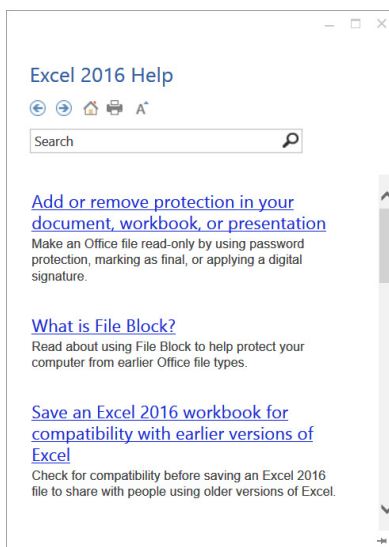
- i. Click on the **FILE** Tab and then click on the question Mark in the top right corner of the screen
- ii. **OR** Press **F1**. The Help window will open:
- iii. Enter a search Parameter
- iv. The window will display the topics that match your search.
- v. Click on a topic in order for it to be displayed

## Topic

⇨ Find a specific topic in help window

### Help window search






- i. The contents page allows you to select from a list of topic headings. Like search results on the internet these are hyperlinks to help files.
- ii. You will need to be online to access the help links. The search will be more extensive being online as it will search online help files from Microsoft.



**Picture 27** Main help window

## 3 BASIC MOVEMENT AND USAGE

**By the end of this section you will be able to:**

-  Navigate between worksheets.
-  Navigate to any point in a worksheet.
-  Enter numerical or textual data.
-  Edit entered data or delete it.
-  Selecting various parts of sheet or workbook simultaneously.

### 3.1 MOVEMENT

#### 3.1.1 MOVING AROUND WORKSHEET

With such a large working area available, you need to be aware of some of the techniques used for moving around the workbook. It is possible to move using either the keyboard or the mouse.

##### **With the Mouse**

The mouse is good if you want to move small distances. Click the white plus on any cell that you want to move to. The cell you clicked on becomes the selected cell.



**Picture 28** Selection cursor



*Depending on the position of the mouse in relation to the active cell, Excel displays different pointer shapes. The shape that must be displaying when moving to a cell or selecting cells is a white cross. (adjacent)*

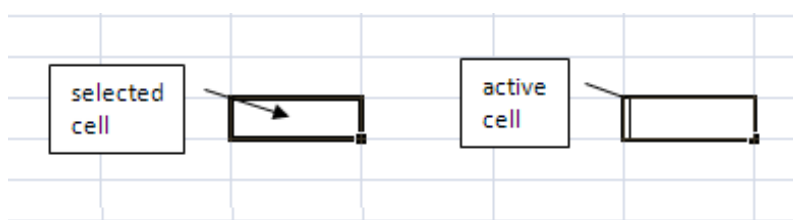
## With the Keyboard

You can select a cell by moving around with your cursor keys. (Arrow keys on your keyboard).

Having selected a cell, by double clicking the cell it becomes the active cell with a flashing cursor. You can also make a cell active by clicking in the formula bar or by pressing the **F2** key.



*Please note that while any cell is active various commands will not be available until the cell is no longer active. You may close the cell by pressing return or cancelling whatever was entered by pressing esc.*



**Picture 29** Selected and active cell

## Scrolling

The vertical and horizontal scroll bars do not move the active cell but they do allow you to see areas of the worksheet that are not currently visible. Having scrolled to an area of the worksheet, if you then need to move the active cell into that region, click the mouse onto a cell of your choice.



**Picture 30** Horizontal scroll bar

→ To use the scroll bars:

### Using the mouse

- i. Click on the scroll arrows up/down or left/right.
- ii. Drag the scroll box until the relevant cell becomes visible.



The size of a scroll box indicates the proportional amount of the used area of the sheet that is visible in the window. The position of a scroll box indicates the relative location of the visible area within the worksheet.

The table below lists some useful tips for scrolling:

TO SCROLL	DO THIS
One row up or down	Click the arrows on the vertical scroll bar.
One column left or right	Click the arrows on the horizontal scroll bar.
One window up or down	Click above or below the scroll box in the vertical scroll bar.
One window left or right	Click to the left or right of the scroll box in the horizontal scroll bar.

**Table 1** Scrolling options



When dragging the scroll box a scroll tip will display, showing the row or column you will move to when you release the mouse.

### Using the keyboard

- i. When you need to move further, it is better to use the keyboard. The table below lists useful movement keys.

To Move	Do this
One Cell Up, Down, Left or Right	[←][→][↑][↓]
Up One Screen	[PAGE UP]
Down One Screen	[PAGE DOWN]
Left One Screen	ALT[PAGE UP]
Right One Screen	ALT[PAGE DOWN]
To Edge of Worksheet (or current block of data)	CTRL+[Relevant Arrow Key]
To a Particular Cell	[F5] then type the reference for the cell required and press Return
To column A in the current row	[HOME]
To cell A1	CTRL+[HOME]

**Table 2** Moving with keyboard

### 3.1.2 MOVING AROUND WORKBOOK



To move between sheets

Each new workbook contains worksheets, named sheets 1 to sheet 3. The sheet name appears on a tab at the bottom of the workbook window.

### Mouse

- i. You may click on any sheet tab to go to that sheet
- ii. If the sheet required is not in view, use the tab scrolling buttons to display the sheet. to the left of the sheet names



Picture 31 Sheet navigation buttons

### Keyboard

3. Press **CTRL+[PAGE DOWN]** to move to the next sheet, or **CTRL+[PAGE UP]** to move to the previous sheet.



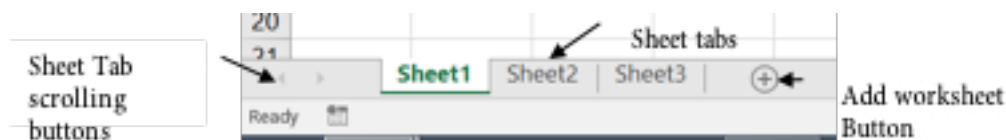
*The last tab is to allow the creation of a new worksheet, be careful or any new sheets may need to be deleted*



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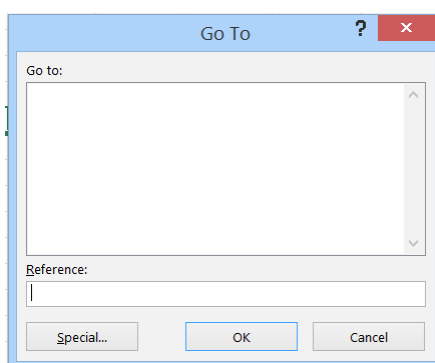
Picture 32 Sheet tabs

### 3.1.3 MOVING: USING TOOLS

#### Go to

→ To move to a specific cell:

You can use [F5] to tell Excel to move to a specific cell. [F5] is the Microsoft Office Go To key. When you press [F5] in Excel a dialog box is displayed where you can type in a cell reference.



Picture 33 GoTo dialog box

#### Keyboard

- i. Press [F5] on the keyboard. The following dialog box will appear.
- ii. Type the cell reference that you want to move to in the Reference box and press **ENTER**.
- iii. You can use [F5] to move to a cell in a different sheet

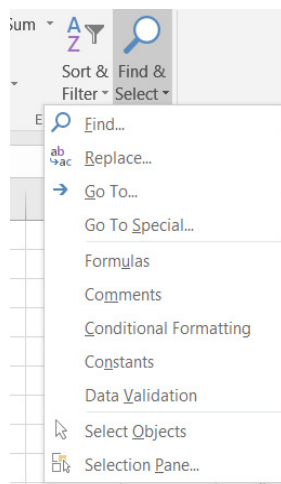
**E.G.** To go to Sheet 7 cell A1 you can press [F5] and then type **Sheet7!A1**. (The exclamation mark tells excel that the text immediately before it, is a sheet name. The sheet name must exist in the workbook)

Excel keeps a log of the cells you have visited using the 'Go to' key, and lists them in the 'Go to' list area of the dialog. You can go back to a previously visited cell by pressing [F5] and double-clicking on the cell reference you want from the list.

Named ranges are also listed in the Go to list if they have been set up.

### Using the mouse

- i. To access the **GoTo** Box using the Mouse, click on the arrow to the right of the **FIND** button, in the **EDITING** group, on the **HOME** tab to display a menu.

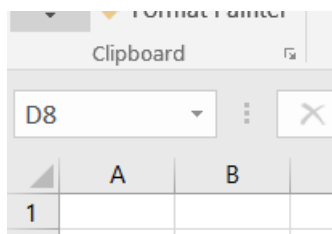


**Picture 34** Find and select menu – home tab

- ii. Choose GoTo. The Dialog box is displayed.

### Name Box

#### → Name Box for Navigation



**Picture 35** Name Box

### Mouse and keyboard

- i. Click in the **NAME BOX**, the value will be highlighted
- ii. Type the cell reference you wish to go to and press return
- iii. If you have names (covered later) use the drop down arrow and select the name of the cell or the range you wish to go to

### 3.1.4 RANGES

A range is a selection of cells within your sheet, it is necessary to understand the reference before moving forward.

→ To select a range

#### Mouse

- i. Click on a cell and hold down with your left mouse button.
- ii. Drag and select the area of cells you wish to highlight.
- iii. Let go with your mouse button



*Clicking again on the sheet anywhere will deselect the range. Using arrow keys in a range will deselect also*

#### Keyboard method 1

- i. Have a single cell selected.
- ii. Hold down your [SHIFT] key and use your arrow keys to select vertically and horizontally until you have the range you wish, selected.
- iii. Let go of shift key

#### Keyboard method 2

- i. Have a single cell selected.
- ii. Press the **F8** key, this enables extend selection mode, “Extend Selection” should appear in bottom left of status bar.
- iii. Use arrow keys to extend selection horizontally and vertically
- iv. Press **F8** to turn off this feature

## 3.2 DATA ENTRY

### 3.2.1 ENTER TEXT AND NUMBERS

There are various aspects to note and be aware of, both in terms of entering data, and also to do with the nature of the data being entered. You can enter data into a cell by positioning the cursor in the cell and typing the information. The maximum number of characters that a cell can contain is 32,000.

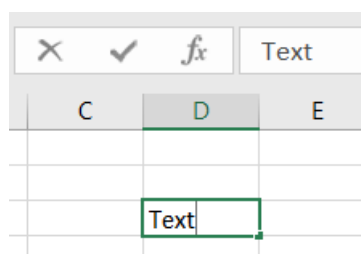
Excel recognises text and numeric entries and initially displays them with different alignments – left for text and right for numbers. You can override these with other formats if required.

→ To enter information:

### Mouse

1. Move to the cell where you want the entry and type a word (for example TEXT in cell D3). The text will appear in the Formula bar as well as in the current cell.

**OR**



**Picture 36** Entering text

- i. Select the cell and click in the formula Bar and type.
- ii. The cursor will be visible as a flashing insertion point in the formula bar or the cell, depending where you started typing.
- iii. Click on the green tick mark to the left of the formula bar to confirm the entry.

**OR**

### Keyboard

- i. Press **ENTER** to confirm the entry and move the selected cell one down
- ii. Press **TAB**. To confirm the entry and Move the selected cell one to the right.



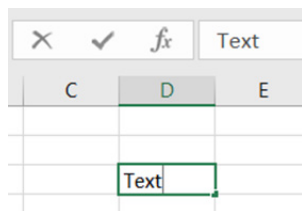
*Until you confirm an entry, Excel remains in "Entry" mode, and the cell is active (see Status bar). Upon confirming entry Excel will return to the "Ready" mode, and the value typed will appear in the cell.*



*When you press ENTER to confirm an entry, Excel will by default move the selected cell down to the cell below. When you press TAB to confirm an entry, Excel will by default move the selected cell Right. You can disable this setting or choose to move the selected cell in a different direction using the excel options dialog box (File Tab). See the Customisation section for more information.*

### 3.2.2 CANCELLING AND EDITING DATA ENTRIES

You may find that you have typed an entry into the wrong cell. Provided you have not confirmed the entry by pressing **ENTER** or clicking the green tick from the formula bar, you can abandon it.



**Picture 37** Cancelling an entry

→ To abandon or cancel an entry:

#### **Mouse**

- i. Click the red cross to the left of the Formula Bar.

#### **OR**

#### **Keyboard**

- i. Press **[ESC]** to cancel entry

When you have confirmed an entry, while the cell is still selected, the current cell reference will be displayed in the Name box and the cell contents are displayed in the Formula bar. Text information, as opposed to numeric information, will initially appear left aligned within the cell. If you enter text which is longer than the column width, the display on the worksheet will seem to overlap into the next cell to the right (if that cell is empty).

→ To edit an unconfirmed entry

Occasionally, you may make a typing error prior to confirming an entry. You cannot use the arrow keys (at this point) to move backward you **MUST** click in the formula bar at that point (on an **UNCONFIRMED** entry) and use the arrow keys to reposition the cursor. If not and you use the arrow key to try and move within the text it merely confirms the entry and moves you in the direction of the arrow key, you used.

→ To edit a confirmed entry

#### **Keyboard**

- i. Double click on cell containing the data to be edited

#### **OR**

- i. Press **F2** key

**OR**

- i. Edit directly in formula bar

Using any of these methods above will allow change the cell to an active cell and allow you to use the cursor keys [←][→] to move around the data you wish to edit. Use the **BACKSPACE** to delete characters behind the cursor or **DELETE** to delete characters in front of the cursor within the data or you may add information to the entry before confirming it.

**3.2.3 ENTER DATES**

It is possible to enter dates into Excel and have them accepted and displayed as such provided you use a recognised format. Excel 2003 will allow entry of dates from 1900 onward.

**Recognised formats for dates**

**Use a forward slash (/) as the day/month/year separator :01/01/01**

**Use a dash (hyphen) as the day-month-year separator :1-1-01**



*Do not use full stops as a date separator as excel will read this as text and the value will not be entered as a true date.*

Dates entered in excel appear as dates but are actually numbers formatted to appear as dates this allows calculation with them so it is important to enter them correctly. A date once entered correctly will ALWAYS have a four-digit year in the formula bar however that date may appear in the cell. Dates start at the number **1** which represents the date **1-1-1900**. Dates being numbers align to the right. Any date entered before that date will not be recognised as a true date to excel but will be seen as text and therefore align to the left as with all text.

If you omit the year from a date, Excel will assume the current year. You will not see the year in the cell but if you look at the cell contents on the Formula bar, you will see that Excel has added it.

With some recognised date styles, Excel will automatically format the date to display in a certain way. You can choose how your dates are displayed by formatting them yourself (see the section on formats for more information).

### 3.2.4 PERSISTENT FORMATS

Some entries are recognised by Excel and are formatted automatically. Dates are one such entry (as described above), percentages are another. When you delete data from such cells and replace it with other entries, you may find that you get surprising results. This is because although you cleared the data from the cells, the formats still remain and are causing the new data that you typed to display in a certain way. For more information on clearing cell data, see the clearing cells later in this section.

### 3.2.5 AUTOCOMPLETE

When you type the first few letters of an entry into a cell, Excel can complete the entry automatically using an option known as AutoComplete. It does this by building a list based on the entries already entered in a column. If Excel suggests an inappropriate entry, you can pick a different entry from the list.

→ To use autocomplete:

#### Keyboard

- i. Position yourself over the next blank cell in a column.
- ii. Begin typing the entry – Excel will try to match what you type with other items already entered in the current column and will automatically suggest the entry for you.
- iii. Press **ENTER** or **TAB** to accept Excel's proposed entry.

nomas	AC53	Australia	Ch
Whitney	GS09	Germany	Sh
linga	AA70	Australia	Ad
ooley	AW59	Australia	We
smith	BW45	Germany	

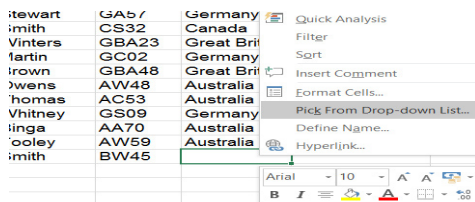
**Picture 38** Using autocomplete

#### OR

- i. Continue typing to replace Excel's proposed entry with your own entry.
- ii. Press **ENTER** or **TAB** to confirm completion.

### Pick from autocomplete list

You can get AutoComplete to display a list of possible entries built up from previously entered column data and select the one you want without typing anything.



Picture 39 Drop down list tool

→ To pick from an autocomplete list:

#### Mouse

- i. Click the right mouse button in the required cell.
- ii. Choose, **PICK FROM DROP DOWN LIST**.
- iii. Choose the entry required.

#### OR

#### Keyboard

- i. Use movement keys to move to required cell then use **ALT + [↓]** to show list and then cursor keys to move through list pressing **ENTER** confirms selection



Picture 40 Drop down list with ALT key

Excel can only AutoComplete column entries if there are no gaps in your data. If you leave a gap, the next cell that you type in, will not AutoComplete, neither will you be able to pick from a list.

You can stop Excel from AutoCompleting column entries by switching the setting off.

→ To disable autocomplete

#### Mouse

- i. **FILE** Tab, options, **ADVANCED**, in the **EDITING OPTIONS**. untick the **ENABLE AUTOCOMplete FOR CELL VALUES** checkbox.

### 3.3 EDITING

There are various ways in which you can change or remove data you have entered in cells on the worksheet.

#### 3.3.1 TYPING REPLACES SELECTION

This option is a feature that is standard throughout the Microsoft Office suite. It ensures that if you type when an item is selected, your typing replaces the selected item. This is extremely useful in a number of instances. When you want to change a short cell entry, it might be quicker to make use of this option to overwrite the entry with the new one.

→ To overwrite a cell entry:

#### Keyboard

- i. Move to the cell you want to change.
- ii. Type in the new entry (the former one will disappear as soon as you start typing).
- iii. Press **ENTER** to confirm the changed entry.

#### 3.3.2 USE THE MOUSE TO EDIT

Perhaps one character has been omitted, or two characters have been transposed, and only a slight adjustment needs to be made. If this is the case, you can add or change characters using edit mode. You can edit directly in the cell or on the Formula bar.

→ To edit in cell:

#### Mouse

- i. Double-click the cell to change –this will access Edit mode (the prompt on the Status bar will say ‘Edit’).
- ii. Use the arrow keys to move the cursor to the edit position within the entry and the **DELETE** and **BACKSPACE** keys to remove characters if necessary.
- iii. Press **ENTER** (or **TAB**) to confirm the changes.

→ To edit in the formula bar:

### Mouse

- i. Move to the cell to change.
- ii. Click in the Formula bar where the cell contents appear. This will drop you straight into Edit Mode (see Status bar) and a cursor appears in the Formula bar.
- iii. Use the arrow keys to move the cursor to the edit position within the entry and the **DELETE** and **BACKSPACE** keys to remove characters if necessary.
- iv. Press **ENTER** to confirm the changes.

→ Edit in cell using the keyboard

You can access edit mode using a function key.

### Keyboard

- i. Select the cell to be edited.
- ii. Tap the **F2** function key. Excel will go into Edit mode. A cursor will appear at the end of the active cell.
- iii. Use the arrow keys to move the cursor to the edit position within the entry and the **DELETE** and **BACKSPACE** keys to remove characters if necessary.
- iv. Press **ENTER** to confirm the changes.



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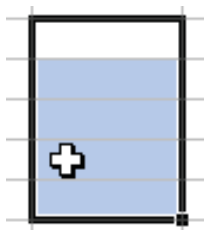
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## 3.4 SELECTION

### 3.4.1 SELECT INFORMATION

When you want to issue a command that will affect several cells, you should select those cells first.



**Picture 41** Selecting a range

When you select a block of cells, Excel shows you which cell is the active cell within that selection by leaving it white, while the rest of the cells are highlighted black. There are a variety of ways you can select different items on the worksheet and these are described below.

→ To select cells with the mouse

#### Mouse

When you select with the mouse, you need to make sure that the selection pointer is displayed. This is the white plus that appears when the mouse is positioned over the middle of a cell.

To select	Do this
A single cell	Click the cell, or press the arrow keys to move to the cell.
A range of cells	Click the first cell of the range, and then drag to the last cell.
All cells on a worksheet	Click the <b>SELECT</b> button from the <b>EDITING</b> group on the <b>HOME</b> tab, then <b>SELECT ALL</b> button from Menu.
Nonadjacent cells or cell ranges	Select the first cell or range of cells, and then hold down <b>CTRL</b> and select the other cells or ranges.
A large range of cells	Click the first cell in the range, and then hold down <b>SHIFT</b> and click the last cell in the range. You can scroll to make the last cell visible.
An entire row	Click the row number.
An entire column	Click the column letter.
Adjacent rows or columns	Drag across the row or column headings. Or select the first row or column; then hold down <b>SHIFT</b> and select the last row or column.
Nonadjacent rows or columns	Select the first row or column, and then hold down <b>CTRL</b> and select the other rows or columns.
More or fewer cells than the active selection	Hold down <b>SHIFT</b> and click the last cell you want to include in the new selection

**Table 3** Cell selection options

➔ To select cells with the keyboard

Sometimes, selecting with the keyboard gives you more control over the amount of data you select. The table below lists the more useful keys for selecting:

**Mouse**

- i. You can cancel a selection by moving somewhere else. Click the white plus on any cell outside the selection.
- i. By using one of the arrow or cursor keys [←] or [→] or [↑] or [↓].

**3.4.2 SELECT MULTIPLE SHEETS**

TO SELECT	DO THIS
The active cell plus one Cell up, down, left or right	SHIFT+[←],SHIFT+[→],SHIFT+[↑],SHIFT+[↓]
To Edge of Worksheet (Or current block of data)	SHIFT+CTRL+[Relevant Arrow Key]
The current region	CTRL+[*] (Use the asterisk from the number pad)
Whole Column	CTRL +SPACEBAR
Whole Worksheet	CTRL+A

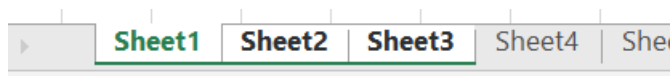
**Table 4** Range selection options

There are some situations where you need to select more than one worksheet. The active sheet in a workbook can be determined by its white tab where its name appears in bold.

➔ To select adjacent worksheets:

**Mouse**

- i. Click the tab of the first worksheet that you want to include in your selection.
- ii. Hold down the **SHIFT** key and click on the tab of the last worksheet that you want included in your selection. All the sheets between the first and the last will be selected.



**Picture 42** Selecting adjacent worksheets

- iii. The selected sheet tabs will turn white and the word ‘Group’ will appear on the title bar.

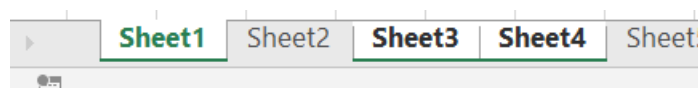


**Picture 43** Title bar group name for sheets

→ To Select Non-Adjacent Worksheets:

**Mouse**

- i. Click the on the first worksheet's tab that you want to include in your selection.
- ii. Hold down the **CTRL** key and click each other worksheet's tab that you want included in your selection. The selected sheet tabs will turn white and the word '[GROUP]' will appear on the title bar.



**Picture 44** Non adjacent sheets



*You can cancel sheet selection by clicking on a sheet tab that is not included in the current selection. For more information on working with multiple worksheets, see the relevant section later in this manual.*

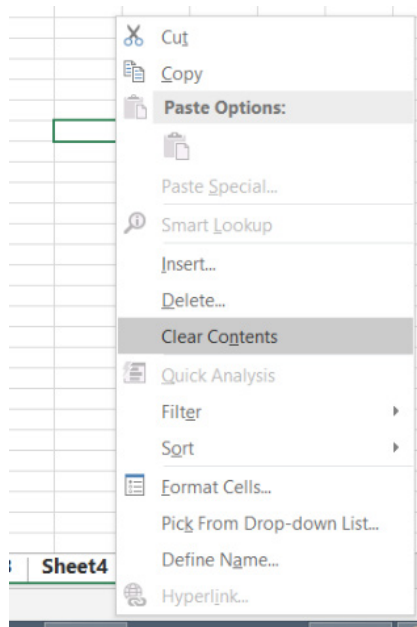
### 3.4.3 CLEAR CONTENTS, FORMATS AND COMMENTS

If you want to remove an entry completely from a cell, you need to clear the cell. There are a variety of ways you can do this and the method you choose depends on what you want to remove from the cell. You can remove data from cells using the ribbon or the keyboard. This command would only remove cell data (numbers, text, dates, and formulae). If you have formatted the cells, clearing their contents would leave the formats intact so that new data you type in the cleared cells would keep the old data's formats.

→ To clear contents:

**Mouse**

- i. Select the cell or cells you want to clear.
- ii. Right click on the cell/selection.
- iii. Choose **CLEAR CONTENTS** from the shortcut menu.

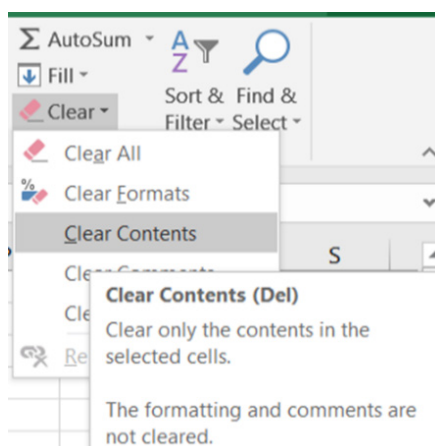


**Picture 45** Clear contents from right click

**OR**

### **Keyboard**

- i. Move to the cell or select the cells whose contents you want to clear.
- ii. Tap the **DELETE** key.
- iii. If you need to be able to choose what gets removed when you clear a cell, you should use the **CLEAR COMMAND** from the **EDITING** group, on the **HOME** Tab.



**Picture 46** Clear contents from menu on ribbon

→ To clear formats

**Mouse**

- i. Make selection
- ii. Go to the **HOME** Tab
- iii. Click on the eraser and the word **CLEAR** to the right of the Tab
- iv. Click on **CLEAR FORMATS** to clear formats **OR CONTENTS** to clear the data in the cell (same as right mouse click)
- v. All formats will be removed from selection

→ To clear comments

**Mouse**

- i. Repeat steps 1–3 as above then Click on **CLEAR COMMENTS**

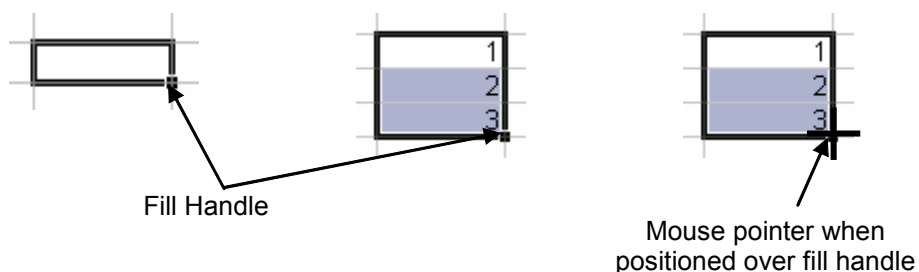


*Novice users occasionally imagine that they can clear a cell simply by replacing its contents with a space. This is a dangerous practice and is to be avoided. Although a cell containing nothing but a space may appear to be empty, Excel remembers that a space has been entered there. Such renegade spaces will take up room both in memory and on disk, and can cause real problems with more advanced spreadsheet and database functions. Avoid them by clearing cells properly.*

### 3.4.4 THE FILL HANDLE

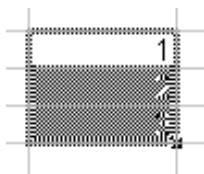
The fill handle is a very useful tool in Excel. It allows you to copy and clear data but also to fill in series of data (dates, weekdays etc.). Those aspects of the fill handle are dealt with later in this manual. The fill handle appears in the bottom right hand corner of the active cell or selection. When your mouse is over the fill handle, the white plus pointer changes to a black plus.

You can use the fill handle to clear the data from a cell.



**Picture 47** Fill handle

→ To clear cell contents with the fill handle:



**Picture 48** Using fill handle to clear data

### Mouse

- i. Select the cells whose contents you want to clear.
- ii. Position your mouse over the fill handle to display the black plus.
- iii. Drag the fill handle back over the selected cells. Release the mouse when all cells have been included.

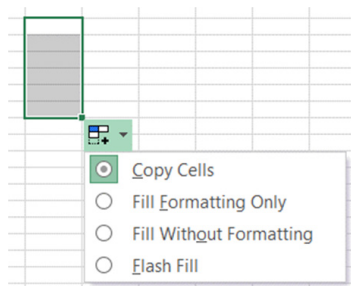


*You can use the fill handle to clear more than just contents. By holding down the CTRL key, the fill handle can be used to clear both contents and formats from cells.*

→ To clear cell contents with smart tag

### Mouse

- i. Select an empty cell in any direction from the data you wish to remove.
- ii. Use the fill handle to drag over the data you wish to remove.
- iii. Make a selection from the smart tag as to what aspect of the data you wish to overwrite.



**Picture 49** Clearing data with smart tag

- iv. The empty selected cells value or format will overwrite the data in the highlighted cells.

### 3.4.5 USEFUL INFORMATION

#### Scrolling

To scroll long distances hold down the **SHIFT** key while dragging the scroll box.

When you use the scrolling keys (such as [**PAGE UP**] and [**PAGE DOWN**]) with **SCROLL LOCK** turned off, your selection moves the distance you scroll. If you want to preserve your selection while you scroll through the worksheet, turn on **SCROLL LOCK** first.

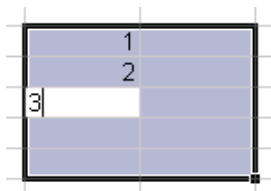
#### Data entry

You can enter the current date into a cell by pressing **CTRL+[;]**.

If you want to break a line within a cell, press **ALT+ENTER**.

### 3.4.6 SELECT CELLS TO LIMIT DATA ENTRY (RANGES)

When you want to limit the cells that data should be typed in, you can do this by selecting them. When you type in a selection, the entry appears in the active cell (the cell that remains white). You can then move the active cell down or right within the selection to continue. When Excel hits the edge of the selected block, pressing **ENTER** or **TAB** would move you to the next column or row within the selection.



**Picture 50** Enter data using a range



→ To set limits for data entry: (select a range)

#### Mouse

- i. Select the cells where the entries should be made.
- ii. Type the first entry. The entry will appear in the active cell.
- iii. Press **ENTER** to move the active cell down.

#### OR

- i. Press **TAB** to move the active cell right.

-  You can continue using **ENTER** or **TAB** to move the active cell to the next cell within the selection where you want data. If you need to go back up or left, use **SHIFT+ENTER** or **SHIFT+TAB**.
-  Do not use arrow keys to move within the selection (Range) as they will deselect the block.

### 3.4.7 SELECT CELLS FOR MULTIPLE ENTRY

When the same data needs to be entered into lots of cells That are not next to each other, you can do it by selecting them first, typing in the data and then confirming the entry with a special key combination.

→ To make multiple entries:

#### Mouse

- i. Select the cells where you want the entries to appear (use the **CTRL** key if there are several non-adjacent blocks to fill in).
- ii. Type the entry – it will initially appear in the active cell.
- iii. Press **CTRL+ENTER**.

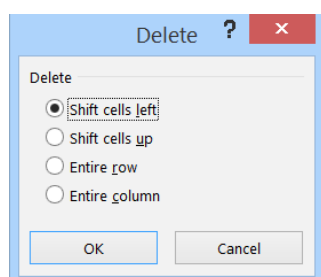
### 3.4.8 WORKING WITH ROWS, COLUMNS AND CELLS

Columns and rows can be inserted into your spreadsheet or individual cells, they can be deleted or moved.

→ To delete a cell or cells

#### Mouse

- i. Select a cell or cells to be deleted
- ii. Right click on selection, Choose delete from the right click menu to open a dialog box

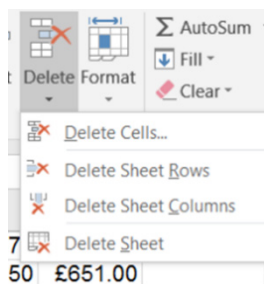


**Picture 51** Delete with dialog

- iii. Make a selection from the options, click **OK**

**OR**

- i. Click on the delete button in the **CELLS** group on the **HOME** Tab to open a menu

**Picture 52** Delete from menu

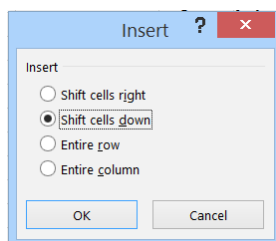
- ii. Choose delete cells to open the **DELETE CELLS** Dialog box
- iii. Make a Selection, Click **OK**



*Deleting a cell will always move the corresponding cells. Be careful it does not affect adjacent data.*

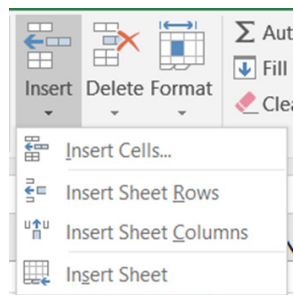


To Insert a cell or cells

**Picture 53** Insert from dialog**Mouse**

- i. Select a cell or cells Where you wish to insert.
- ii. Right click on selection, Choose **INSERT** from the right click menu to open a dialog box
- iii. Make a selection from the options, click **OK**

OR



Picture 54 Insert from menu

- i. Click on the Insert button in the **CELLS** group on the **HOME** Tab to open a menu
- ii. Choose **INSERT CELLS** to open the **INSERT CELLS** Dialog box
- iii. Make a Selection, Click **OK**

*Inserting a cell will always move the corresponding cells. Be careful it does not affect adjacent data.*

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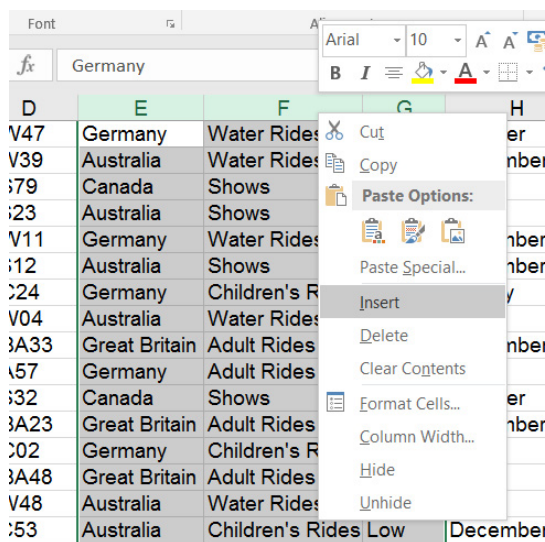
### → Rows and columns

Inserting or deleting rows and columns is much the same as deleting. However, you must remember that you are inserting or deleting whole rows or whole columns. Everything below or to the right of the affected columns will move to accommodate the inserted rows or columns. Please ensure it does not affect other information on your sheet.

### → To insert or delete a column or row

#### Mouse

- i. Select a row or column by clicking on a row heading, Click and drag to select multiple rows or columns.
- ii. Right click on selected column or row headings.



**Picture 55** Inserting multiple rows or columns








- iii. Choose insert or delete from the menu
- iv. Rows or columns will be inserted or deleted (as many as were selected)

#### OR

- i. After Selection, Use the insert or delete buttons in the **CELLS** Group, on the **HOME** tab.
- ii. Choose **ROWS** or **COLUMNS**

# 4 FORMULAE AND FUNCTIONS

**By the end of this section you will be able to:**

-  Understand the difference between functions and formulae
-  Enter by typing, simple functions and formulae
-  Understand and use BoDMAS
-  Enter functions and formulae in using mouse, keyboard or ribbon.
-  Use basic conditional functions
-  Use the Fill handle to enter multiple formulae
-  Understand and use Absolute and Relative cell references

## 4.1 FORMULAE

In a spreadsheet application, at a very basic level, values often need to be added, subtracted, multiplied and divided. To allow for the fact that individual values might change, spreadsheet formulae generally refer, not to actual values, but to the cells where those values are being held. If values have been entered into **A1** and **A2**, then **A1+A2** will return an answer which will automatically recalculate if the value of **A1** should change. It is this automatic recalculation which makes spreadsheets invaluable.

Excel recognises formulae because they are preceded by an equals sign (=).

When entering basic formulae, the mathematical operators defining the operation to be carried out are as follows:

Addition	+
Subtraction	-
Multiplication	*
Division	/
Exponentiation	^

**Table 5** Mathematical operations

You will find all of these mathematical operators ranged across the top and down the right hand side of the numeric keypad.

#### 4.1.1 TYPING FORMULAE

You enter formulae by typing them in the cell where you want the formula's result to appear. When you confirm entry of a formula, Excel will display the result on the worksheet, but the underlying calculation appears on the Formula bar.

→ To enter a formula:

##### Keyboard

- i. Move to the cell where you want to enter the formula.
- ii. Type an equals sign (=).
- iii. Type the formula (e.g. C4+D4+E4).

	B	C	D	E	F
		Jan	Feb	Mar	Total
Long		110	50	140	=C4+D4+E4
Olson		200	50	240	

**Picture 56** Create basic formula

- iv. Press **ENTER** to confirm the entry.
- v. Excel automatically recalculates formulae. If you change one of the cells referenced in your formula, as soon as you press **ENTER** to confirm the changed value, your formula result will update.

##### OR

- i. Construct the formula by clicking in the formula bar and Typing the formula there.

#### 4.1.2 ENTERING FORMULAE BY POINTING

It is possible to enter formulae without actually typing the equals sign (=) or the cell references. Instead, you can make use of a pointing technique to indicate which cells are to be included. As with typing formulae, it is important to start off in the cell where the answer is to be displayed.

Pointing can be quicker and more efficient than typing cell references as it reduces the chances of errors.

→ To enter a formula using keyboard AND mouse:

### Mouse

- i. Position the cursor in the cell where you want the formula.
- ii. Type an equals sign (=).
- iii. Click the first cell whose reference should be included in your formula. A moving dotted line, known in Excel as a 'marquee', will appear around that cell and the cell reference will appear in the formula bar immediately after the equals sign.

	B	C	D	E	F
		Jan	Feb	Mar	Total
Long		110	50	140	=C4+D4+E4
Olson		200	50	240	

**Picture 57** The marquee

### OR

- i. Use an arrow key to move there. A moving dotted line, known in Excel as a 'marquee', will appear around that cell and the cell reference will appear in the formula bar immediately after the equals sign.
- ii. Type in the mathematical symbol you want to use in your calculation, then click on (or move to) the next cell to be included in the formula.
- iii. Continue building the formula in this way.
- iv. Press **ENTER** to complete the formula.



*Remember whether typing or pointing a formula may be constructed within a cell or in the formula bar*

### 4.1.3 ERRORS IN FORMULAE

Sometimes you may get surprising results from a formula. This is most often because you have referenced the wrong cell, but it could also be that you have multiplied where you should have added and so on. You can correct formulae using the editing techniques described earlier in this manual.

→ To edit a formula:

### Mouse

- i. Double-click on the cell containing the formula. The cell will switch from displaying the result of the formula to the formula itself.

**OR**

- i. Select the cell containing the formula. Click in the formula bar to edit there

**OR**

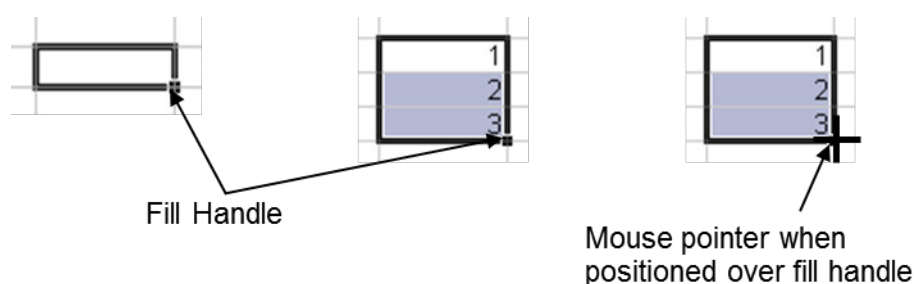
- i. Move to the cell containing the formula, press the **F2** key to open the cell for editing
- ii. Click the mouse over the part of the formula to change to anchor the cursor there. Type any new characters or use the **BACKSPACE** and **DELETE** keys to remove characters.
- iii. Press **ENTER** or click the green tick on the formula bar to confirm the changes.

**OR**

- i. Press **ESC** or click on the cross on the formula bar to discard any changes

**4.1.4 FILLING FORMULAE**

Having entered an initial formula in the first cell of a column or row, you often find that you want to generate results for the other cells in that column or row. In the example below, you would probably want your formula to work out totals for all the orders.



**Picture 58** Fill handle for formulae

There are a variety of ways that you can get Excel to copy a formula so that it generates results for other cells in a column or row.

**4.1.5 THE FILL HANDLE AND FORMULAE**

The fill handle has already been described earlier in this manual. It can be used to clear cells but has other uses as well, one of which is filling formulae.

→ **To use the fill handle to copy formulae:**

**Mouse**

- i. Move to the cell that has the formula that you want to fill.
- ii. Position your mouse pointer over the fill handle. It will change to a black plus.
- iii. Drag the black plus down, up, left or right over the cells where you want your copied formula to generate results. You will see an outline around those cells.

	Mar	Total
50	140	300
50	240	
80	295	
95	185	
95	203	
17	122.7	

Picture 59 Filling a calculation

- iv. Release the mouse when the outline includes all the cells where you want results.
- v. A Smart Tag will be produced. The options it offers are not needed at the moment.

**OR**

- i. Instead of using the left mouse button to fill down, try using the right mouse button. When released after dragging a menu will appear offering numerous options as to how the data should be filled.

B	C	D	E	F
	Jan	Feb	Mar	Total
Long	110	50	140	300
Olson	200	50	240	490
Stark	300	180	295	775
Unger	220	195	185	600
Kraft	305.5	195	203	

Picture 60 Right mouse button with fill handle

**4.1.6 FILL FORMULAE USING KEYSTROKES**

You can fill a column or a row of formulae using the keyboard.

	Total
5	50
7	
3	
3	

Picture 61 Using the keyboard to fill

→ To fill using keystrokes:

**Keyboard**

- i. Select the cell containing the formula to fill *and* the cells where you want to copy it.
- ii. Press **CTRL+[D]** to fill down.

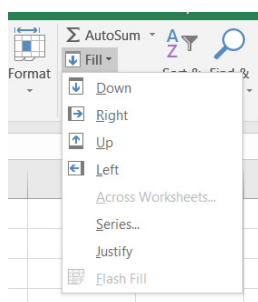
**OR**

- i. Press **CTRL+[R]** to fill right.

*There are no keystrokes to fill up or left.*

**OR**

- i. Select the cell containing the formula to fill and then click the fill command from the **EDITING** group on the **HOME** Tab and select the direction for the fill from the resulting sub-menu.



**Picture 62** Fill from menu

**4.1.7 FLASH FILL**

Flash Fill is a new way to fill entries within Excel it can predict patterns in the data you are trying to enter and allow you to fill in various uncommon ways.

<b>FIRST</b>	<b>LAST</b>	<b>FULL</b>
Sara	Klingon	Klingon, Sara
Sean	Willis	Willis, Sean
Colleen	Abel	Abel, Colleen
Teri	Binga	Binga, Teri
Frank	Culbert	Culbert, Frank
Kristen	DeVinney	DeVinney, Kristen
Theresa	Califano	Califano, Theresa
Barry	Bally	Bally, Barry
Cheryl	Halal	Halal, Cheryl
Harry	Swayne	Swayne, Harry

**Picture 63** Using flash fill to enter data

→ To fill list of names

**Keyboard**

- i. Enter the data in the first cell of an adjacent column type it in the manner you wish it to appear.
- ii. Press enter to move down a cell.
- iii. Enter again the data as you would wish it to appear.
- iv. Excel will predict after finding a pattern, how you may want the rest of the column data to be entered.
- v. Press return to accept the prediction and enter the data.
- vi. If the prediction is incorrect, keep typing until the data is predicted correctly.

→ To fill dates

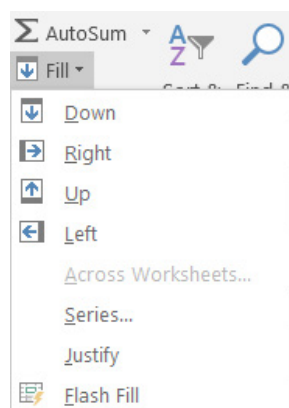
Dates have to be flash filled manually and you would need at least three examples to use the flash fill.

19750819	19/08/1975		19750819	19/08/1975
19830626	26/06/1983		19830626	26/06/1983
19260405	05/04/1926		19260405	05/04/1926
19990308			19990308	08/03/1999
19361130			19361130	30/11/1936
20010525			20010525	25/05/2001
20031103			20031103	03/11/2003

**Picture 64** Dates entered as text and how you want them

**Keyboard**

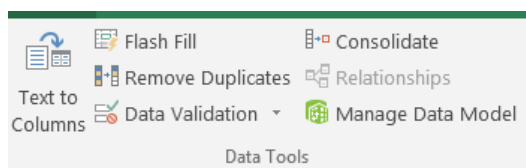
- i. Dates in first column entered as text
- ii. Dates in second column entered as I desire them
- iii. In next empty cell EITHER:
- iv. Go to **EDITING** group, **HOME** tab and access the **FILL** menu



**Picture 65** Flash fill from home tab

OR

- i. DATA Tab, DATA TOOLS group, FLASH FILL button



Picture 66 Flash fill button data tab

- ii. Click the flash fill button to fill the series of dates

### 4.1.8 BODMAS WITH FORMULAE

**BoDMAS** is a mathematical acronym that simply reminds us of the order of operations that mathematics uses to step through more complicated formulae. (Brackets), (Division), (Multiplication), (Addition), (Subtraction).

Excel follows these rules to a point please take note of the following table to see the order of preference that excel uses when working out calculations.

To change the order of evaluation, enclose in brackets the part of the formula to be calculated first.

Level	Operator	Operation
1st	-	Negation (as in -1)
2nd	%	Percent
3rd	^	Exponentiation
4th	* and /	Multiplication and division
5th	+ and -	Addition and subtraction
6th	&	Connects two strings of text (concatenation)
7th	= <> <= >= <>	Comparison

Table 6 Table of operations

### → Using BoDMAS

**E.G.** The following formula produces 11 because Excel calculates multiplication before addition. The formula multiplies 2 by 3 and then adds 5 to the result.

**Type =5+2\*3 press ENTER Result =11**

In contrast, if you use parentheses to change the syntax, Excel adds 5 and 2 together and then multiplies the result by 3 to produce 21.

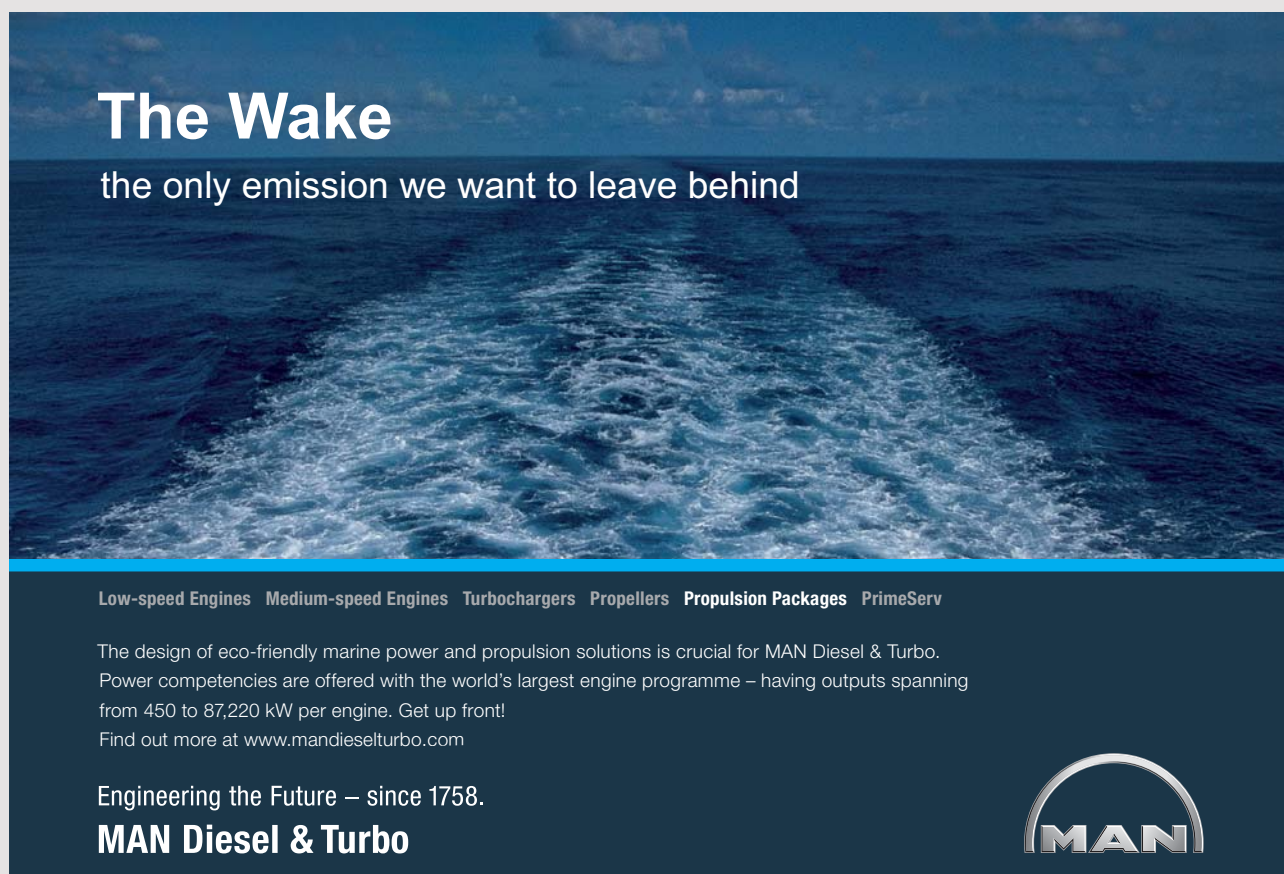
**Type =(5+2)\*3 press ENTER result = 21**

## 4.2 FUNCTIONS

### 4.2.1 BASIC FUNCTIONS

Having mastered how to set up your own custom formulae, you will be able to carry out any calculations you wish. However, some calculations are complicated or involve referring to lots of cells making entry tedious and time consuming. For example, you could construct a formula to generate a total at the bottom of a column (or the end of a row), like this:

**=D2+D3+D4+D5**



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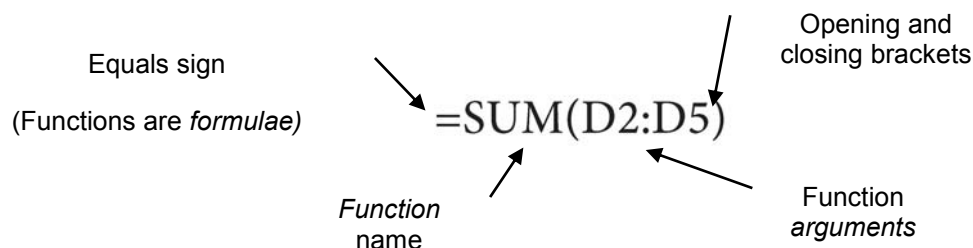
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The above formula would work, but if there were 400 cells to total and not just 4, you would get bored with entering the individual cell references.

When formulae become unwieldy or complex, Excel comes to the rescue with its own built-in formulae known as *functions*.



**Picture 67** Components of a function

### Functions always follow the same syntax:

The name of the selected function tells Excel what you want to do and the arguments generally tell Excel where the data is that you want to calculate.

Excel has a huge number of functions, not all of them are relevant to everyone. The functions are categorised according to what they do. In this manual, we outline some of the most basic functions that can be usefully used at a general level.

### Sum function

As discussed above on how the basic functions are made up we will create a basic function from scratch the first function being the sum function this will add several figures together

→ To create sum function

#### Mouse

- i. Enter or locate several figures you wish to find the total of.
- ii. In an empty cell enter the equals sign.
- iii. Type in the word sum and open a set of brackets.
- iv. Highlight the figures you wish to total so that a cell range appears after the open bracket.
- v. Close the bracket and press return

QTR4
1000
800
400
300
=SUM(E4:E7)

SUM(number1, [number2])

**Picture 68** Building a SUM function

### Average function

The next function to try is the Average function this will give the mean average of several figures.

QTR3	QTR4
900	100
800	80
500	40
500	30
=AVERAGE(D4:D7)	

AVERAGE(number1, [number2], ...)

**Picture 69** Building an AVERAGE function

→ To create average function

#### Mouse

- i. Enter or locate several figures you wish to find the average of.
- ii. In an empty cell enter the equals sign.
- iii. Type in the word Average and open a set of brackets.
- iv. Highlight the figures you wish to find the average of so that a cell range appears after the open bracket.
- v. Close the bracket and press return

### Max function

The next function to try is the **MAX** function this will give the highest value in a range of figures

→ To create MAX function

#### Mouse

- i. Enter or locate several figures you wish to find the highest value from.
- ii. In an empty cell enter the equals sign.
- iii. Type in the word Max and open a set of brackets.

- iv. Highlight the figures you wish to find the Highest value of so that a cell range appears after the open bracket.
- v. Close the bracket and press return

Item	QTR1	QTR2	QTR3	QTR4	
Bonnets	500	800	900	1000	=MAX(B4:E4)
Funnels	400	100	800	800	MAX(number1, [number2], ...)

**Picture 70** Building the MAX function

### MIN function

The next function to try is the **MIN** function this will give the Lowest value in a range of figures.

Item	QTR1	QTR2	QTR3	QTR4	
Bonnets	500	800	900	1000	1000
Funnels	400	100	800	800	=MIN(B5:E5)

**Picture 71** Creating the MIN function

→ To create MIN function

#### Mouse

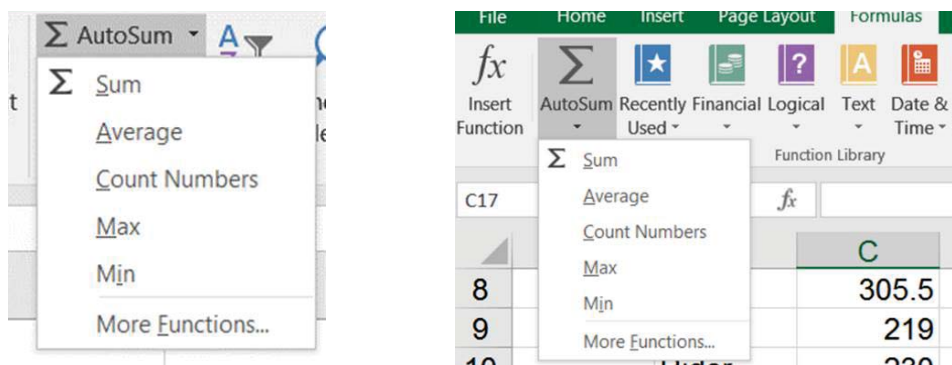
- i. Enter or locate several figures you wish to find the highest value from.
- ii. In an empty cell enter the equals sign.
- iii. Type in the word Min and open a set of brackets.
- iv. Highlight the figures you wish to find the lowest value of so that a cell range appears after the open bracket.
- v. Close the bracket and press return.

### 4.2.2 AUTOSUM

→ Using autosum

#### Mouse

- i. Move selected cell to bottom of column or end of row of figures.
- ii. Click on the **FORMULAS** Tab, then click on **AUTOSUM**. OR on the **HOME** tab in the **EDITING** group.
- iii. From the menu select the **SUM** function.
- iv. A 'marquee' will appear around the suggested range to sum and a pre-built function will appear in selected cell.
- v. If suggested range is correct then press **ENTER**. If not redefine range by selected the figures you wish to include in the function and press **ENTER**.



Picture 72 Autosum locations

### Other common functions

The **Sum** function is very useful, but the AutoSum icon can also be used to for some other common functions: **Average** (of the selected figures), **Count** (the number of selected figures), **Max** (the largest selected figure) and **Min** (the smallest selected figure).

→ To use other common functions:

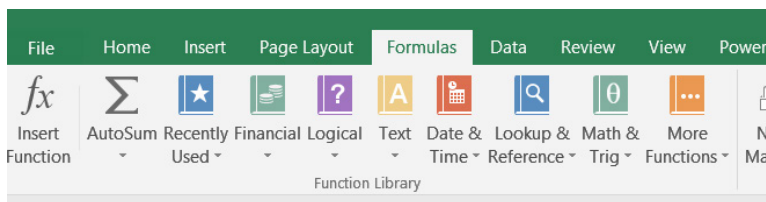
#### Mouse

- i. Select the cell immediately below a column of figures (or to the right of a row of figures) to be totalled.
- ii. Click on the drop-down arrow next to the **AUTOSUM** icon and select the function that you want to use from the list.
- iii. The selected function will automatically appear in the Formula bar and Excel will make a guess at which cells you want to use (you will see a marquee around the cells and their references will be the function arguments).
- iv. Press **ENTER** to accept the cells that Excel proposes or select a different set of cells before pressing **ENTER**.

### 4.2.3 FUNCTION LIBRARY

On the **FORMULAS** Tab you will find the **FUNCTION LIBRARY** which is dedicated to functions, autosum functions are just a few of the most regularly used functions.

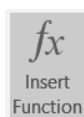
The functions are broken down into categories and grouped accordingly to make it easy to access the specific function you desire to use. In many places you will see the more functions command which allows access to the whole range of functions available to excel. This brings us to the **INSERT FUNCTION** utility.



Picture 73 Function library

**Insert function**

If after looking through all categories you do not find, or find it difficult to locate a specific function then we can use the insert function facility. Which contains all functions available in excel

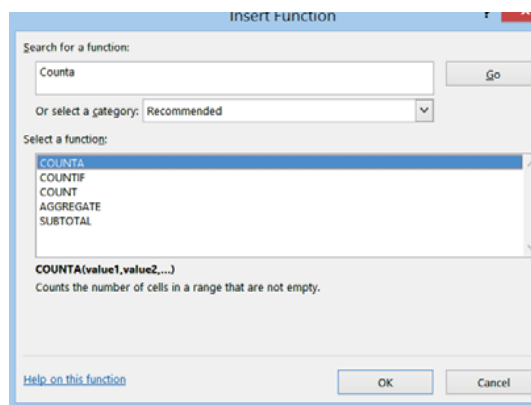
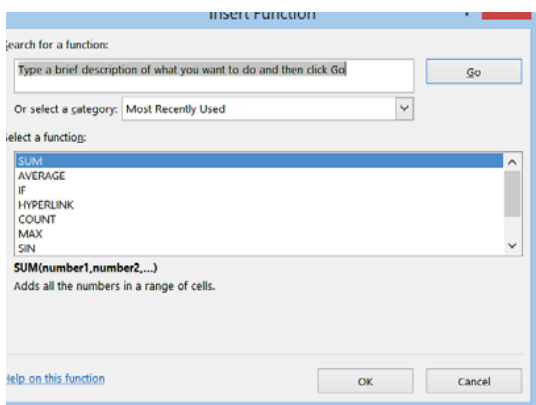


Picture 74 Insert function button

→ To insert function

**Mouse**

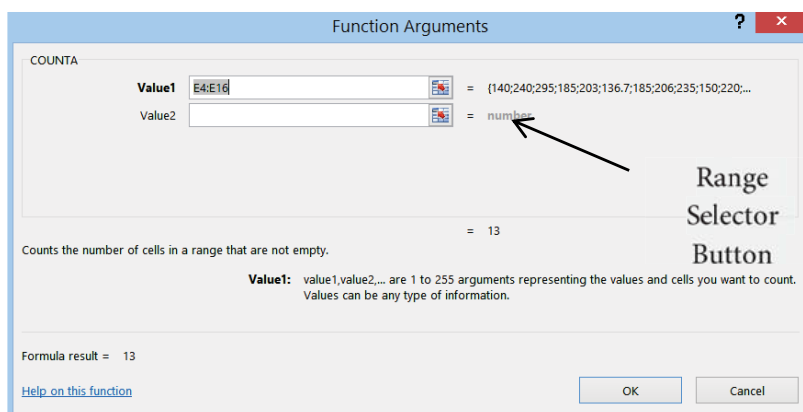
- i. Click in the cell which you want a result
- ii. Go to the **FORMULAS** Tab and click on the **INSERT FUNCTION** icon on the far left
- iii. The **INSERT FUNCTION** dialog box appears



Picture 75 Insert function dialog

### Mouse

- i. Type a description of the function you wish to use in the topmost box and click on go **OR** select a category from the drop down box.
- ii. Results will appear in the bottom box then select a specific function with a single click of the mouse.
- iii. A description will appear underneath the white box and the syntax of how it is constructed
- iv. If further explanation is required on a specific function then click on the blue hyperlink in the bottom left corner to get more information.
- v. When the function you want is selected (in this case **COUNTA**) click.
- vi. A dialog box appears (below) with a suggested range for the function. Excel will place the function on the worksheet in the selected cell. You can see the selected function being built on the formula bar. If this is incorrect reselect the range and press **ENTER**.



**Picture 76** Entering ranges

### OR

- i. Click the **RANGE SELECTOR** button. This will collapse the dialog box shown above.
- ii. Drag across the cells to replace Excel's pre-selected guess with your own cell references. Click the **RANGE SELECTOR** button again to return to the dialog.
- iii. Click **OK** to enter the function and complete.

#### 4.2.4 FUNCTION BOX/NAME BOX

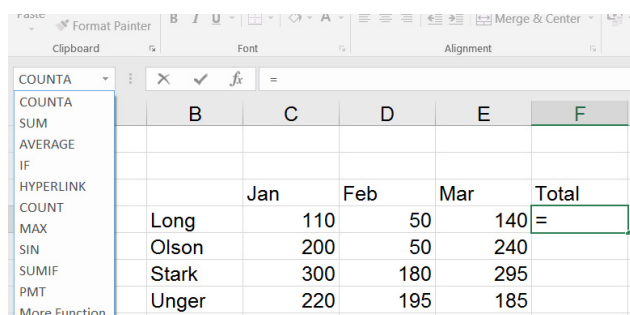
There are some functions that are accessed more than others and for that reason Excel gives you a slightly quicker method for entering them than the Paste function dialog. The Function box, groups the most commonly used functions for quick and easy access. This is only accessible after an equals sign has been entered in a cell or the Formula Bar.

If nothing has been entered this box is generally referred to as the name box as previously mentioned and will be covered further in this manual.

→ To enter a function using the function box:

#### Mouse

- i. Type the equals sign (=) in the **FORMULA BAR** (or directly into your cell).
- ii. Excel displays the function box to the left of the **FORMULA BAR**.
- iii. Click the drop-down list arrow to the right of the **FUNCTION BOX** to display a list of function names.
- iv. Select the function you require by clicking its name from the list.



**Picture 77** Selecting a function from the function box

#### OR

- i. If your function is not listed, click the **MORE FUNCTIONS...** option to access the **INSERT FUNCTION** dialog.

#### Then

- i. Choose the function, select cells and press return.

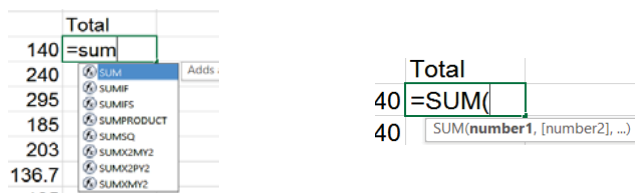
### 4.2.5 TYPE FUNCTIONS

When you get more familiar with functions and start to remember how they are constructed, you can type them rather than selecting them using the previously described methods.

→ To type a function:

#### Keyboard

- i. Move to the cell where you want the function.
- ii. Type an equals sign (=) followed immediately by the function name and an open bracket.



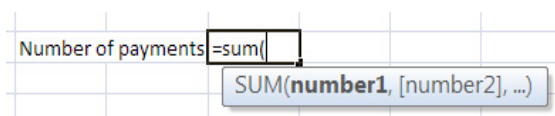
**Picture 78** Typing function in cell

- iii. As you type the function name a list appears making suggestions of the function you may wish, filtered by the letters you type.
- iv. If you see the function you wish, you may double click on it in the list. OR you may use the arrow keys to move to it and press your **TAB** key to enter the function into the cell. Open brackets will be automatically added so you can continue with construction.
- v. A tool tip appears underneath to indicate the arguments the function needs.
- vi. Select (or type) the cells you want the function to act upon using the mouse or arrow keys.
- vii. Press **ENTER** to confirm the entry.

*As long as your formula only contains one function, you do not need to type the closing bracket. Pressing ENTER or TAB makes Excel close the bracket automatically.*

### 4.2.6 FUNCTION ARGUMENT TOOL TIPS

Excel 2016 displays information about function arguments as you build a new formula. The tool tips also provide a quick path to Help. You click any function or argument name within the tool tip.



**Picture 79** Function tool tip

### 4.2.7 CELL REFERENCES

In functions, you often need to refer to a range of cells. The way Excel displays cell references in functions depends on whether the cells you want the function to act upon are together in a block or in several non-adjacent cells or blocks.

The table below explains how you can use different operators to reference cells:

Operator	Description	Example
Reference operator: (colon)	Range operator, which produces one reference to all the cells between two references, including the two references	B5:B15
, (comma)	Union operator, which combines multiple references into one reference	SUM(B5:B15,D5:D15)
(single space)	Intersection operator, which produces one reference to cells common to two references - In this example, cell B7 is common to both ranges	SUM(B5:B15 A7:D7)

**Table 7** Range references in calculation

## 4.3 ABSOLUTE AND RELATIVE REFERENCES

### 4.3.1 RELATIVE REFERENCES

When you fill formulae, you tell Excel to base the formulae it creates on the one you have entered by starting from the cell that contains it.

In the example shown right, the formula being copied says =C4:E4. However, once copied, if you click on any of the copies, Excel will have updated the references to keep the row numbers current (C5:D5, C6:D6 and so on).

	Jan	Feb	Mar	Total
Long	110	50	140	=SUM(C4:E4)
Olson	200	50	240	SUM(number1, [num
Stark	300	180	295	775
Unger	220	195	185	600
Kraft	305.5	195	203	703.5
Oakes	219	147	136.7	502.7

**Picture 80** Referencing relative cells

This is because Excel, by default, uses **RELATIVE REFERENCING**. When you enter a formula, you enter specific cell references. Behind the scenes, Excel ‘translates’ those references into positions relative to the result cell. So, in our example shown left, Excel would take the formula:

**=C4:D4**

Translate it as follows:

**= [Three cells to the left].**

It therefore does not matter which row you copy the formula into, Excel will always use “[Three cells to the left]” to generate the result.

Most of the time, this is what you would want, but there are occasions where you need to stop Excel updating cell references when you copy formulae.

### 4.3.2 ABSOLUTE REFERENCES

The example below shows a formula being created to work out the amount of VAT Total would have to Pay. The order totals are in column F and the VAT rate is in F1. The initial formula has therefore been set up as:

`=F4*F1`

		VAT	20%
	Feb	Mar	Total
10	50	140	300
00	50	240	490
00	180	295	775
00	105	185	600

Picture 81 Creating an absolute reference from relative



The formula will generate a result for the first Total. However, when copied, you will get zeros against the VAT amounts for the other orders or error messages if referencing cells containing non compatible information. This is due to the relative referencing that Excel applies to all formulae by default.

Having copied the above formula, if you clicked on any formula in the Discount amount column below the first one, you would see that Excel has updated the references ( $=F5*F2$ ,  $F6*F3$ ). This is where the problem lies – you want Excel to change the first reference as your formula needs to refer to the different order totals, but the VAT rate should remain constant. You need to make that reference **ABSOLUTE**.

→ To make a reference absolute:

### Keyboard

- i. Move to the cell where you have typed the formula and press **F2** to access Edit mode.
- ii. Move the cursor with the arrow keys so that it is inside the reference we want to fix.

	A	B	C	D	E	F	G
1					VAT	20%	
2							
3			Jan	Feb	Mar	Total	VAT
4		Long	110	50	140	300	$=F4*F$1$
5		Olson	200	50	240	490	
6		Stark	300	180	295	775	
7		Unger	220	195	185	600	
8		Kraft	305.5	195	203	703.5	
9		Oakes	219	147	136.7	502.7	
10		Bidar	220	104	185	510	

**Picture 82** An absolute reference

- iii. Press **[F4]**. Dollar signs will appear against the column letter and the row number.
- iv. Press **ENTER** to confirm the change.
- v. In our example, amending the formula to read:  
 **$=F4*F$1$**
- i. This would prevent Excel from changing the F1 reference when the formula is copied.

### Fill Handle







You can get the fill handle to fill formulas down to the same level as the entries in the previous column by double-clicking on it.



*Pressing [F4] repeatedly over a reference allows you to toggle between making both the row and column absolute ( $\$A\$1$ ), just the column absolute ( $\$A1$ ), just the row ( $A\$1$ ), or nothing absolute I.E back to relative (A1).*

# 5 FILE OPERATIONS

By the end of this section you will be able to:

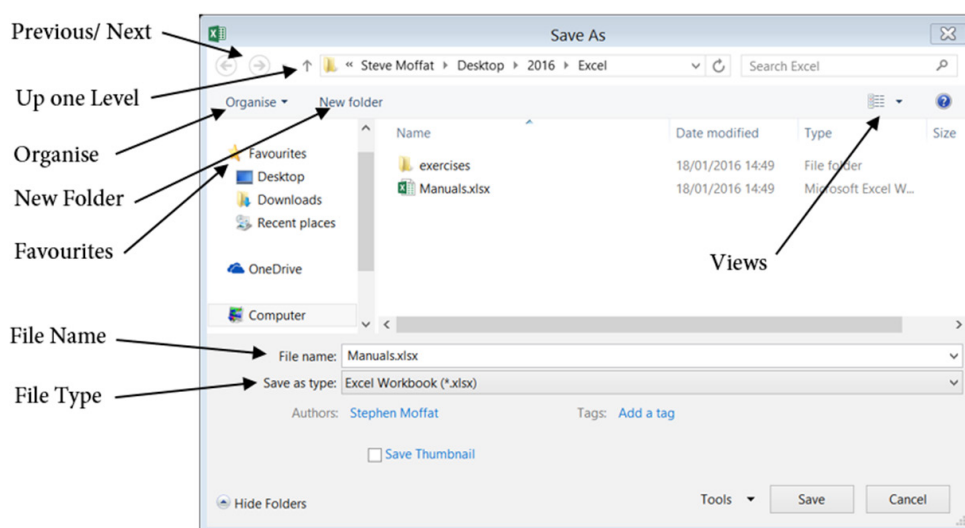
-  Open and close files
-  Create new files
-  Save files
-  Understanding file types and filenames
-  Save files with different names in different locations
-  Save as different types of files

## 5.1 WORKING WITH FILES

You can save any information entered in Excel so that you may call it back at a later stage either to add, edit or print the contents. It's a good idea to save work frequently as this will minimise the risk of work being lost in the event of a power cut or system fault.

### 5.1.1 SAVING FILES

Excel gives any new document you create a temporary name – the word 'Book' followed by a number. The number increases by one for each new workbook you create in any one work session.



Picture 83 Save As dialog

### 5.1.2 SAVE AS DIALOG BOX

**PREVIOUS/NEXT FOLDER** – As you move through the folder structure in the Files list, these buttons allow you to go back to a previous folder that you viewed.

**UP ONE LEVEL** – Click one of these button to look in the folder that is up one level in the current folder structure.

**NEW FOLDER** – Click this button to create a new folder within the current folder.

**ORGANISE** – This is a menu button offering options found in right clicking on a file such as cut, copy, delete etc.

**VIEWS** – Click the arrow next to this button to display file and folder view options.

**FILE NAME** – Type or select a file name for the file that you are saving.

**SAVE AS TYPE** – In the list, click the file format in which you want to save the file. Most 2016 Microsoft Office system programs can save files in more than one format, so you may need to select the format that you want. If you wish to use the functionality of 2016 it is advised to use the latest format. (Default Excel Workbook)

**FAVOURITE LINKS** – Click a shortcut on the favourite links bar on the left to save the file to the location represented by the shortcut.

**DELETE** – Right click a file or folder to delete the selected file or folder.

**Tools** – Click Tools to display a list of tasks that you can perform. The tools that are available vary depending on the program that you are using.

**SAVE** – After you determine the location, file name, and format of the file that you are saving, click Save to save the file.

**CANCEL** – To go back to the file without saving it, click Cancel.

**TOOLS** – These will be covered in the advanced Manual.

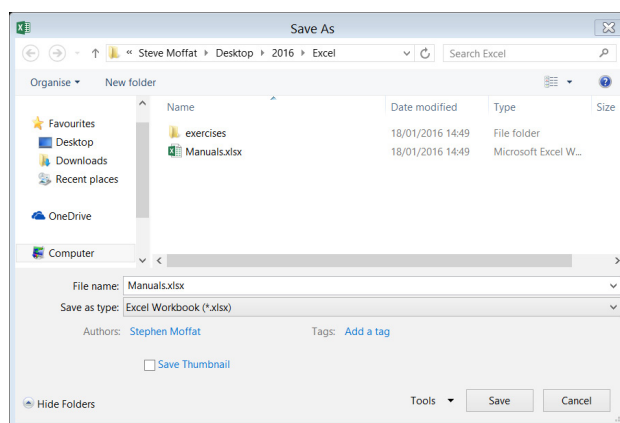
→ To save a file:

### Mouse

- i. Click the **SAVE** button. On the **QUICK ACCESS TOOLBAR**. If you have not saved the workbook previously, the **SAVE AS** dialog box will appear asking you for a document name and location.



**Picture 84** Save button to open dialog – quick access toolbar



**Picture 85** Forcing a Save As

- ii. The first list box marked at the top in the dialog box allows you to determine the drive and folder that you want to save the document in. The large area below the list box allows you to see which files are stored in the area currently displayed.

→ To change the location:

### Mouse

- i. Click the drop-down list arrow to the right of the **LIST** box and choose the desired drive or folder (you may need to use more than one).

### OR

- i. Navigate the folders on the Left hand side to Locate the folder you wish to save it in.
- ii. Once you have located the folder you wish to save it in move to the bottom of the dialog box where there are two list boxes, one for the file name and one for the document type. Excel automatically assigns the first few words you typed as the workbook name.



**File Types And File Names:** Excel in general has always saved files with three letter filetype's such as book1.xls or accounts.xlt the last three letters always being the type of file that it is saved as. In 2016, however, this has now changed and the default filetype for all excel files is now book1.xlsx a four character filetype. This is because the nature of the contents of the file has changed radically and is in no way comparable to earlier versions.

### → Naming a file:

#### **Mouse**

- i. Click in the **FILE NAME** box and drag your mouse over the current file name – this will highlight it. Then type the new name.
- ii. Choose from the **SAVE AS TYPE** box which version of excel you wish to save this file as. (If somebody using a previous version needs to access this file this is essential)
- iii. Finally, when the location, name and FileType have been entered, save the workbook by clicking the button marked **SAVE**. This closes the dialog box. Back in the Excel screen you will notice that the name you allocated to your workbook appears on the title bar at the top of the screen
- iv. If you saved this file as an earlier version, you will see compatibility mode next to the filename in the title bar



**Workbook names can be up to 255 characters. File names cannot include any of the following characters: forward slash (/), backslash (\), greater than sign (>), less than sign (<), asterisk (\*), period (.), question mark (?), quotation mark ("), pipe symbol (|), colon (:), or semicolon (;). You do not need to type the document extension (".xls") as Excel automatically adds this to all files you save.**

### 5.1.3 SAVING CHANGES TO FILES



**Picture 86** Save button for quick save (save changes)

Once you have allocated a name to a file using the **SAVE AS** dialog, clicking the **SAVE** button simply saves any new changes to the name you originally gave. It is worth saving files that you are working on every ten minutes or so. When you click the **SAVE** button, the status bar displays a message to say that it is saving and a blue meter which counts up to show how long the save will take.

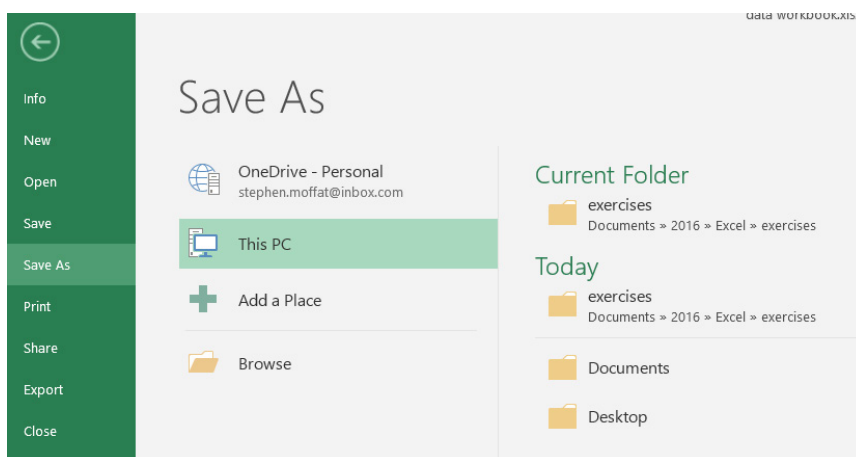
➔ To save changes

### Keyboard

- I. You can save the current workbook by using the keystroke **CTRL+[S]**. If the workbook has never been saved before, the Save As dialog will appear, otherwise, **CTRL+[S]** saves any new changes to the file name that you have already allocated.

## 5.1.4 SAVING AS A DIFFERENT TYPE OR DIFFERENT NAME

If a file you work with needs to be saved as something else or it needs saving under a different name or maybe another version then we cannot use the save button as this would just save the changes to this file we must call up the **SAVE AS** dialog again and save the file as something else.



**Picture 87** Save as – file tab

➔ To save as different file

### Mouse

- i. Click on the **FILE** Tab and move the mouse cursor to **SAVE AS**
- ii. Select the location from options presented, choose a folder or place
- iii. This will bring the **SAVE AS** dialog box to the screen again at the location chosen
- iv. Make the necessary changes and click on **SAVE**

### 5.1.5 CLOSE FILES

When you finish working on a file, you can close it down using the following methods:

→ To close the current file:

Mouse

- i. Click on the **FILE** Tab and choose **CLOSE** near the bottom of menu.
- OR**
- ii. Click once on the cross (situated on the Top right-hand side of the screen)

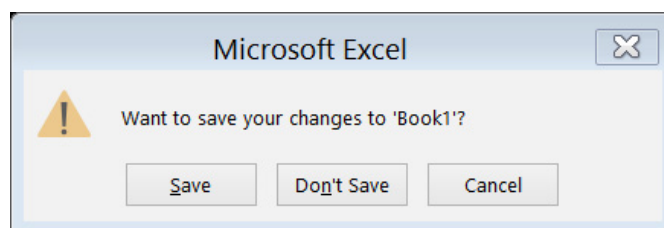


**Picture 88** Close cross

- iii. If you have changed a file since the last time you saved it, Excel will not let you close that file without prompting you first to save the changes. A dialog box will appear with the option to save the changes you have made.



*Merely opening a file could create changes for many reasons even if you personally have not changed anything so think carefully before deciding whether or not to save any changes as you close.*



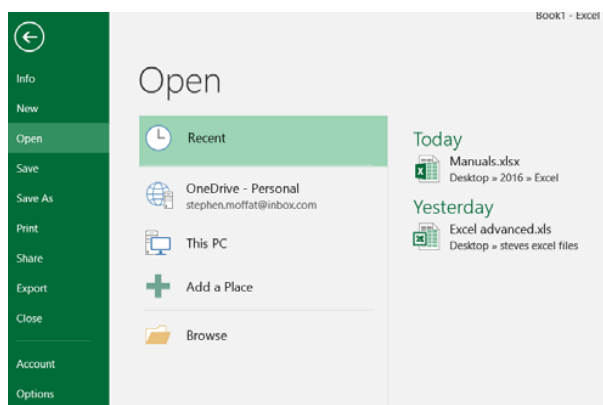
**Picture 89** Save warning

### 5.1.6 OPEN FILES

☞ To open a file:

#### Mouse

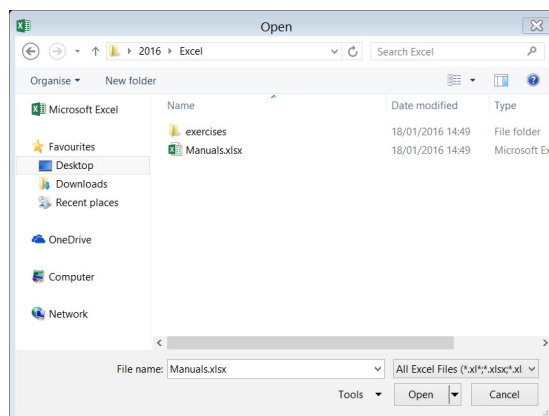
- i. Click on the **FILE** Tab and choose recent all recently used files appear on the right hand side of window.



**Picture 90** Open options – file tab

#### OR

- i. Click on **FILE** Tab and choose **OPEN**.
- ii. Click on **BROWSE** or double Click on **THIS PC**.
- iii. The **OPEN** dialog box will appear.



**Picture 91** Open dialog

- iv. If the file you want is not listed in the window, navigate using the folder list on the left or the drop down list box at the top as you did for saving to locate the containing folder until you see the file you wish to open in the main part of the window.

- v. To open the file either: Click once on the file name to select it and click the **OPEN** button.

**OR**

- i. After locating the file Double-click the file name.

### Keyboard

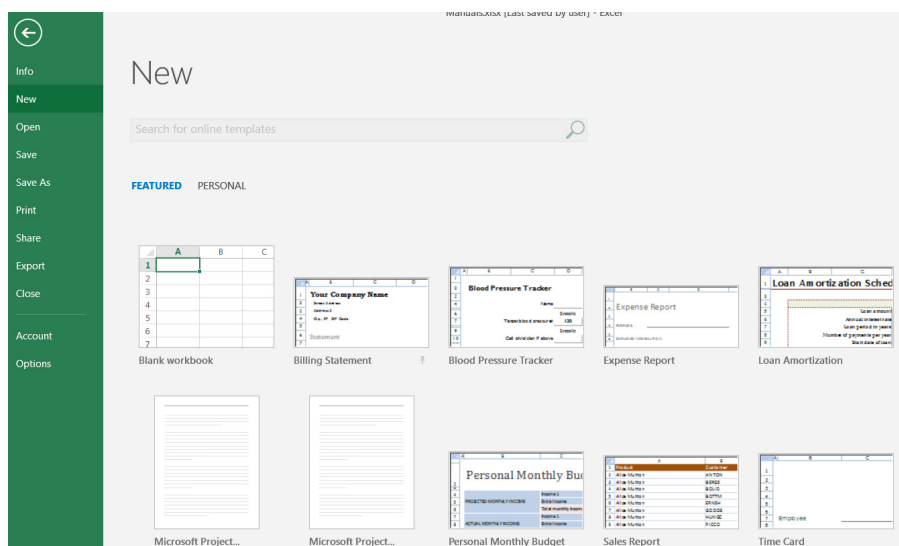
- i. You can also open workbooks using the key combination **CTRL+[O]**. This will invoke the **FILE OPEN** dialog – follow the steps outlined above to select and open the file that you want.



*The ADD A PLACE and ONEDRIVE need internet connection they are linked to your user account and direct you to folders and files you have stored on the internet. These facilities will be covered in a later Manual.*

## 5.1.7 NEW FILES

There are many occasions you may wish to create a new file and instead of just opening a new blank file excel gives you the option of many pre prepared files that allows you the ability to enter data and not have to start from scratch, formatting building calculations etc. The advanced Manual will show you how to create your own templates saving hours of work.



**Picture 92** Creating new files – file tab

→ To create a new file:

### Mouse

- i. Click on the **FILE** Tab and click on **NEW** The above options will appear.
- ii. In the main area are templates if you are online there are many more choices available as you will see.
- iii. Choosing a category such as **FEATURED** or **PERSONAL** will allow you to create a new workbook based on any of the template files you see. The Personal category contains templates created by yourself if none have been created you will not have this option available.
- iv. A preview of any workbook type is shown in the main area.
- v. When you have located the correct type of workbook selected even if it is only blank click on it to create your file.

### OR

### Keyboard

- I. **CTRL+[N]** will create a new blank file.

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## 6 MOVING AND COPYING DATA

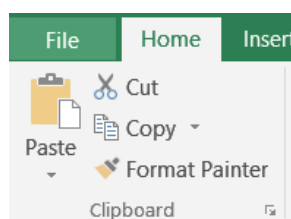
By the end of this section you will be able to:

-  Use cut copy and paste
-  Drag and drop information
-  Transfer data between files

### 6.1 CUT, COPY AND PASTE

Having entered information in a worksheet, you may decide that you need to reposition it or use cell entries in another worksheet or file that you have created. The good thing about Excel is that once you have entered something once, you can move or copy it anywhere – to other Excel files and even to files that belong to other applications.

All Microsoft products use the same terminology when describing moving and copying items – **CUT**, **COPY** and **PASTE**. These terms stem from the times when typesetters would lay out templates by physically cutting an item from its current location, and gluing or pasting it in to the new location.



Picture 93 Clipboard group

#### 6.1.1 CUT AND PASTE (MOVE)

→ To move items:

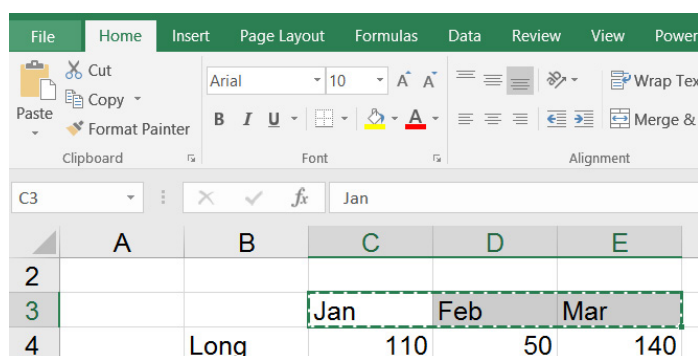
##### Mouse

- i. Select the cells that you want to move.



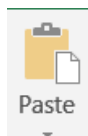
Picture 94 Cut button

- ii. Click the **CUT** button on the **HOME** Tab. In the **CLIPBOARD** group The selected cells will display a marquee around them and Excel will show a prompt on the Status bar to tell you what to do next.
- iii. Move to the cell where you want to place the cells you cut. If you have cut a block of cells, the cell you select before you paste is where you want the top left cell in the cut block to move to.



**Picture 95** Select and cut

- iv. Click the **PASTE** button from the **HOME** Tab in the **CLIPBOARD** group



**Picture 96** Paste button

**OR**

- i. Press **ENTER**.

**OR**

**Keyboard**

- i. Select the cells you want to move.
- ii. Press **CTRL+[X]** to cut the cells out a marquee will appear around the cells, and you will see a prompt on the status bar.
- iii. Move to the cell where you want the cut cells to jump to. If you have cut a block of cells, the cell you select before you paste is where you want the top left cell in the cut block to move to.
- iv. Press **CTRL+[V]** to paste the cells into their new location.

### 6.1.2 COPY AND PASTE

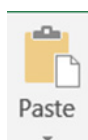
→ To copy items:



**Picture 97** Copy button

#### Mouse

- i. Select the cells that you want to copy.
- ii. Click the **COPY** button on the **HOME** Tab. In the **CLIPBOARD** group. The selected cells will display a marquee around them and Excel will show a prompt on the Status bar to tell you what to do next.
- iii. Move to the cell where you want to place the cells you cut. If you have cut a block of cells, the cell you select before you paste is where you want the top left cell in the cut block to be copied to.
- iv. Click the **PASTE** button from the **HOME** Tab. In the **CLIPBOARD** group the copied cells will appear



**Picture 98** Paste

#### OR

- i. Press **ENTER**. The copied cells will appear.

#### OR

#### Keyboard

- i. Select the cells you want to copy.
- ii. Press **CTRL+[C]** to make a copy. Excel displays a marquee around the copied cells and a prompt on the Status bar.
- iii. Move to the cell where you want the copy to go. If you have copied a block of cells, the cell you select before you paste is where you want the top left cell in the copied block to be positioned.
- iv. Press **CTRL+[V]** to paste the copied cells back in.to your worksheet

#### OR

- I. Press **ENTER**.

### 6.1.3 CLIPBOARD

Clicking on the **DIALOG BOX LAUNCHER** for the **CLIPBOARD** group On the **HOME** tab will open the clipboard as a TaskPane on the left hand side of the screen

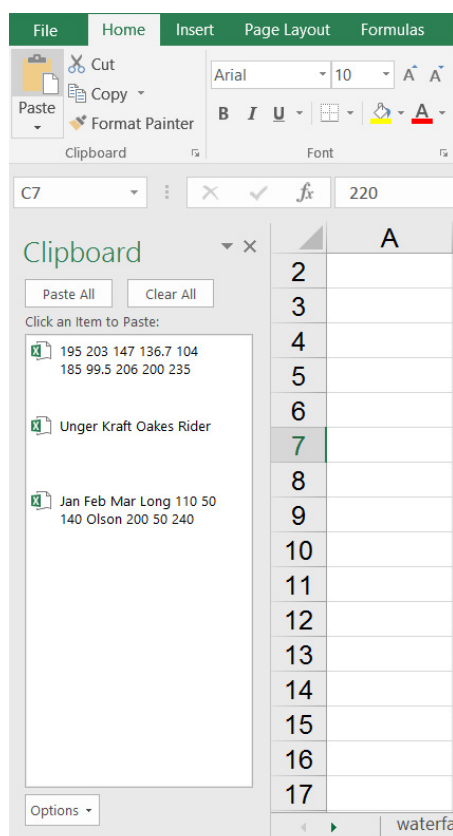


**Picture 99** Dialog box launcher

The clipboard holds the last 24 items that have been cut or copied from any of the Microsoft applications and allows you to paste the same item many times in many places including other applications.

The clipboard is generic to all applications and needs merely to be displayed as it is here. The clipboard can be cleared at any time or single Items deleted.

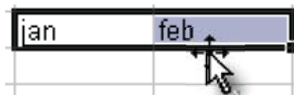
Clicking on the cross at the top right of the TaskPane will close it. Closing the TaskPane does not affect the items on the clipboard.



**Picture 100** Clipboard TaskPane

### 6.1.4 DRAG AND DROP

You can move and copy cells by selecting and dragging them with the mouse. When you do this, you must ensure that you have the correct mouse pointer shape displaying before dragging and dropping.



**Picture 101** Dragging data

When you select a cell or a group of cells, Excel outlines them with a heavy border. When the mouse is moved slowly over this border, it will display a white arrow which points up and to the left – and a four arrowed cross in black this is your drag and drop pointer and allows you to move and copy cells with the mouse.



**Picture 102** Move cursor

➔ To move:

#### Mouse

- i. Select the cells you want to move or copy.
- ii. Point to the border of the selection.
- iii. With the drag and drop pointer displaying, drag the selection to the upper-left cell of the paste area. You'll see a fuzzy box, the same size as the selected block that will follow your mouse – when you release the mouse the selected cells will jump to their new location.

	B	C	D	E	F	G	H
		Jan	Feb	Mar			
Long		110	50	140			
Dlson		200	50	240			
Stark		300	180	295			
Jnger		220	195	185			

**Picture 103** Moving data



*When you move cells to an area that already has data, Microsoft Excel will ask you to confirm that you wish to replace the existing cell contents with the data you are moving.*

➔ To copy:



Picture 104 Copy or duplicate cursor

**Mouse**

- i. If you want to copy the selection, repeat steps one and two above but before clicking on to the border hold down the **CTRL** key on the keyboard, then begin clicking and dragging. You will see a plus sign appear next to the mouse pointer to signal the fact that you are copying rather than moving.
- ii. With the fuzzy box positioned where you want the copy, let go of the mouse first and then release the **CTRL** key.

	B	C	D	E	F	G	H
		Jan	Feb	Mar			
Long		110	50	140			
Dolson		200	50	240			
Stark		300	180	295			
Inger		220	195	185			F3:G6

Picture 105 Duplicating or copying data

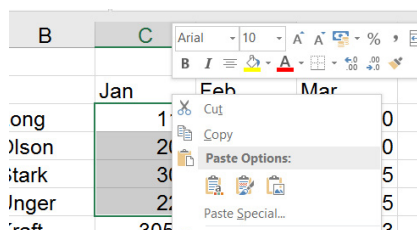
**6.1.5 SHORTCUT MENUS**

You can use commands from Excel’s shortcut menus to move and copy items. The shortcut menus appear when you click the right mouse button over a cell or selection.

➔ To move cells:

**Mouse**

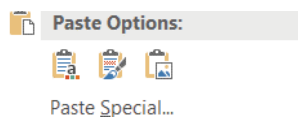
- i. Select the cells you want to move and with the mouse positioned anywhere within the highlighted area, click the right mouse button.



Picture 106 Right click shortcut menu

- ii. From the resulting shortcut menu, choose **CUT**. A marquee will appear around the selected cells and the Status bar will display a prompt.
- iii. Click the right mouse button over the cell where you want the cut cells to Move to. If you have cut a block of cells, the cell you click before you paste is where you want the top left cell in the cut block to move to.

- iv. Choose the one of the **PASTE** option buttons from the shortcut menu. You will find varying options depending on what has been cut or copied. You may paste with or without formatting, or to follow the formatting of the cells that you paste to. Maybe even to paste as picture.



**Picture 107** Paste options shortcut menu

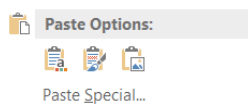
## OR

- i. Press **ENTER**. The cut cells will jump to their new location.

### → To Copy Cells:

#### Mouse

- i. Select the cells you want to copy and with the mouse positioned anywhere within the highlighted area, click the right mouse button.
- ii. From the resulting shortcut menu, choose **COPY**. A marquee will appear around the selected cells and the Status bar will display a prompt.
- iii. Click the right mouse button over the cell where you want the cut cells to jump to. If you have copied a block of cells, the cell you click before you paste is where you want the top left cell in the copied block to move to.
- iv. Choose the one of the **PASTE** option buttons from the shortcut menu. You will find varying options depending on what has been cut or copied. You may paste with or without formatting, or to follow the formatting of the cells that you paste to. Maybe even to paste as picture.



**Picture 108** Paste options

## OR

- i. Press **ENTER**. The copied cells will appear at their new location but will be removed from the clipboard this is a one-time pasting method.



*If you want to insert the cut or copied cells between two rows or columns of existing data, you can use the Insert cut/copied cells option that also appears on the shortcut menu.*

## 6.2 MOVING AND COPYING BETWEEN FILES

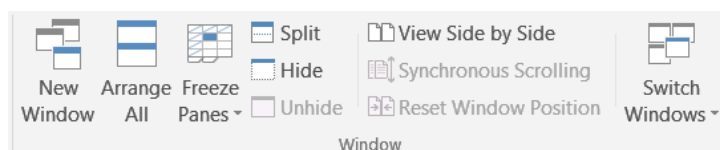
### 6.2.1 VIEWING MULTIPLE FILES

You can use any of the methods described above (even drag and drop) to move and copy items from one workbook to another. When doing this, it is useful to be able to arrange the screen so that you can see the source file (the file containing the items that you want to move or copy) and the destination file (the document where you want to put them) at the same time.

→ To view open files:

#### Mouse

- i. Open multiple workbooks using the techniques described in **SECTION 5, FILE OPERATIONS**.
- ii. Click **VIEW** tab, Choose **ARRANGE ALL** in the **WINDOW** group. A dialog box will open to allow you to choose how the files will be arranged. Choose vertical and the two workbooks will be tiled on screen one beside the other, each in its own window.



**Picture 109** View window options

- iii. Use your preferred technique (as described above) to move or copy items from one file to the other.

#### OR

- i. If you click the **SWITCH WINDOWS** icon, this will list the files that are currently open to allow you to switch from one file to another. Copying from one file and then switching to paste into another file.

 *Drag and drop will obviously not work with this method*

### 6.2.2 INSERT PASTE

As already mentioned, Excel will overwrite existing data with cells that you are moving or copying. There are occasions where you want to swap the positions of cells without overwriting what you already have.

A	B	C	D	E
		Jan	Feb	Mar
	Long	110	50	140
	Olson	200	50	240
	Stark	300	180	295
	Kraft	305.5	195	203
	Unger	220	195	185
	Oakes	219	147	136.7
	Rider	230	104	185

**Picture 110** Drag to rearrange data

In the example above, if you wanted to move the selected cells up two rows so that both “Oakes” orders were between Stark and Kraft, you would have to use **INSERT PASTE** to do it, otherwise the existing data (Stark or Kraft) would be overwritten.

☞ To insert the cells between existing cells:

#### Mouse

- i. Select the cells you want to move or copy.
- ii. Point to the border of the selection.
- iii. Hold down **SHIFT** (if moving) or **SHIFT+CTRL** (if copying) as you drag.

You'll see a fuzzy line that you can position horizontally (between rows) or vertically (between columns). Release the mouse, then the keyboard. Your cells will jump to their new location.

### 6.2.3 MOVING AND COPYING BETWEEN WORKSHEETS

When you drag cells to areas not currently visible, Excel will scroll the display down or across allowing you to move or copy the cells to those areas. Sometimes, you may want to drag an item to a different worksheet within the workbook.

☞ To move and copy to another worksheet:

#### Mouse

- i. Select the cells to move or copy and position the mouse over the selection border.
- ii. Hold down the **ALT** key as you drag the cells (**ALT+CTRL** if you are copying).
- iii. Drag down over the sheet tab that you want to put the cells on and Excel will jump to that sheet. Continue dragging until you are in the location on the selected sheet that you want the cells in. Release the mouse **then** the keyboard.

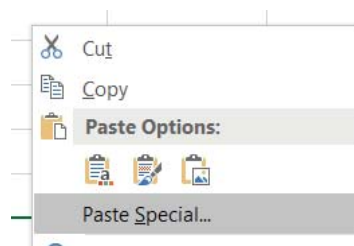
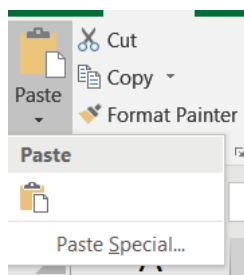
### 6.2.4 PASTE SPECIAL

The Paste Special option gives you the ability to choose what should be pasted into the destination cells. For example, you may want to paste data without its formats, or you might want to convert a formula to a static value – Paste special gives you the choice. You can also use Paste Special to add/subtract/divide or multiply the copied cells with the destination cell data.

→ To use paste special:

### Mouse

- i. Select the cells you want to copy. Right click anywhere within the highlighted block and choose Copy from the shortcut menu.
- ii. Click the right mouse button over the cell where you want the copied data to appear. If you have copied a block of cells, the cell you click before you paste is where you want the top left cell in the copied block to move to.



Picture 111 Accessing paste special

### OR

- i. Click on the dropdown arrow on the **PASTE** button in the **CLIPBOARD** group on the **HOME** tab.

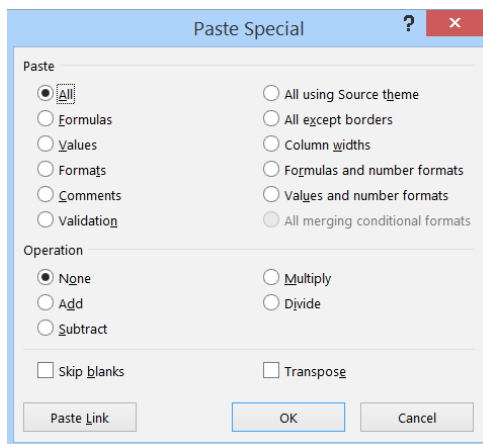
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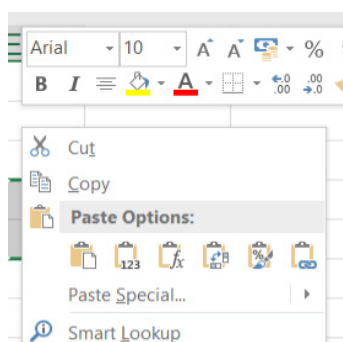


**Picture 112** Paste special dialog

- ii. Choose **PASTE SPECIAL**. The Previous dialog box will appear:
- iii. Select an option in the **PASTE** section of the dialog to choose what will be pasted into the destination cells.
- iv. Select an option from the **OPERATION** section of the dialog to choose the mathematical operation you want to perform on the copied data.
- v. Check the **SKIP BLANKS** box to suppress empty cells being pasted.
- vi. Check the **TRANSPOSE** box to change the arrangement of the copied cells from column to row and vice versa. Click **OK** to close the dialog and paste the data.

**OR**








- i. Follow steps 1 and 2 above then when you right click move your mouse to paste options and you will see the **QUICK PASTE SPECIAL OPTIONS** related to your copied selection. When you move your mouse over them you will see a preview on your worksheet as to what would happen for each choice.
- ii. Click on a button to apply that choice.



**Picture 113** Paste special shortcuts

# 7 FORMATTING

**By the end of this section you will be able to:**

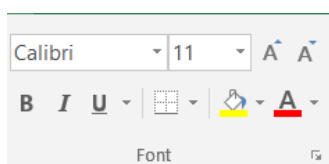
-  Format cell appearance
-  Format data appearance
-  Format rows and columns
-  Use and understand the format dialog box
-  Merge and unmerge cells
-  Change row and column heights
-  Change orientation of cells and data

## 7.1 FONT GROUP FORMATS

Having produced a spreadsheet, it may be formatted to achieve a more professional and more easily readable layout of data for both screen display and printout. There are several different ways of formatting data in Excel 2016 to produce extremely impressive effects, and many of the tools in the Formatting groups on the home Tab are used for the most popular formatting tasks. This section looks at several different approaches to improving the layout of a spreadsheet.

### 7.1.1 FORMATTING GROUPS ON HOME TAB

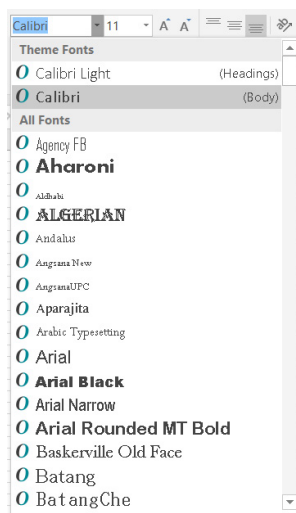
The Formatting groups are together on the **HOME** Tab the buttons that create formats most frequently used to enhance worksheet appearance. Not all the formats that you can apply in Excel are contained in the **FORMATTING** group icons some can only be accessed via the dialog box which is accessed by the **DIALOG LAUNCHER** button found at the bottom right of the **FORMATTING** group which is discussed later in this section.



**Picture 114** Font group – home tab

## Font

By default, Excel 2016 uses Calibri as its base font and all new worksheets will use this font for data that you enter. However, you can choose different font faces for cells on the worksheet using the Ribbon.



**Picture 115** Changing the font

→ To change the font:

### Mouse

- i. Select the cells where you want to change the font.
- ii. Click the drop-down list arrow to the right of the **FONT** box in the **FONT** group on the **HOME** Tab.
- iii. The fonts are listed alphabetically. Use the vertical scroll bar on the right of the list to move the list items up and down.
- iv. Select the desired font by clicking on it. The font face for the selected cells will change to reflect your choice.

### OR

### Keyboard

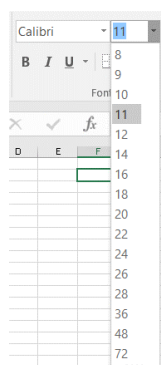
- i. Select the cells to change.
- ii. Press **CTRL+SHIFT+[F]** to highlight the current font on the formatting toolbar.
- iii. Use **ALT [↓]** to drop down the list of available fonts, use the up and down arrows to move the highlight bar up and down the list and **ENTER** to apply the chosen font to the selected cells.

## Point size

→ To change the point size:

### Mouse

- i. Select the cells with the data to change.
- ii. Click on the drop-down list arrow to the right of the currently displayed point size.
- iii. Pick a new number from the list – the selected cell data will change size accordingly.



**Picture 116** Changing the point size

## OR

### Keyboard

- i. Select the text to change. Then Press **CTRL+SHIFT+[P]** to highlight the current point size on the formatting toolbar.
- ii. Either type the point size that you want to use (your typing will replace the currently selected number) or use **ALT+[↓]** to display the list of point sizes and move the highlight bar to the selected size using the up and down arrow keys.
- iii. Press **ENTER** to apply the currently highlighted size to the selected cells.

## OR

### Mouse

- i. After selecting cells, you may use your mouse to increase or decrease the size of your font in the selected cells by clicking on the increase or reduce point size buttons in the **FONT** group. This will change the size of your font one point at a time.



**Picture 117** Increase-decrease point size



*Although Excel displays from 8 to 72 points in the list, you can type your own numbers in and press ENTER to apply the format.*

## Bold, italic and underline

Bold, italic and underline can be applied to the selection using buttons on the formatting toolbar or keyboard shortcuts.

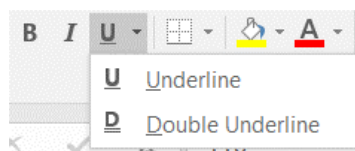


Picture 118 Bold, italic and underline

→ Apply bold, italic or underline:

### Mouse

- i. Select the cells to change. Then Click on either the **B**, **I** or **U** buttons on the toolbar. The button will “switch on” and the selected text will display the applied format.



Picture 119 Underline options

- ii. Clicking on the **UNDERLINE** drop down arrow will give you the option of having double underline instead of the regular single one. You may still toggle this off by clicking the **U** again.

### OR

### Keyboard

- i. Select the cells to change.
- ii. Press **CTRL+[B]** to apply bold formatting, **CTRL+[I]** to apply italic formatting or **CTRL+[U]** to apply single underline formatting to the selected cell data.

→ Remove bold, italic and underline:

### Mouse

- i. Select the cells with the format. Then Click the **BOLD**, **ITALIC** or **UNDERLINE** button to turn the format off.

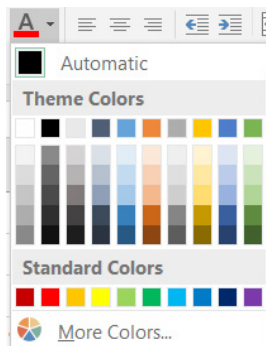
### OR

### Keyboard

- i. Select the cells with the format. Then Press **CTRL+[B]**, **CTRL+[I]** or **CTRL+[U]** to switch the format off.

## Font colour

This will change the colour of on-screen information. It will also print the information in the chosen colour if you are connected to a colour printer.



Picture 120 Change font colour

→ To change font colour:

### Mouse

- i. Select the cells whose font colour you want to change. Then Click the drop-down list arrow displayed on the right-hand side of the **FONT COLOUR** button in the **FONT** group on the **HOME** tab and choose the desired colour.
- ii. **THEMES** (see later) show complimentary colours and shades on the theme that you may have chosen for your worksheet (those in figure are default).
- iii. There are also standard colours to choose from.
- iv. If you still cannot find what you want from the default palette there are more colours to choose from. Click **MORE COLOURS** to find any colour you desire.

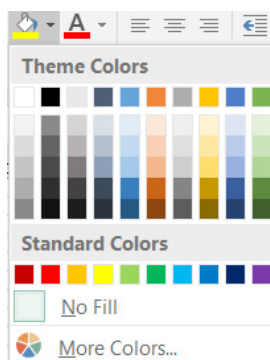
→ To reset font colour:

### Mouse

- i. Select the cells you want to reset to the default colour. Then Click the drop-down list arrow displayed on the right-hand side of the Font colour button.
- ii. The **AUTOMATIC** option will reset text back to the default colour (normally black).

## Background fill colour

If you want to shade the background of cells, use the **FILL COLOUR** button.



Picture 121 Fill colour

→ To change fill colour:

### Mouse

- i. Select the cells whose background colour you want to change.
- ii. Click the drop-down list arrow displayed on the right-hand side of the **FILL COLOUR** button in the **FONT** group on the **HOME** tab.
- iii. The **NO FILL** option will remove any applied fill colours.
- iv. The fill colour palette has the same range of colours and colour options that is in the text colour drop down list.

## Borders

When you print a worksheet, Excel allows you to choose whether you want all the cell gridlines to print or not. Often, you want to print some but not all of the lines – this is when you need to apply borders. You can then tell Excel not to print the gridlines but your borders will be printed.



*If the palette does not have the bordering option that you want to apply, use the **FORMAT CELLS** dialog (discussed later in this section) to apply the borders.*

→ To apply borders:

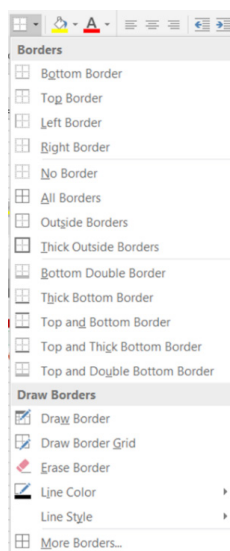
### Mouse

- i. Select the area you want to border.
- ii. Click the drop-down list arrow to the right of the **BORDERS** button on the **FONT** Group of the **HOME** Tab.
- iii. From the palette, click on the required border option.
- iv. You may go back to this and apply secondary or tertiary borders to your selection.

→ To remove borders:

### Mouse

- i. Select the area with the borders you want to remove.
- ii. Click the drop-down list arrow to the right of the **BORDERS** button on the **FONT** Group of the **HOME** Tab.
- iii. From the palette, click on the **NO BORDER** option.

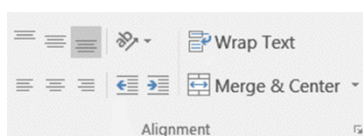


**Picture 122** Border options from menu

## 7.1.3 PARAGRAPH GROUP FORMATS

### Alignment

You can select from three different cell alignment options in Excel by clicking the relevant button (described below). The buttons determine how data lines up between the left and right edges of the selected cell(s).



**Picture 123** Alignment group for paragraphs

→ To change alignment:

### Mouse

- i. Select the cell(s) whose alignment you want to change.
- ii. Click on the button for the alignment you require (*see below*).

- iii. Click this button to **left-align** cell data. Left alignment ensures that the left edge of an entry is flush with the left edge of the cell. Left alignment is the default alignment for text entries in cells.



**Picture 124** Left align button

- iv. Click this button to **centre** cell data. This will make each cell entry in the selection position itself in the middle of the cell.



**Picture 125** Centre align button

- v. Click this button to **right-align** cell data. Right alignment ensures that the right edge of an entry is flush with the right edge of the cell. Right alignment is the default for numeric cell entries.



**Picture 126** Right align button

## Merge cells

If you want to type a heading across the top of a table of data, it can be quite difficult to line it up in the centre. If the columns in your table are different widths, or the title is a certain length, the chances of you getting it exactly central along the top of the table are practically nil. Luckily Excel has a solution. You can merge the cells across which you want the heading, centring it at the same time.



**Picture 127** Merge and centre

→ To merge cells:

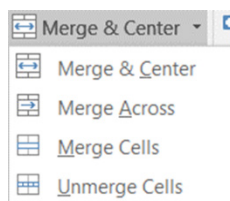
### Mouse

- i. Select the cells you want to merge.
- ii. Click the **MERGE AND CENTRE** button from the **PARAGRAPH** group on the **HOME** tab.

→ To unmerge cells

### Mouse

- i. Select the cells you want to unmerge.
- ii. Click the **MERGE AND CENTRE** button from the **PARAGRAPH** group on the **HOME** tab, again, and this will unmerge the cells selected.
- iii. As you can see from the figure right if you click the drop down arrow to the right of the merge cell button you have different options to merge cells.



**Picture 128** Merge and centre options







- The number 1 MOOC for Primary Education
- Free Digital Learning for Children 5-12
- 15 Million Children Reached

**About e-Learning for Kids** Established in 2004, e-Learning for Kids is a global nonprofit foundation dedicated to fun and free learning on the Internet for children ages 5 - 12 with courses in math, science, language arts, computers, health and environmental skills. Since 2005, more than 15 million children in over 190 countries have benefitted from eLessons provided by EFKI. An all-volunteer staff consists of education and e-learning experts and business professionals from around the world committed to making difference. eLearning for Kids is actively seeking funding, volunteers, sponsors and courseware developers; get involved! For more information, please visit [www.e-learningforkids.org](http://www.e-learningforkids.org).

## Indents

Indents allow you to control where a cell entry begins inside a cell.

→ To indent cell data:

### Mouse

- i. Select the cell(s) where you want an indent.
- ii. Click the **INCREASE INDENT** button from the **PARAGRAPH** group on the **HOME** tab. to indent the selected cell data by a standard amount from the left. You can click this button again to increase the amount of indent and so on.



**Picture 129** Increase indent

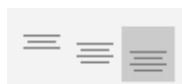
- iii. If you need to take the indent back, click the **DECREASE INDENT** button to do this.



**Picture 130** Decrease indent

## Vertical alignments

Use the options in this list to choose how data lines up between the top and bottom edges of cells.



**Picture 131** Vertical alignment options

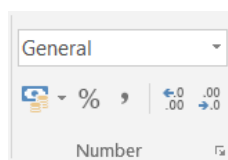
→ To change vertical alignment:

### Mouse

- i. Select the cells you want to format.
- ii. Click left button to align text to top of cell
- iii. Click middle button to align text to centre of cell
- iv. Click right button to align text to bottom of cell

## 7.2 NUMBER GROUP FORMATS

Initially, numbers in Excel use a General format. You may find that the results of formulae run to different numbers of decimal places, or you might want to display numbers as monetary values with a currency symbol and two decimal places. There is no need for you to enter the numbers in the way you want them displayed – it is far better to use Excel's number formatting buttons.



**Picture 132** Number group

### Increase and decrease decimal places

You can add and remove decimal places from numeric data using the Increase Decimal and Decrease Decimal buttons. Where you decrease, Excel will round numbers up or down to the nearest unit. However, many places that you may increase or decrease the value to excel will still use the entered value to calculate not the value that appears in the cell as this is only an appearance not a true value (check formula bar for true value).

→ To increase decimals:

#### Mouse

- i. Select the cells with the numbers you want to change.
- ii. Click the **INCREASE DECIMAL** button from the **NUMBER** group on the **HOME** tab



**Picture 133** Increase decimal

- iii. Keep clicking the **INCREASE DECIMAL** button until your numbers display the correct number of decimal places.

→ To decrease decimals:

**Mouse**

- i. Select the cells with the numbers you want to change. Click the **DECREASE DECIMAL** button from the **NUMBER** group on the **HOME** tab.



**Picture 134** Decrease decimal

- ii. Keep clicking the **DECREASE DECIMAL** button until your numbers display the correct number of decimal places.

### Comma style

Comma style sets all the selected numbers to 2 decimal places and puts commas between different thousand multiples.

**E.G.** 100000 would become 100,000.00 when comma style is applied to it.

→ To apply comma style:

**Mouse**

- i. Select the cells with the numeric data you want to format. Click the **COMMA STYLE** button from the **NUMBER** group on the **HOME** Tab



**Picture 135** Comma style

### Currency

Applying this style will add a £ sign and two decimal places (pence) to the selected numbers.

→ To apply currency style:

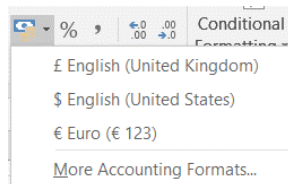
**Mouse**

- i. Select the cells with the numeric data you want to format. Click the **CURRENCY** button from the **NUMBER** group on the **HOME** Tab.



**Picture 136** Currency button

- ii. Using the drop down arrow to the right of the currency button gives access to the most likely used currency formats in use you can choose from different currency symbols using the **FORMAT CELLS** dialog discussed later in this section.



**Picture 137** Currency button options

### Percent style

Where you have typed decimals on the worksheet, you may want to express those values as percentages. You can do this with the Percent Style format.

**E.G.** 0.5 would become 50% when you apply Percent Style.

→ To apply percent style:

#### Mouse

- i. Select the cells with the numeric data you want to format. Click the Percent Style button from the Formatting toolbar.



**Picture 138** Percent style button



*The number formats (apart from Increase and Decrease Decimal) are mutually exclusive. Applying Comma Style to cells that already have Currency formats would lose the currency symbol. If you need to return to the default General style for numbers, you can use the Format Cells dialog discussed later in this section.*

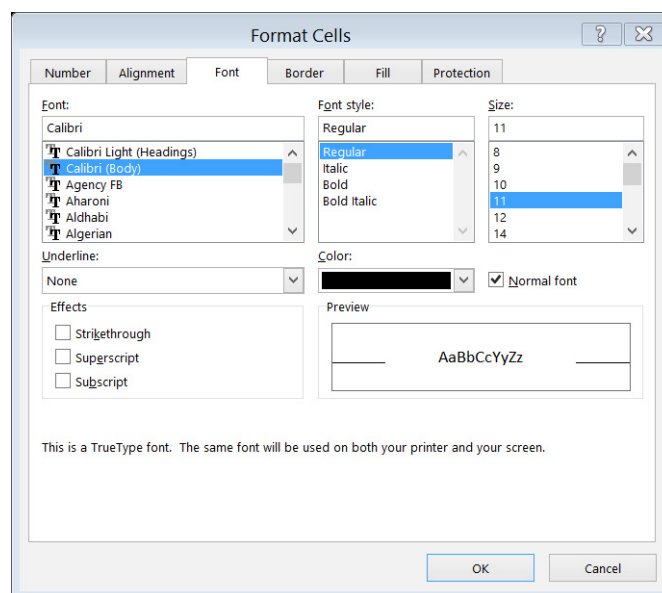


*If you ever see ##### in cells that normally display numbers, it is because the format you have applied is too wide for the column. To show the numbers, either change to a format that fits or widen the column (see later in this section for details on changing column widths).*

### 7.3 FORMAT CELLS DIALOG

When you want to apply formats that Excel does not give you buttons for on the Formatting toolbar, you need to use the Format Cells dialog. This dialog contains all the formatting options (including those accessible via the Formatting toolbar) that you can use within the Excel application.

The **FORMAT CELLS** dialog is divided into tabs, each tab dealing with a format category.



**Picture 139** Format cells dialog

→ To access the format cells dialog:

#### Mouse

- i. Select the cells whose formats you want to change.
- ii. Click the **DIALOG BOX LAUNCHER**. From either the **FONT**, **ALIGNMENT** or **NUMBER** group on the **HOME** Tab.



**Picture 140** Dialog box launcher

#### OR

#### Keyboard

- i. Press **CTRL+[1]**

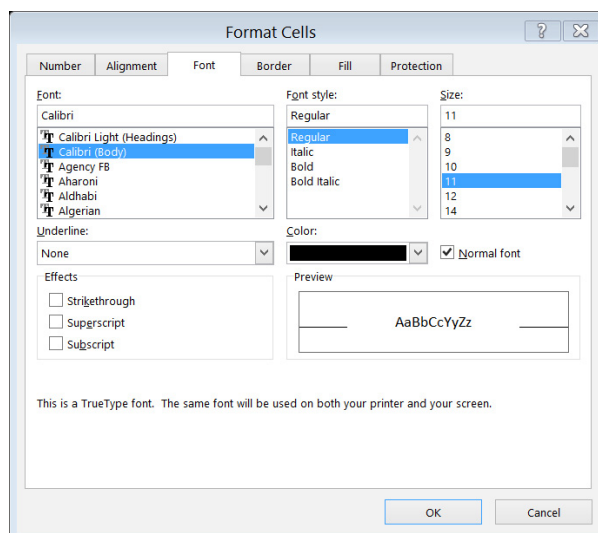
## Dialog box information

The dialog box as seen Above will appear. Depending on which dialog box launcher you clicked will depend on which tab will appear first of the six in the dialog box.

Once the dialog is on-screen, you can move between the format categories by clicking on the labelled tabs and change settings on each. Each tab has a Preview window to show you what the effects of your changes will look like should you choose to apply them. When all the formats have been set, click the **OK** button to close the dialog and apply the new formats.

### 7.3.1 FONT TAB

Most of the formats you find on the **FONT** tab of the **FORMAT CELLS** dialog can be applied directly from the groups on the home tab and need no further discussion. However, there are some extra Effects that can be applied should you need to do so.



**Picture 141** Dialog-font tab

→ To apply effects:

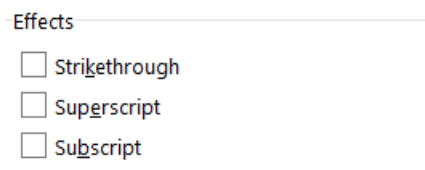
#### Mouse

- i. Select the cells you want to format.
- ii. Click the **DIALOG BOX LAUNCHER**. From either the **FONT**, **ALIGNMENT** or **NUMBER GROUP** on the **HOME** Tab.



**Picture 142** Dialog launcher

- iii. Click the **FONT** tab.
- iv. Check the **STRIKETHROUGH**, **SUPERSCRIPT** or **SUBSCRIPT BOXES**.



**Picture 143** Effect options

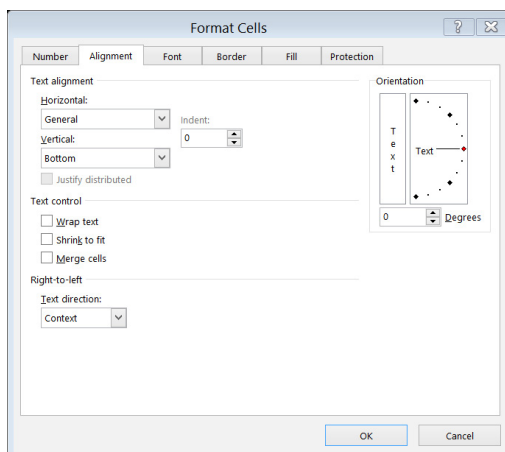
(the Preview window will show you what the formatting will look like on sample data).

- v. Click **OK** to close the dialog and apply the changes.

*The **SUPERSCRIPT** and **SUBSCRIPT** options are mutually exclusive.*

### 7.3.2 ALIGNMENT TAB

The settings on this tab give you lots of options for alignments which are not available from the **PARAGRAPH** group.



**Picture 144** Dialog-alignment tab

## Horizontal alignment

Most of the formats for horizontal alignment are available from the **PARAGRAPH** group., however there are some extras:

**JUSTIFY** – where you have several lines of data in a cell, you can ensure that the left and right edges of the data are straight.

**FILL** – use this to repeat the selected cell entries within their cells so that the entire cell from left to right is full.

**CENTRE ACROSS SELECTION** – Centres values in one cell across multiple columns without merging the cells.

☞ To change horizontal alignment:

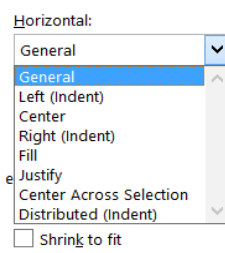
### Mouse

- i. Select the cells you want to format.
- ii. Click the **DIALOG BOX LAUNCHER**. From either the **FONT**, **ALIGNMENT** or **NUMBER GROUP** on the **HOME** tab.



**Picture 145** Dialog launcher

- iii. Click the **ALIGNMENT** tab.
- iv. Click the drop-down list arrow to the right of the **HORIZONTAL LIST** box.



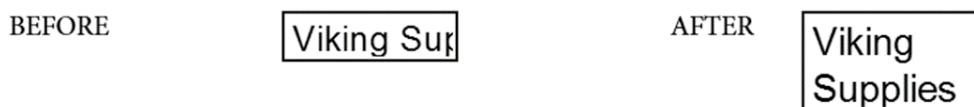
**Picture 146** Horizontal alignment options

- v. Choose the alignment by clicking on the required option from the list.
- vi. Choose **OK** to close the dialog and apply the changes.

## Text control

The text control options allow you to determine how the size of the data in the selected cells will affect columns and rows.

**Wrap text** – Where you have an entry that is too wide for the column, you can get Excel to wrap within a cell. Where a single line becomes multiple lines, Excel will automatically adjust the row height.



Picture 147 Wrap text

**Shrink to fit** – Reduces the apparent size of font characters so that all data in a selected cell fits within the column. The character size is adjusted automatically if you change the column width. The applied font size is not changed on printouts.



Picture 148 Shrink to fit

## Merge cells

Makes the selected cells into one cell.



*Where there are entries in all the selected cells, when you merge them together, Excel will warn you that it will only keep the entry in the top left cell in your selection.*

→ To change text control settings:

### Mouse

- i. Select the cells you want to format.
- ii. Click the **DIALOG BOX LAUNCHER**. From either the **FONT**, **ALIGNMENT** **OR** **NUMBER** group on the **HOME** Tab.



Picture 149 Dialog launcher

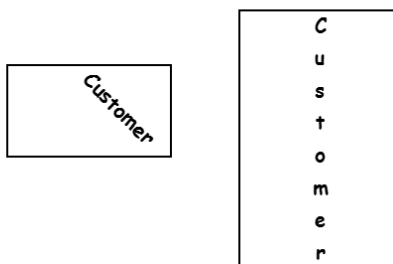
- iii. Click the **ALIGNMENT** tab.
- iv. Check the relevant options under the **TEXT CONTROL** heading to switch on the effect.
- v. Click **OK** to close the dialog and apply the new formats.

## Orientation

BEFORE

Customer

AFTER: Shown here are some examples of different orientations.



Picture 150 Orientations

You can display and print data in Excel oriented any way you choose.



# FACTCARDS

Are you working in academia, research or science? And have you ever thought about working and moving to the Netherlands?

  
**Arriving**  
33

  
**Living**  
50

  
**Studying**  
51

  
**Working**  
101

  
**Research**  
50

Factcards.nl offers all the **information** that you need if you wish to proceed your **career** in the **Netherlands**.

The information is ordered in the categories arriving, living, studying, working and research in the Netherlands and it is freely and easily accessible from your smartphone or desktop.

[VISIT FACTCARDS.NL](https://factcards.nl)

→ To change orientation:

**Mouse**

- i. Select the cells you want to format.
- ii. Click the **DIALOG BOX LAUNCHER**. From either the **FONT**, **ALIGNMENT** or **NUMBER** group on the **HOME** Tab.

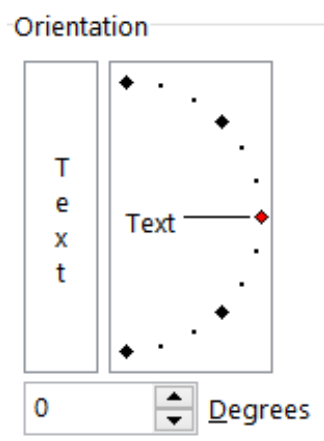


**Picture 151** Dialog launcher

- iii. Click the **ALIGNMENT** tab.
- iv. In the **ORIENTATION** section, to keep characters' horizontal but arrange them one underneath the other, click the picture that corresponds.

**OR**

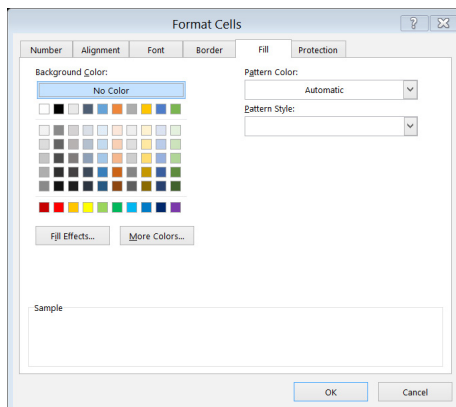
- i. Drag the red dot marker up or down to give a degree value of plus or minus 90° from the base position (horizontal).
- ii. Click **OK** to apply the new formats and close the dialog.



**Picture 152** Setting orientation

### 7.3.3 FILL TAB

You can use settings on the **FILL** tab to not only add background fill colours to cells, but apply patterns to them as well.



**Picture 153** Dialog-fill tab

→ To apply patterns to cells:

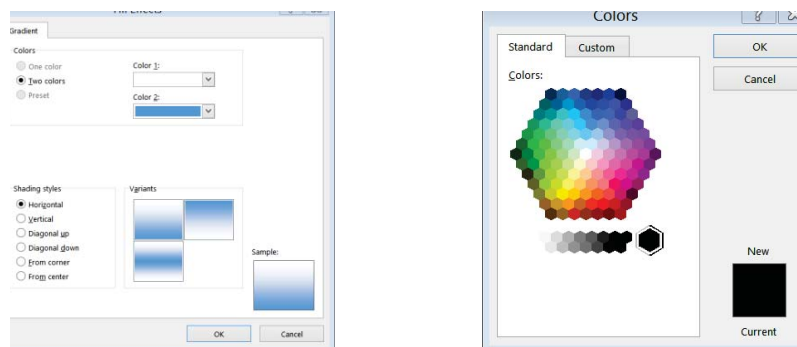
#### Mouse

- i. Select the cells you want to format.
- ii. Click the **DIALOG BOX LAUNCHER**. From either the **FONT**, **ALIGNMENT** or **NUMBER** group on the **HOME** Tab.



**Picture 154** Dialog launcher

- iii. Click the **FILL** tab. Click the drop-down list arrow on the right of the **PATTERN COLOUR** box to display a palette of colours for the pattern and choose a pattern colour.
- iv. Click the drop-down list arrow on the right of the **PATTERN STYLE** box to display a palette of pattern Styles.
- v. Choose the pattern that you want (i.e. lines, dots etc).
- vi. If you want to change what colour the lines/dots etc. that make up your pattern will be, access the **PATTERN COLOUR** palette once again and click a colour.
- vii. The colour palette on the left will give the cell a background colour.
- viii. Click the fill effects button to choose more advanced patterns and colouring. The **FILL EFFECTS** dialog will be launched (This will be discussed later. It is a dialog box that is used for filling colours and patterns of many types of objects.).



**Picture 155** Fill and colour options

- ix. Choose the more background colours the more colours button a separate dialog box will be launched with an extensive choice of colours.
- x. The Sample pane will display what the chosen formats will look like should you choose to apply them. Choose **OK** to close the dialog and apply your formats.

### 7.3.4 BORDERS TAB

You can change border line styles, colours and directions using the Borders tab.

→ To apply custom borders:

#### **Mouse**

- i. Select the cells you want to format.
- ii. Click the **DIALOG BOX LAUNCHER**. From either the **FONT**, **ALIGNMENT** or **NUMBER** group on the **HOME** Tab.

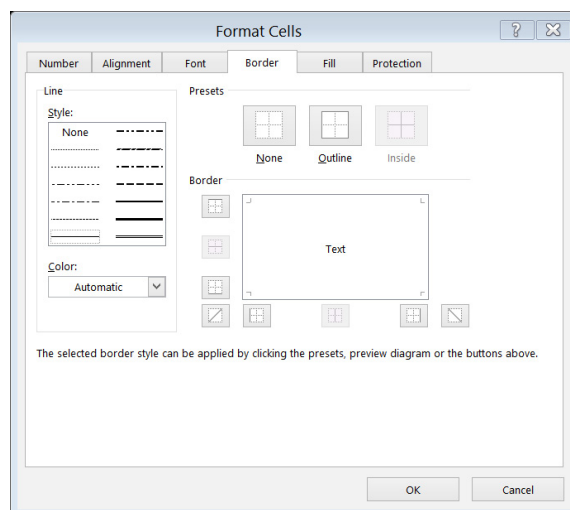


**Picture 156** Dialog launcher

- iii. Click the **BORDER** tab.
- iv. Choose the line style by clicking on the appropriate line from the **STYLE** palette.
- v. Choose the line colour by clicking on the drop-down arrow to the right of the **COLOUR** box to access a colour palette. Click the colour you want your border to be.
- vi. In the **BORDER** section, set which edges of your selection need bordering by clicking the button which shows the relevant edge.

**OR**

- i. If there are multiple edges that need borders, click the **PREVIEW** diagram (where the word “Text” sits) along the edges that you want the borders. Clicking the word “Text” in the preview diagram will give diagonal borders. One click will add a border; another will remove it.



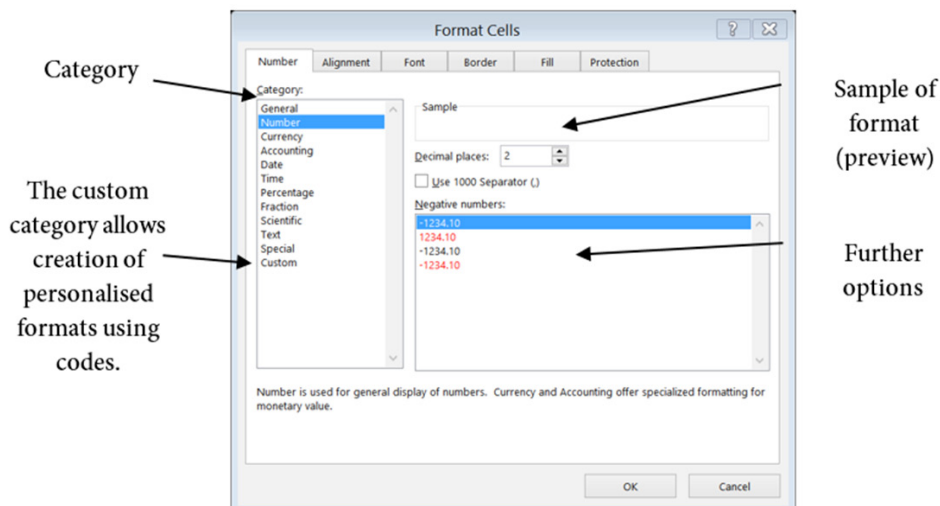
**Picture 157** Dialog-borders

**OR**

- i. Use the preset buttons to apply a borders see the effects in the preview.
- ii. Click the **OK** button to close the dialog and apply your changes.

### 7.3.5 NUMBER TAB

The Numbers tab gives you the ability to display data that Excel stores numerically in lots of different ways. The Formatting toolbar gives you buttons for applying only very few of the vast selection of number formats that Excel contains. The options that you see on the tab vary depending on which category of format you select. Generally speaking, Excel will display a sample based on the contents of the active cell and the default option within the category you selected. You can then pick from a list of format codes until the sample is displayed the way you want it.



**Picture 158** Dialog-number formats

→ To apply number formats:

#### Mouse

- i. Select the cells you want to format.
- ii. Click the **DIALOG BOX LAUNCHER**. From either the **FONT, ALIGNMENT OR NUMBER** group on the **HOME** Tab.



**Picture 159** Dialog launcher

- iii. Click the **NUMBER** tab.
- iv. Click the category of formatting your numeric or textual data should use from the **CATEGORY** list.
- v. Select the relevant options that appear until the **SAMPLE** data looks the way you want your numbers to look like
- vi. Click **OK** to close the dialog and apply the format.

### 7.3.6 CUSTOM NUMBER FORMATS

There are occasions when you want numeric data to display in a way that Excel does not have a format for. When this happens, you can create a custom format.

→ To create a custom number format:

### Mouse

- i. Select the cells you want to format.
- ii. Click the **DIALOG BOX LAUNCHER**. From either the **FONT, ALIGNMENT OR NUMBER** group on the **HOME** Tab.

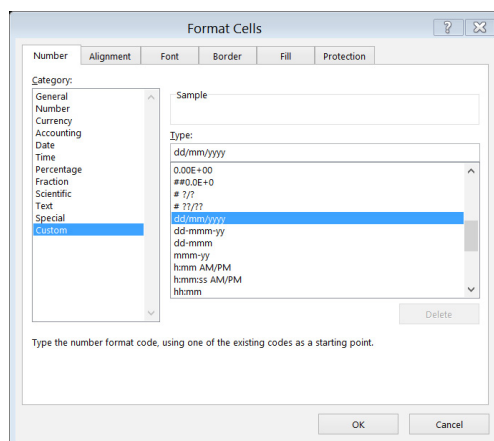


**Picture 160** Dialog launcher

- iii. Click the **NUMBER** tab. Then choose the **CUSTOM** category (the last option on the Category list). The dialog box will change to show you a list of Type format codes.
- iv. Scroll down the Type list until you find a code similar to the one you want to format your data with.

**E.G.** if you wanted to change a date currently displaying as 01/01/2000 to display as “January”, select the format code “mmmm-yy” to give you a base to alter – it would initially display your date as “Jan-2000”, but you can change it to what you want.

- v. Click in the **TYPE** box and amend the code to give the display you want (watch the sample as you do this). For the example mentioned above, you would type “mmmm”.
- vi. When you have the correct code, click **OK** to close the dialog and apply the custom number format.



**Picture 161** Custom number format



*Custom formats, once created, only exist in the file that they were set up in. If you want to use them in another workbook, you can copy the format across. You can copy formats only using Paste Special (see Section 5 for more information).*

### 7.3.7 PROTECTION TAB

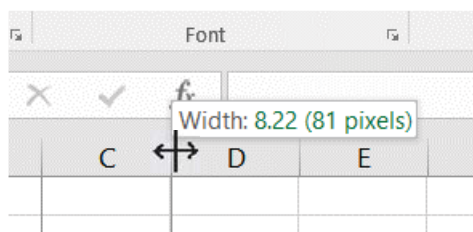
You can use the settings on this tab to control which cells are accessible when you protect a worksheet. This topic is dealt with in the section “Working with multiple sheets” later in this manual.

## 7.4 FORMATTING COLUMNS AND ROWS

Excel has some formats that apply themselves to whole columns and rows. Changing widths and heights, hiding, inserting and deleting rows and columns are all operations that you might want to carry out.

### 7.4.1 COLUMN WIDTH

You can alter the width of a single column, or by selecting the columns whose width you want to change, you can make all columns in the selection the same width. With a single column, Excel changes the width of the column to the left of your mouse pointer.



**Picture 162** Adjusting columns

→ To change column width:

#### **Mouse**

- i. Move the mouse over the intersection between the column letters on the right-hand side of the column you want to change. The mouse pointer will display the shape that you need for changing column width.
- ii. Click and drag to the right or left to widen or narrow the column – a guide will draw itself down into the worksheet to preview where the column edge will jump to, and Excel will display the actual width of the column in points in a tip box that appears.
- iii. Release the mouse when the desired width has been reached.

→ To change width of multiple columns:

**Mouse**

- i. Select the columns whose width you want to change by clicking and dragging over the column letters with the selection pointer (white plus).
- ii. Position the mouse over one of the intersections between the column letters in your selection. The pointer will display the shape needed for altering column widths.



**Picture 163** Adjustment cursor

- iii. Click and drag to the right or left to widen or narrow the column – a guide will draw itself down into the worksheet to preview where the column edge will jump to, and Excel will display the actual width of the column in points in a tip box that appears.
- iv. Release the mouse when the desired width is reached. All the columns in the selection will jump to the same width as the one you changed.

### **Autofit**

If you're not sure what the optimum width for a column would be, you can get Excel to AutoFit it for you. AutoFit looks at all the data in a column and fits the column width around the widest entry – you may find the column gets wider or narrower when you AutoFit.

→ To autofit a column:

**Mouse**

- i. Move the mouse over the intersection between the column letters on the right-hand side of the column you want to change. The mouse pointer will display the shape that you need for changing column width.



**Picture 164** Adjustment cursor

- ii. Double-click the intersection.
- iii. The column will automatically adjust to the widest value in that column.

➔ To autofit multiple columns:

### Mouse

- i. Select the columns you want to AutoFit by clicking and dragging over the column letters with the selection pointer (white plus).
- ii. Position the mouse over one of the intersections between the column letters in your selection. The pointer will display the shape needed for altering column widths.
- iii. Double-click to AutoFit all selected columns.

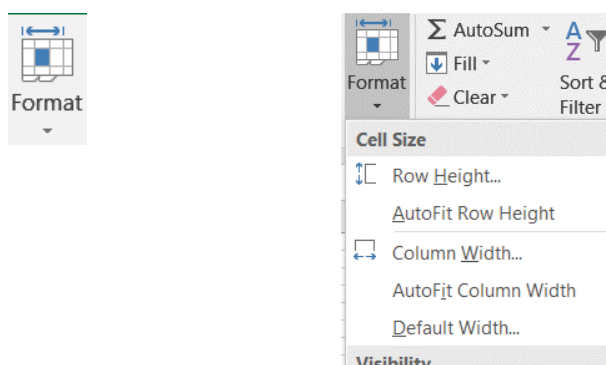
## Default width

If you need to change Excel's default width, you can choose an option from the menu to do so and to set a new default for the whole sheet.

➔ To change the default column width/row height:

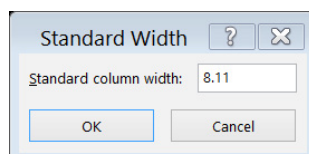
### Mouse

- i. Click in any column.
- ii. Choose **FORMAT** from the **CELLS** group on the **HOME** Tab, and click on **DEFAULT WIDTH**.



**Picture 165** Format cells menu

iii. A dialog box appears. Enter a size and click **OK**.



**Picture 166** Standard width dialog

iv. All columns on that sheet will change to the new size.

## 7.4.2 ROW HEIGHT

Excel automatically changes row height when you alter the font and point size of the cell entries within it. However, you can alter the height of a single row manually, or by selecting the rows whose height you want to change, you can make all rows in the selection the same height. With a single row, Excel changes the height of the row above your mouse pointer.

→ To change row height:

### Mouse

- i. Move the mouse over the intersection between the row numbers below the row you want to change. The mouse pointer will display the shape that you need for changing row height.
- ii. Click and drag up or down to increase or decrease row height – a guide will draw itself across into the worksheet to preview where the row edge will jump to, and Excel will display the actual height of the row in points in a tip box that appears.
- iii. Release the mouse when the desired height has been reached.

### OR

- i. Select the rows you wish to change the height of
- ii. Choose **FORMAT** from the **CELLS** group

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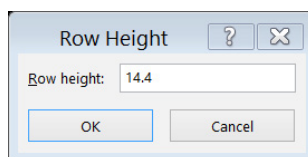
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iii. Choose **ROW HEIGHT** a dialog will appear



**Picture 167** Row height dialog

iv. Enter a value and click **OK**



Any column that has previously had its width changed will be unaffected by this those that have been changed will have to have their width changed manually if you wish all columns to be same width. Because other formats can affect the widths your columns need to be, it is often a good idea to leave changing column widths until last, this will avoid you repeatedly having to change the widths as you apply other formats. If the column of a cell is too narrow to display the numbers, Excel displays the cell with '####'. If you hover over the cell a tool tip will appear displaying the information within the cell.

→ To change height of multiple rows:

#### Mouse

- i. Select the rows whose height you want to change by clicking and dragging over the row numbers with the selection pointer (white plus).
- ii. Position the mouse over one of the intersections between the row numbers in your selection. The pointer will display the shape needed for altering row heights.
- iii. Click and drag up or down to increase or decrease row height – a guide will draw itself across into the worksheet to preview where the row edge will jump to, and Excel will display the actual height of the rows in points in a tip box that appears.

4	Long	110	50
5	Olson	200	50
6	Stark	300	180
7	Unger	220	195
8	Kraft	305.5	195
9	Oakes	219	147
10	Rider	230	104

**Picture 168** selection of multiple rows

iv. Release the mouse when the desired height is reached. All the rows in the selection will jump to the same height as the one you changed.

## Autofit

If you're not sure what the optimum height for a row would be, you can get Excel to AutoFit it for you. AutoFit looks at all the data in a row and fits the row height around the tallest entry – you may find the row gets taller or shorter when you AutoFit.

→ To autofit a row:

### Mouse

- i. Move the mouse over the intersection between the row numbers below the row you want to change. The mouse pointer will display the shape that you need for changing column width.
- ii. Double-click the intersection.

→ To autofit multiple rows:

### Mouse

- i. Select the rows you want to AutoFit by clicking and dragging over the row numbers with the selection pointer (white plus).
- ii. Position the mouse over one of the intersections between the row numbers in your selection. The pointer will display the shape needed for altering row heights. Then Double-click to AutoFit all selected rows.

## 7.4.3 HIDE COLUMNS, ROWS AND SHEETS

You can choose not to display certain rows and columns on your screen. Hiding them also prevents them from printing.

→ To hide columns:

### Mouse

- i. Select the column you want to hide by clicking on the column letter, or if you want to hide multiple columns, highlight them.
- ii. Click the right mouse button anywhere over the selection to display the shortcut menu. Then choose Hide columns.

### OR

- i. Click on format command in the cell group on the home Tab
- ii. Move mouse cursor to hide & Unhide Click on hide columns

### OR

### Keyboard

- i. Repeat step 1 above. Press CTRL+[0]

→ To hide rows:

### Mouse

- i. Select the row you want to hide by clicking on the row number, or if you want to hide multiple rows, highlight them.
- ii. Click the right mouse button anywhere over the selection to display the shortcut menu. Then Choose **HIDE**.

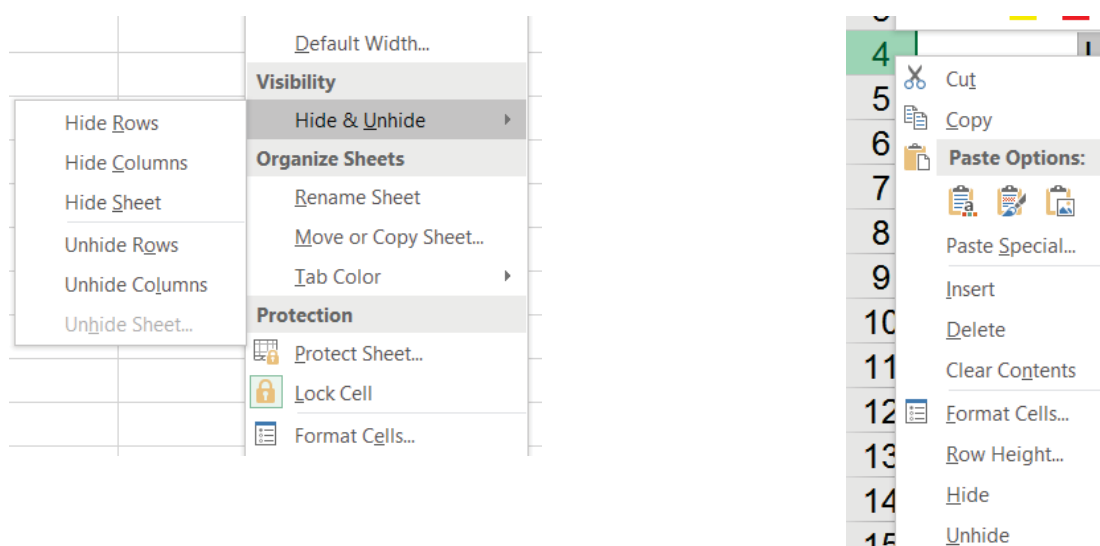
### OR

- i. Select rows to be hidden Click on **FORMAT** command in the **CELL** group on the **HOME** Tab.
- ii. Move mouse cursor to **HIDE & UNHIDE**
- iii. Click on **HIDE ROWS**

### OR

### Keyboard

- i. Repeat step 1 above.
- ii. Press CTRL+[0]



**Picture 169** Hide and unhide

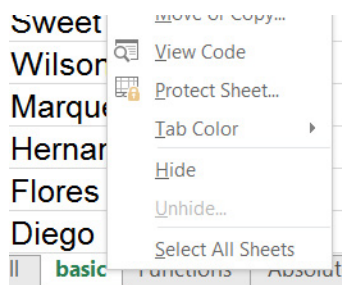
→ To hide sheets

### Mouse

- i. Select sheet or sheets to be hidden
- ii. Click on **FORMAT** command in the **CELL** group on the **HOME** Tab
- iii. Move mouse cursor to **HIDE & UNHIDE**
- iv. Click on **HIDE SHEET**

**OR**

- i. Select sheets to be hidden
- ii. Right click on a selected sheet tab



**Picture 170** Sheet right click menu

- iii. Click **HIDE**

⇨ To unhide columns and rows or sheets:

**Mouse**

- i. Select the columns or rows either side of the hidden ones by dragging over the column letters or row numbers with the selection pointer.
- ii. Position the mouse over the row or column intersection between the selected rows or columns then Double-click.

**Keyboard**

- i. Repeat step 1 above. Then Press **CTRL+SHIFT+[+]**.

**OR****Mouse**

- i. Click on **FORMAT** command in the **CELL** group on the **HOME** Tab
- ii. Move mouse cursor to **HIDE & UNHIDE** then Click on **UNHIDE** sheet, column or row

## 7.5 INSERT AND DELETE CELLS, ROWS, COLUMNS OR SHEETS

This was covered briefly earlier in the Manual; this section covers all aspects in depth.

You can add new cells into a worksheet if you need to make space to add new entries in. Excel also gives you tools for adding entire rows and columns. If you add cells, Excel will ask you how the existing cells should be rearranged to accommodate the new ones.

**Before...**

1 M	2 M	3 M
1 M	2 M	3 M

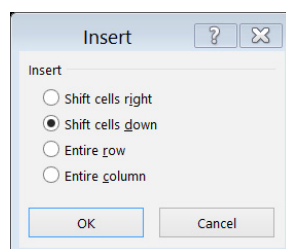
**Picture 171** Prior to insertion of cells

### 7.5.1 ADD CELLS

→ To insert a cell:

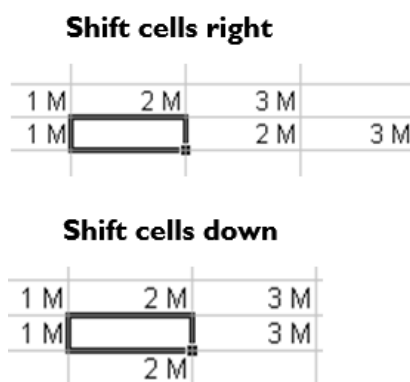
#### Mouse

- i. Select the cell below or to the right of where you want the new one.
- ii. Click the right mouse button to access the shortcut menu. OR the **INSERT** command from the **CELLS** group on the **HOME** tab.



**Picture 172** Insert cells dialog

- iii. Choose **INSERT**. The following dialog box will appear:
- iv. Choose **SHIFT CELLS RIGHT** to insert a new cell to the left of the selected one, or **SHIFT CELLS DOWN** to insert a new cell above the selected one.



**Picture 173** Insert cells after

**OR**

#### Keyboard

- i. Repeat step 1 above. Press **CTRL+SHIFT+[+]**

→ To insert multiple cells:

#### Mouse

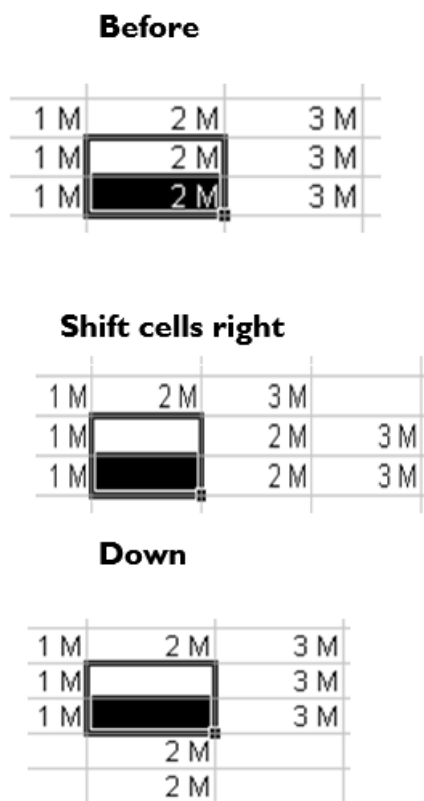
- i. Select the amount of cells corresponding to the number you want to insert below or to the right of where you want the new ones.
- ii. Click the right mouse button to access the shortcut menu.

- iii. Choose **INSERT** to access the dialog.
- iv. Choose **SHIFT CELLS RIGHT** to insert new cells to the left of the selected one, or **SHIFT CELLS DOWN** to insert new cells above the selected one.

**OR**

**Keyboard**

- I. Repeat step 1 above. Press **CTRL+SHIFT+[+]**.



**Picture 174** Insert multiple cells

→ To insert entire rows:

**Mouse**

- i. Select the row below where you want the new one by clicking its row number, or if you are inserting multiple rows, highlight them.
- ii. Click the right mouse button anywhere over the selection to access the shortcut menu.
- iii. Choose **INSERT**. Excel adds the number of selected rows above the first row in your selection.

**OR**

**Keyboard**

- I. Repeat step 1 above. Then Press **CTRL+SHIFT+[+]**.

→ To insert entire columns:

**Mouse**

- i. Select the column to the right of where you want the new one by clicking its column letter, or if you are inserting multiple columns, highlight them.
- ii. Click the right mouse button anywhere over the selection to access the shortcut menu.
- iii. Choose **INSERT**. Excel adds the number of selected columns to the left of the first column in your selection.

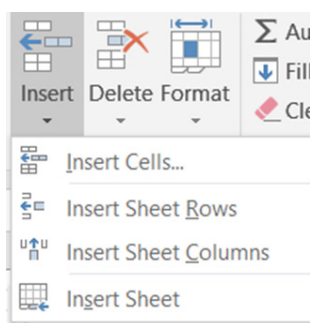
**OR**

**Keyboard**

- i. Repeat step 1 above.
- ii. Press CTRL+SHIFT+[+].

**OR**

- i. Select the cells rows or columns as mentioned previously and use the **INSERT** command from the **CELLS** group on the **HOME** tab.



**Picture 175** Insert menu

- ii. Insert the appropriate selection.

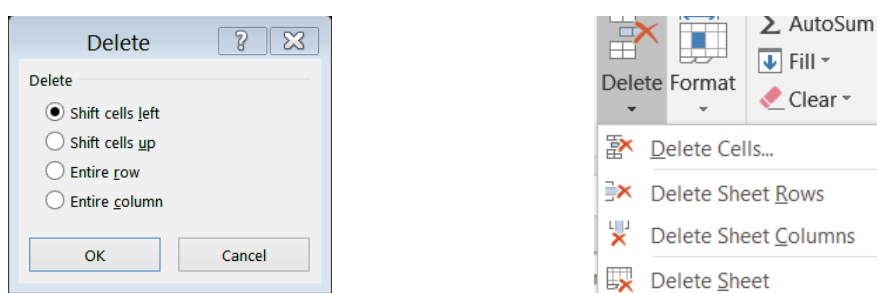
## 7.5.2 DELETE CELLS

In Excel 2016 we can delete straight from the home Tab by clicking on the **DELETE** button to show us a menu to delete any part of the workbook, **sheet**, **row**, **column** or **cell**.

→ To delete cells:

### Mouse

- i. Select the cells you want to delete.
- ii. Click the right mouse button to access the shortcut menu or use the **DELETE** button from the **CELLS** group.
- iii. Choose **DELETE CELLS**. The following dialog box will appear:



**Picture 176** Delete menu and dialog

- iv. Choose **SHIFT CELLS LEFT** to close the gap left by the deleted cells with cell entries to the left.

### OR

- i. Choose **SHIFT CELLS UP** to close the gap left by the deleted cells with cell entries above.

### OR

### Keyboard

- i. Select the cells to delete.
- ii. Press **CTRL+[-]**.
- iii. Choose **SHIFT CELLS LEFT** to close the gap left by the deleted cells with cell entries to the left.

### OR

- i. Choose **SHIFT CELLS UP** to close the gap left by the deleted cells with cell entries above.

→ To delete entire rows or columns:

#### Mouse

- i. Select the row or column you want to delete by clicking its row number or column letter or, if you are deleting multiple columns or rows, highlight them.
- ii. Click the right mouse button to access the shortcut menu or use the **DELETE** button from the **CELLS** group.
- iii. Choose **DELETE SHEET ROWS** or **DELETE SHEET COLUMNS**.

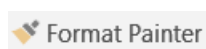
#### OR

#### Keyboard

- i. Repeat step 1 above.
- ii. Press **CTRL+SHIFT+[-]**.

### 7.5.3 FORMAT PAINTER

The Format Painter is a tool that you can use to copy all formats from one area of the worksheet to another. This is particularly useful when you have spent time formatting one group of cells and you decide that another group of cells should have the same formats – rather than reapplying the formats again manually, one by one, you can paint them on to the new cells with the Format Painter.



**Picture 177** Format painter button

→ To paint formats:

#### Mouse

- i. Select the cell that has the formatting you want to use. Click the **FORMAT PAINTER** button from the **HOME** tab in the **CLIPBOARD** group. Your mouse pointer will change to display a paintbrush next to the selection pointer (white plus).
- ii. Select all the cells you want to apply the formats to by dragging over them. As soon as you release the mouse, the formats will appear.
- iii. If you wish to use the same format more than once double click the **FORMAT PAINTER** button this will hold the function until you click on the **FORMAT PAINTER** to turn it off. Apply the format as many times as you wish.




*If you want to keep cell contents but remove all the formatting from those cells, click on the eraser on the home Tab and clear formats*

## 7.5.4 SHORTCUT KEYS FOR FORMATTING

Excel uses shortcut keys that you can use for formatting data contained below.


To	Press
Display the Cells command (Format menu)	CTRL+[1]
Apply the General number format	CTRL+SHIFT+[~]
Apply the Currency format with two decimal places (negative numbers appear in parentheses)	CTRL+SHIFT+[\$]
Apply the Percentage format with no decimal places	CTRL+SHIFT+[%]
Apply the Exponential number format with two decimal places	CTRL+SHIFT+[^]
Apply the Date format with the day, month, and year	CTRL+SHIFT+[#]
Apply the Time format with the hour and minute, and indicate A.M. or P.M.	CTRL+SHIFT+[@]
Apply the Number format with two decimal places, 1000 separator, and – for negative values	CTRL+SHIFT+[!]
Apply the outline border	CTRL+SHIFT+[&]
Remove all borders	CTRL+SHIFT+[_]
Apply or remove bold formatting	CTRL+[B]
Apply or remove italic formatting	CTRL+[I]
Apply or remove an underline	CTRL+[U]
Apply or remove strikethrough formatting	CTRL+[5]
Hide rows	CTRL+[9]
Unhide rows	CTRL+SHIFT+[9]
Hide columns	CTRL+[0]
Unhide columns	CTRL+SHIFT+[+]

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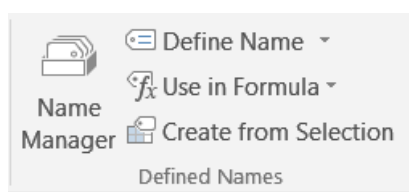
redefining / standards 

# 8 NAMES

**By the end of this section you will be able to:**

-  Name cells and ranges by three methods
-  Edit names
-  Manage names
-  Sort and filter names
-  Use names in functions

## 8.1 NAMING CELLS AND RANGES











**Picture 178** Defined names group

When entering formulae or referring to any area in a workbook, it is usual to refer to a 'range'. For example, B6 is a range reference; B6:B10 is also a range reference. One problem with this sort of reference is that it is not very meaningful and therefore easily forgettable. If you want to refer to a range several times in formulae or functions, you may find it necessary to write it down, or select it, which often means wasting time scrolling around the workbook. Instead, Excel offers the chance to name ranges in a workbook, and to use these names to select cells, refer to them in formulae or use them in Database, Chart or Macro commands.

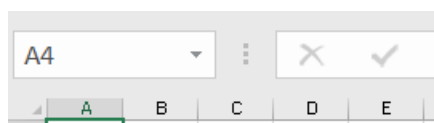
There are three ways to create names or define them the management of names will be found on the formulas Tab in the defined names group.

### 8.1.1 RULES WHEN NAMING CELLS

-  Names are unique within a workbook and the names that you choose to use must adhere to certain rules.
-  The first character of a name must be a letter or an underscore character. Remaining characters in the name can be letters, numbers, full stops, and underscore characters.
-  Names cannot be the same as a cell reference, such as Z\$100 or R1C1.
-  Spaces are not allowed. Underscore characters and full stops may be used as word separators – for example, First.Quarter or Sales\_Tax.
-  These Names may also be used in calculations. (covered later)
-  A name can contain up to 255 characters.
-  Names can contain uppercase and lowercase letters. Microsoft Excel does not distinguish between uppercase and lowercase characters in names. For example, if you have created the name Sales and then create another name called SALES in the same workbook, the second name will replace the first one.
-  Names can refer to external cells or ranges (in other workbooks) and can even be used when those workbooks are not open, although when the references are checked by excel on update errors will occur if they are not valid.

## 8.2 NAME BOX

The Name box is situated on the left-hand side of the Formula bar. You can use the Name box to set up names and move to them.



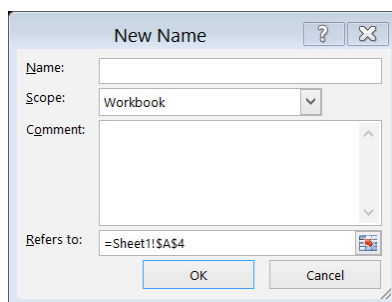
**Picture 179** Name box

→ To define a name

### 8.2.1 METHOD 1 (DEFINE)

#### Mouse

- i. Select the cell or cells you wish to name.
- ii. Click the **DEFINE NAME** from the **DEFINED NAMES GROUP** on the **FORMULAS** Tab. A dialog is launched.
- iii. In the **NEW NAME** dialog box, in the **NAME** box, type the name that you want to use for your reference. Names can be up to 255 characters in length.



**Picture 180** New name dialog



- iv. To specify the scope of the name, in the **SCOPE** drop-down list box, select **WORKBOOK**, or the name of a worksheet in the workbook.
- v. You may enter a descriptive comment up to 255 characters. This is optional (see note).
- vi. The cells referred to when creating a name are by default absolute which means that when used in calculations they can be copied without the cell reference changing.
- vii. If you had selected cells or ranges previous to opening the **NEW NAME** dialog then the cells or ranges selected will be displayed in the refers to box.
- viii. If you had not previously selected cells or ranges: Then In the Refers to box Enter a Cell reference. The current selection is entered by default. To enter other cell references as an argument, click **COLLAPSE DIALOG** (which temporarily hides the dialog box), select the cells on the worksheet, and then press **EXPAND DIALOG**.



**Picture 181** Collapse and expand dialog buttons

- ix. If using a constant for a value Type an = (equal sign), followed by the constant value. E.G. 10%.

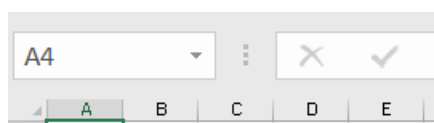
- x. If using a formula for the value Type an = (equal sign) followed by the formula. To finish and return to the worksheet, click **OK**.

-  *If you save the workbook to Microsoft Office SharePoint Server 2016 Excel Services, and you specify one or more parameters, the comment is used as a tooltip in the Parameters toolpane.*
-  *To make the NEW NAME dialog box wider or longer, click and drag the grip handle at the bottom.*

### 8.2.2 METHOD 2 (DIRECT)

#### Mouse

- i. Select the cell, range of cells, or nonadjacent selections (nonadjacent selection: A selection of two or more cells or ranges that don't touch each other. When plotting nonadjacent selections in a chart, make sure that the combined selections form a rectangular shape.) that you want to name.
- ii. Click in the **NAME BOX** at the left end of the formula bar.



Picture 182 Name box

- iii. Type the name that you want to use to refer to your selection. Names can be up to 255 characters in length and press **ENTER**.

-  *You cannot name a cell while you are changing the contents of the cell.*

### 8.2.3 METHOD 3 (BY SELECTION)

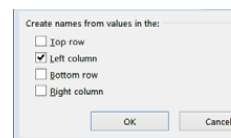
Alternatively, cells can be named using text already on the spreadsheet. For instance, in a spreadsheet, column or row headings may have already been entered in the cells. B6 to B10 for example shows the salesmen's names and their respective sales quarterly this text can be used to name the cell ranges for their sales.

➔ To create names automatically:

### Mouse

- i. Select the cells you wish to define names for, include the data and the data labels in either the first column or top row.

Long	110	50	140
Olson	200	50	240
Stark	300	180	295
Unger	220	195	185
Kraft	305.5	195	203
Olson	210	117	136.7



**Picture 183** Create names by selection

- ii. Click the **CREATE FROM SELECTION** button on the in the **DEFINED NAMES GROUP** on the **FORMULAS** Tab, a Dialog will open.
- iii. Select where your labels are. They **must be part of the selection** can be in the top row or left column.
- iv. Choose **OK** and, all the salesmen's names will appear in the **NAME BOX** to the left of the formula bar and selecting their name will select their individual sales figures.



*This procedure works equally well with text entered to the right of a row of data. Or labels in the bottom of a column but **THEY MUST BE PART OF THE SELECTION.***

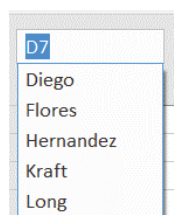
## 8.2.4 SELECTING NAMES (NAVIGATION)

Names have great uses as a navigation tool within a document and are very easy to use. You may have used large portions of your spreadsheet to store data and with over 1,000,000 rows and over 16,000 columns it would be tedious or near impossible to move around to known areas without names.

➔ To select names and navigate

### Mouse

- i. Click on drop down arrow to right of name box and click on the name you would like to navigate to.
- ii. You will now be at that location with the named cells selected.



**Picture 184** Using name box for navigation

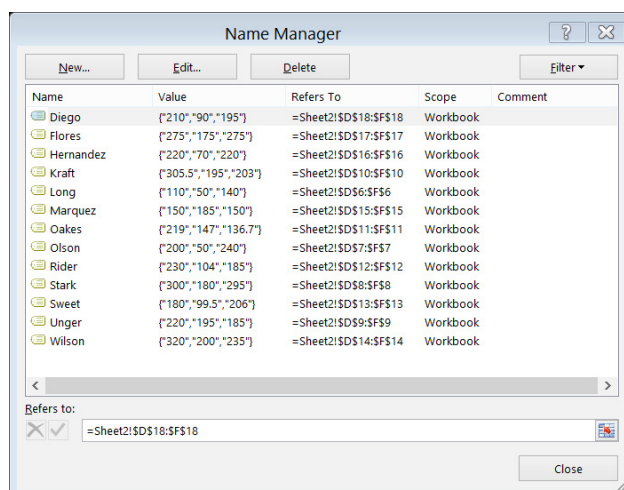
## 8.2.5 MANAGE NAMES BY USING THE NAME MANAGER

Use the **NAME MANAGER** Dialog box to work with all of the defined names and table names in the workbook. For example, you may want to find names with errors, confirm the value and reference of a name, view or edit descriptive comments, or determine the scope. You can also sort and filter the list of names, and easily add, change, or delete names from one location.

→ To use name manager

### Mouse

- i. Click **NAME MANAGER** on the **FORMULA** tab, in the **DEFINED NAMES GROUP**.
- ii. The **NAME MANAGER** Dialog box displays the following information about each name in a list box:



A defined name is indicated by a defined name icon.



**Picture 185** Icon for defined name

A table name is indicated by a table name icon.



**Picture 186** Icon for a table name

You cannot use the **NAME MANAGER** Dialog box while you are changing the contents of the cell.



*The **NAME MANAGER** Dialog box does not display names defined in Visual Basic for Applications (VBA), or hidden names (the visible property of the name is set to "False").*

### Resize columns in name manager

To automatically size the column to fit the largest value in that column, double-click the right side of the column header or drag to left or right to adjust width.

### Sort names

To sort the list of names in ascending or descending order, alternately click the column header.

### Filter names

Use the commands in the Filter drop-down list to quickly display a subset of names. Selecting each command toggles the filter operation on or off, which makes it easy to combine or remove different filter operations to get the results that you want.

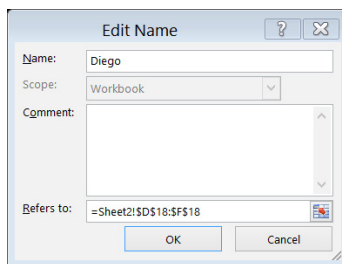
To filter the list of names, do one or more of the following:

Select:	To:
Names Scoped To Worksheet	Display only those names that are local to a worksheet.
Names Scoped To Workbook	Display only those names that are global to a workbook.
Names with Errors	Display only those names with values that contain errors (such as #REF, #VALUE, #NAME, and so on.)
Names without Errors	Display only those names with values that do not contain errors.
Defined Names	Display only names defined by you or by Excel, such as a print area.
Table Names	Display only table names.

### ☛ To change a name

#### Mouse

- i. On the **FORMULAS** tab, in the **DEFINED NAMES** group, click **NAME MANAGER**.
- ii. In the **NAME MANAGER** Dialog box, click the name that you want to change, and then click **EDIT**. You can also double-click the name.
- iii. The **EDIT NAME** dialog box is displayed.



**Picture 187** Edit name dialog

- iv. Type the new name for the reference in the **NAME** box.
  - v. Change the reference in the Refers to box, if necessary and click **OK**.
- OR**
- i. In the **NAME MANAGER** Dialog box, in the **REFERS TO** box, change the cell, formula or constant represented by the name if necessary
  - ii. To cancel unwanted or accidental changes, click **CANCEL**, or press **ESC**.
  - iii. To save changes, click the tick, or press **ENTER**. (Enter saves the changes and closes name manager.



*If you change a defined name or table name, all uses of that name in the workbook are also changed. The Close button only closes the Name MANAGER Dialog box. It is not required to commit changes that have already been made.*

#### → Delete one or more names

##### **Mouse**

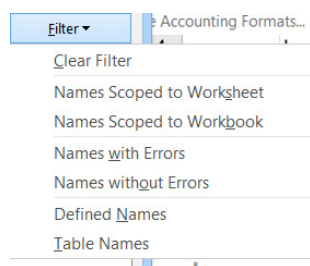
- i. On the **FORMULAS** tab, in the **DEFINED NAMES** group, click **NAME MANAGER**.
- ii. In the **NAME MANAGER** Dialog box, click the name that you want to change.
- iii. To select a name, click it. To select more than one name in a contiguous group, click and drag the names, or press **SHIFT+[CLICK]** for each name in the group.
- iv. To select more than one name in a non-contiguous group, press **CTRL+[CLICK]** for each name in the group.
- v. Click **DELETE**. You can also press the **DELETE** key.
- vi. Click **OK** to confirm the deletion.



*The CLOSE button only closes the NAME MANAGER Dialog box. It is not required to commit changes that have already been made.*

### 8.2.6 FILTERING OUT NEEDED NAMED RANGES

Using the **FILTER** button allows some basic filtering of the names within your workbook.



**Picture 188** Filter menu In name manager

→ To apply a filter

#### Mouse

- i. Open the **NAME MANAGER**
- ii. Click on the **FILTER** button
- iii. Make a selection
- iv. Click on the **CLEAR FILTER** button to remove any previous filter applied to your Names



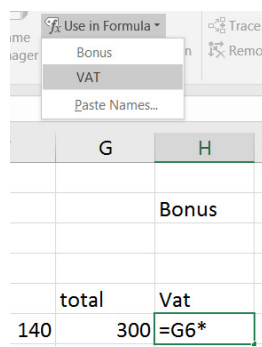
*Don't forget to clear the filter after you have what you want.*



*Scoping is a function where the names may be used on a specific sheet or throughout the whole workbook. When filtering the names you have it may be useful to set a scope if you have many names on many sheets.*

### 8.2.7 NAMES IN FUNCTIONS/FORMULA

Names in functions can be very useful because it saves you having to go and select large amounts of cells or ranges when constructing a function, you can just refer to the name and even then remembering the name is not necessary it can be selected and used easily within your function or formula.



**Picture 189** Using name from USE IN FORMULA menu

→ To use names in functions

### Mouse/Keyboard

- i. Go to cell you wish to create formula in and type in the function you wish to start with **E.G.=G6\***.
- ii. On the **FORMULAS** tab, in the **DEFINED NAMES** group, click **USE IN FORMULA**.
- iii. Select which name you wish to use and click on it.
- iv. The function will now contain the name and will calculate using the range, ranges, cell or constant it refers to.
- v. Press **ENTER**. Or click on the green tick on the left of the **FORMULA BAR**.



*You may wish to use other methods to create your function or formulae only one method is mentioned here but it is the same method for using the named ranges.*

## TURN TO THE EXPERTS FOR SUBSCRIPTION CONSULTANCY

Subscribe is one of the leading companies in Europe when it comes to innovation and business development within subscription businesses.

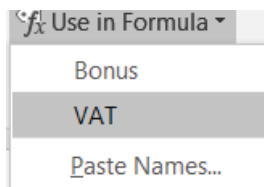
We innovate new subscription business models or improve existing ones. We do business reviews of existing subscription businesses and we develop acquisition and retention strategies.

Learn more at [linkedin.com/company/subscribe](https://www.linkedin.com/company/subscribe) or contact Managing Director Morten Suhr Hansen at [mha@subscribe.dk](mailto:mha@subscribe.dk)

**SUBSCRIBE** - to the future

### 8.2.8 PASTE LIST OF NAMES

You can use the **PASTE NAMES** dialog to give you an index of all the names in your workbook. Excel will place this on the workbook wherever the active cell is positioned.



**Picture 190** USE IN FORMULA menu PASTE NAMES

→ To paste a list of names:

#### Mouse

- i. On the **FORMULAS** tab, in the **DEFINED NAMES** group, click **USE IN FORMULA**.
- ii. Click on **PASTE NAMES** a dialog box is launched.
- iii. Select an individual name and click on **OK** for an individual paste.

#### OR

- i. Click on **PASTE LIST** to have all names pasted into worksheet with their cell references.

Bonus	=Sheet2!\$I\$2
VAT	=Sheet2!\$E\$2

**Picture 191** Pasted names

#### Keyboard

- i. Select a blank cell where you want the list of names to begin.
- ii. Press **[F3]** to access the **PASTE NAMES** dialog.
- iii. Press **TAB** to jump to the **CANCEL** button, then **TAB** again to select the **PASTE LIST** button. The list will appear on the worksheet.



*When you choose a start cell for your pasted list, make sure there is not any data immediately below as it will get cleared when you paste the list.*

### 8.2.9 INTERSECTING NAMES

Where you have named both columns of cells and rows of cells in a table, all the values will belong to two ranges. You can use both names in a formula to retrieve the value where they intersect.

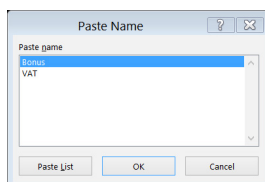
Product	Target	Actual	Result	
Red books	250	295	118.00%	
Green books	300	208	69.33%	=Red_books Target
Blue books	220	206	93.64%	
Black books	120	155	129.17%	
<b>Total</b>	<b>890</b>	<b>864</b>	<b>97.08%</b>	

**Picture 192** Using intersecting names

→ To display a value from intersecting range names:

#### Keyboard

- i. Select the cell where you want to display the value.
- ii. Type an equals sign (=) to begin the formula then press [F3] to access the PASTE NAMES dialog, select the first name and press ENTER.



**Picture 193** Paste names dialog

- iii. Type a space. Press [F3] again and select the second name. Press ENTER. Press ENTER again to complete the formula.

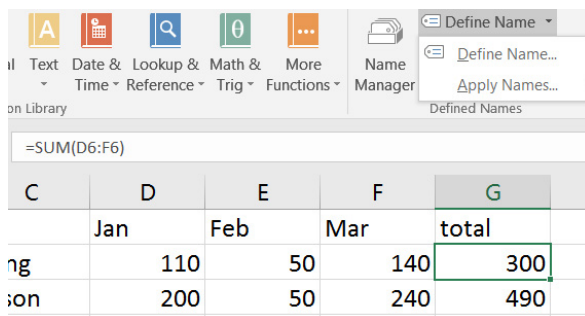


*E.G.: To retrieve the red books target figure from the data shown in the diagram above, your formula would read: =RED\_BOOKS TARGET.*

### 8.2.10 APPLYING NAMES

When a cell has already been referred to in a formula, and is then named, the name will not automatically appear in the formula. Similarly, if a cell is referred to by its address rather than its name, the name will not automatically appear. To replace all references with names, the names must be applied.

Suppose a formula is written to sum cells D6:F6 in the cell G6  
=SUM(D6:F6)



Picture 194 Formula prior to applying names

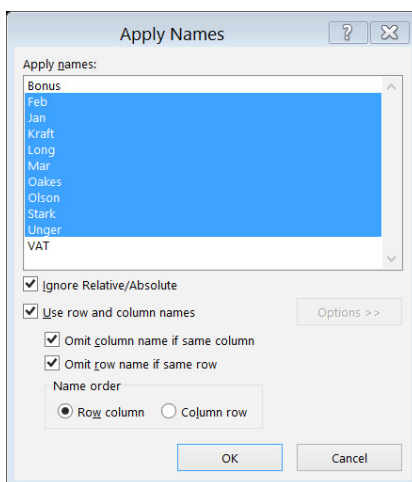
The formula makes no reference to the range “Long”, even though this range has been named.

➔ To replace cell references with range names:

**Mouse**

- i. Click the drop down arrow next to **DEFINE NAME** button on the in the **DEFINED NAMES** group on the **FORMULAS** Tab;
- ii. Select **APPLY NAMES**.
- iii. Click on the **OPTIONS** button for further options in case you have named columns or rows
- iv. To Select other names at the same time, use **CTRL** and click on the required names or **SHIFT** and select a whole section of names.
- v. Click on the name you want, and choose **OK**.
- vi. The formulae will now show the range names instead of the cell references.













*The **APPLY NAMES** command works throughout the spreadsheet, so wherever the cell reference to the name you chose appeared, the name is now in its place.*



Picture 195 Apply names dialog

# 9 WORKING WITH SHEETS

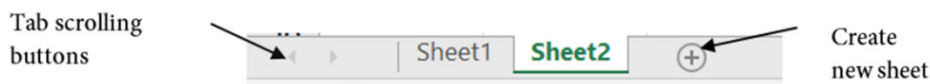
**By the end of this section you will be able to:**

-  Rename worksheets
-  Create worksheets
-  Copy and move worksheets
-  Create formulae and functions across worksheets
-  Group worksheets
-  Protect worksheets
-  Work with document windows
-  Split screen
-  Freeze panes
-  Use zoom controls
-  Use name box to navigate
-  Colour tabs

## 9.1 WORKING WITH INDIVIDUAL WORKSHEETS

When you create a new workbook, Excel gives you multiple pages within that workbook called worksheets. The number of worksheets you get defaults to 3, but you can change that (see the section on customisation for more information). The worksheets are useful when you want to store information under common column headings but need to split it up, (for example by month, week or by department).

When the same data needs to be entered on several worksheets, you can use Group mode which forces data that you type on one worksheet appear on all selected sheets. When Group mode is active, any formatting that you apply to the active worksheet also gets applied to the selected sheets.



**Picture 196** Sheet tools

### 9.1.1 MOVING BETWEEN THE WORKBOOK SHEETS

Each new workbook contains worksheets, named sheets 1 to sheet 3. The sheet name appears on a tab at the bottom of the workbook window.

→ To move between worksheets:

#### Mouse

- i. Click on the appropriate tab

*✎ If the sheet required is not in view, use the tab scrolling buttons to display the sheet.*

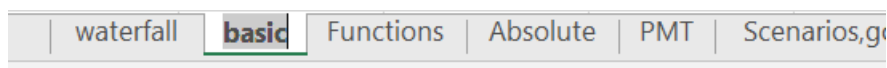
#### OR

#### Keyboard

- i. Press **CTRL+[PAGE DOWN]** to move to the next sheet, or **CTRL+[PAGE UP]** to move to the previous sheet.

### 9.1.2 WORKSHEET NAMES

Excel assigns the names “Sheet 1, Sheet 2” and so on to worksheets in a workbook but you can overwrite them with more meaningful names to describe the data they contain.



**Picture 197** Rename a sheet directly

→ To rename a worksheet:

#### Mouse

- i. Double-click the sheet tab that you want to rename .

#### OR

- i. Right click the tab and choose **RENAME** from the menu.

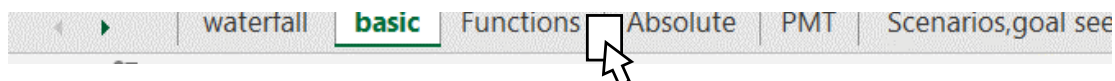
**OR**

- i. Click on the **FORMAT** button in the **CELLS** group on the **HOME** tab.
- ii. Choose **RENAME SHEET** from the menu.
- iii. the current sheet name will become highlighted.
- iv. Type the name you want.
- v. Press **ENTER**.

 **Worksheet names can be a maximum of 31 characters.**

**9.1.3 MOVE AND COPY WORKSHEETS**

Having named your sheets, you may need to switch them about so they are arranged in a different order.



**Picture 198** Move a sheet by dragging

→ To move or copy a sheet using the mouse

**Mouse**

- i. To **MOVE** Click and drag the sheet tab left or right. You'll see a page which follows your mouse pointer as you drag and an arrow to show where the sheet will jump to if you release the mouse.
- ii. Release the mouse when the sheet is in the correct position.
- iii. To **COPY** Hold down the **CTRL** key then click and drag the sheet tab a little plus will appear next to the arrow.
- iv. When the arrow marker indicates the position that you want the copy, release the mouse *then* the **CTRL** key.

→ To move or copy a worksheet using dialog

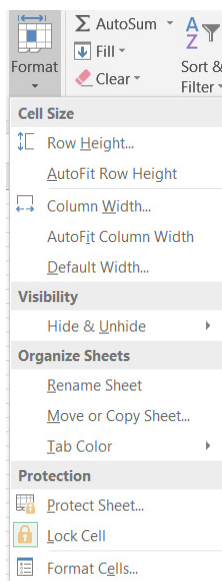
**Either**

i. Right click on your sheet tab and choose **MOVE OR COPY** to open dialog  
**OR**

i. Click on the **FORMAT** button in the **EDITING** group

ii. In the **ORGANISE SHEETS** section choose **MOVE OR COPY** sheet to open dialog

**Then**

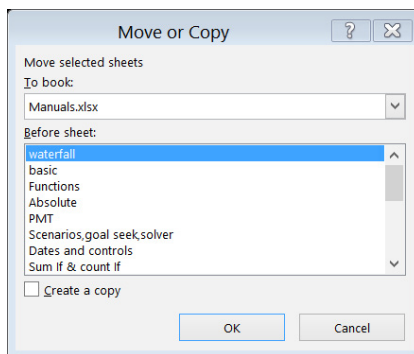


**Picture 199** Format menu for move and copy

- i. Choose the sheet you wish to move the present sheet, *BEFORE*.
- ii. If you wish to make a copy rather than move – Tick the **CREATE A COPY BUTTON**.
- iii. Click **OK** to move or copy the sheet to the selected location



*Because no two worksheets can have the same name, when you copy a sheet as described above, Excel will suffix the copy's name with (2).*



Picture 200 Move or copy dialog

### 9.1.4 INSERT AND DELETE WORKSHEETS

You can add and remove worksheets to and from a workbook as required. The number of sheets is limited only by the available memory which may differ on different computers.

→ To add a worksheet:

**Mouse**

- i. Click on the **PLUS** button to the right of the sheets this is a create new worksheet button



Picture 201 Add worksheet button

- ii. Excel will name it initially with the next sequential number available.

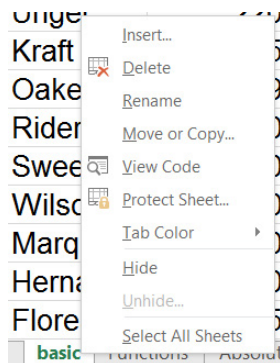
**OR**

**Keyboard**

- i. Press **SHIFT+[F11]**
- ii. A new sheet will appear the tab will be to the left of whichever sheet you are currently on and Excel will name it initially with the next sequential number available.

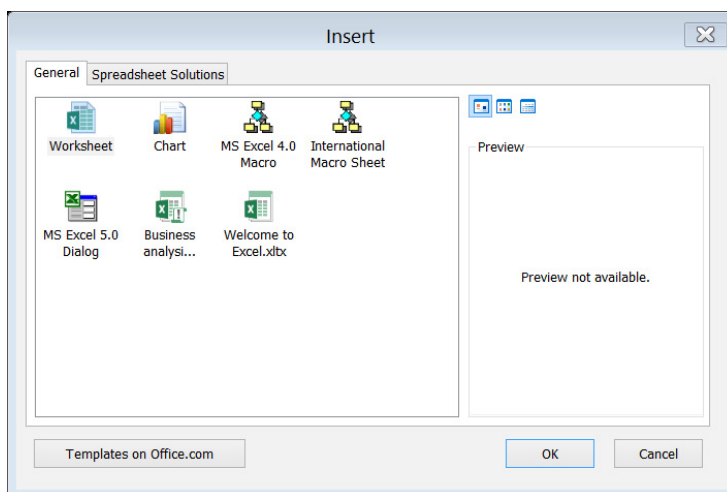
**OR**

- i. Right click on a sheet tab and choose **INSERT** from the menu a dialog will open



Picture 202 Right click sheet menu

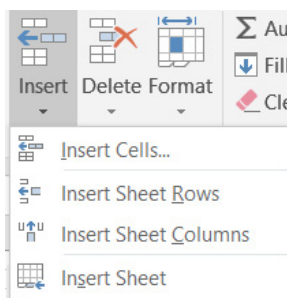
ii. Select **WORKSHEET** and click **OK** a worksheet will appear.



**Picture 203** Right click insert dialog

**OR**

- i. Click on the **INSERT** button from the **EDITING** group
- ii. Choose **INSERT SHEET**.



**Picture 204** Insert menu-ribbon

iii. A sheet will be added.

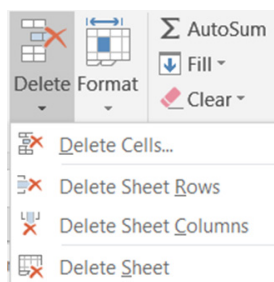
→ To delete a worksheet:

**Mouse**

- i. Click the right mouse button over the worksheet tab that you want to delete.
- ii. Choose **DELETE** from the shortcut menu.

**OR**

- i. Click on the **DELETE** button in the **EDITING** group.



Picture 205 Delete menu-ribbon

# Losing track of your leads?

**Bookboon leads the way**

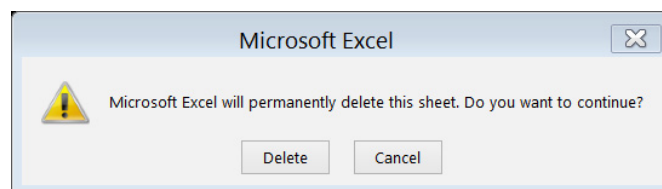
Get help to increase the lead generation on your own website. Ask the experts.

bookboon.com

Interested in how we can help you?  
email [ban@bookboon.com](mailto:ban@bookboon.com)



- ii. Click on **DELETE SHEET**.
- iii. If there has been ANY work on the sheet to be deleted the following dialog box will appear:



**Picture 206** Delete sheet warning

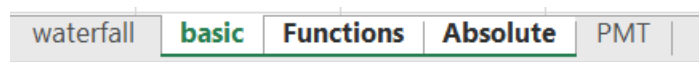
- iv. Click **DELETE** to confirm the deletion.

## 9.2 WORKING WITH MULTIPLE SHEETS

Whenever you select more than one worksheet, Excel considers those sheets to be grouped and switches group mode on accordingly. When group mode is active, the grouped worksheet tabs turn white and the word “[group]” appears on the title bar. Any data that you enter and any formatting that you apply will appear on all worksheets in the group in the same positions on each – this is particularly useful if you need to create a “Summary” sheet that will reference the other worksheets three dimensionally.

### 9.2.1 GROUP ADJACENT SHEETS

When the worksheets that you want to group are next to each other, you can use the **SHIFT** key to block select them.



**Picture 207** Multiple adjacent sheets selected

→ To group adjacent worksheets:

#### Mouse

- i. Click the on the first worksheet’s tab that you want to include in your group.
- ii. Hold down the **SHIFT** key and click on the last worksheet’s tab that you want included in your group. All the sheets between the first and the last will be selected. The selected sheet tabs will turn white and the word “[group]” will appear on the title bar.

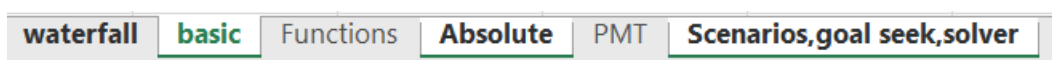
### 9.2.1 GROUP NON-ADJACENT SHEETS

When the sheets you want are not next to each other in the workbook, you can use the **CTRL** key to group them.

→ To group non-adjacent worksheets:

#### Mouse

- i. Click the on the first worksheet's tab that you want to include in your group.
- ii. Hold down the **CTRL** key and click each other worksheet's tab that you want included in your group. The selected sheet tabs will turn white and the word "[group]" will appear on the title bar.



**Picture 208** Multiple non adjacent sheets selected



*When worksheets are grouped, use normal data entry and formatting commands to populate them (see previous sections for more information).*

### 9.2.2 DEACTIVATE GROUP MODE

When you have finished entering and formatting data simultaneously, you can deactivate group mode. There are two ways to do this:

→ To deactivate group mode:

#### Mouse

- i. Click on a sheet tab that is not currently grouped (non white).

#### OR

- i. Click the right mouse button over any sheet tab and choose **UNGROUP SHEETS** from the shortcut menu.

### 9.2.3 USING GROUPED SHEETS

The idea of using grouped sheets is to simultaneously setup, format and arrange the cells, titles and calculations exactly the same on multiple sheets so when ungrouped. You merely have to click on each individual sheet to enter specific data.

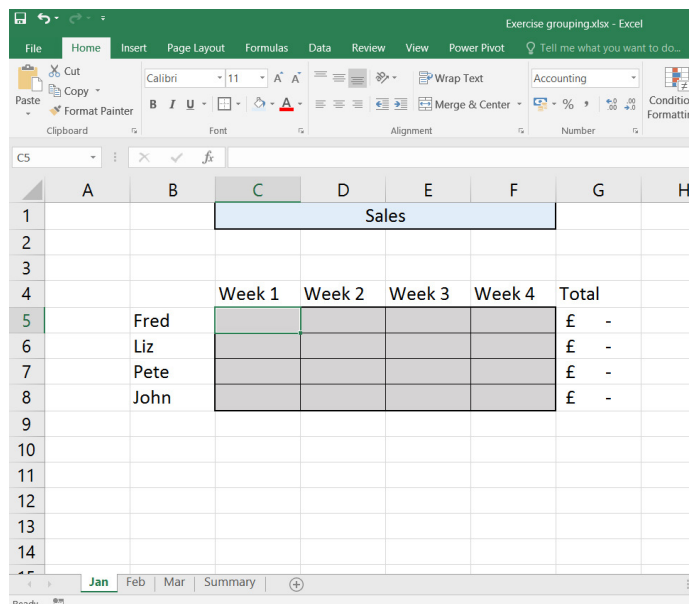
➔ To set up a set of duplicate sheets

**Mouse**

- i. The default number of sheets in a 2016 workbook is one, add as many sheets as is necessary.

**E.G.** If setting up a workbook for a quarter you will need 4 sheets as you will need a summary sheet as well as the chosen 3 months.

- ii. Rename the sheets as necessary.
- iii. Group the four sheets.
- iv. Set column widths and row heights as necessary.
- v. Enter titles and build calculations, Format as desired.
- vi. Ungroup the sheets.
- vii. **SAVE AS** Exercise Grouping.



**Picture 209** Multiple sheets set up simultaneously – all exactly the same

- viii. Check each sheet and you will find they are identical, any changes you wish to make to all sheets, regroup and make the change to ALL at the same time.

*Zoom settings cannot be applied to grouped sheets they have to be set individually.*

## 9.2.4 FILL DATA ACROSS WORKSHEETS

You can copy data to the same position on multiple sheets using the **FILL** command. This is particularly useful if you need to decide what gets copied (everything, or just the formats). It also saves time for those occasions where you accidentally deactivated group mode, typed your entries and then realised that they are only on one page!

→ To fill across worksheets:

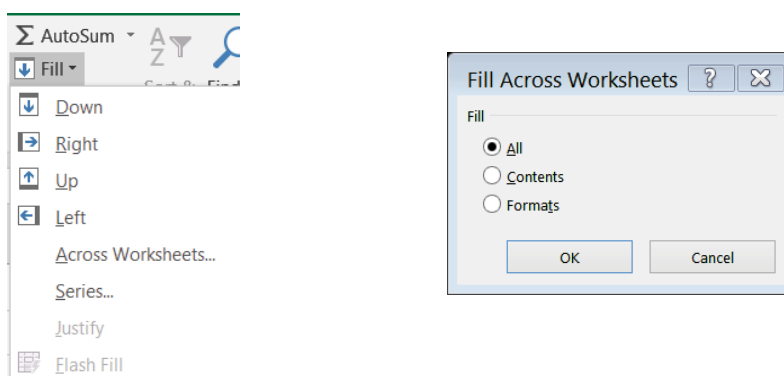
### Mouse

- i. Select the cells you want to copy to the other worksheet(s).
- ii. Select the worksheets you want the copy to appear on by clicking the sheet tabs (use **SHIFT** to block select or **CTRL** to pick non-adjacent pages).
- iii. On the **HOME** tab, in the **EDITING** group, click the down arrow to the right of the **FILL** icon.



Picture 210 Fill icon

- iv. Choose **ACROSS WORKSHEETS** a dialog will open.



Picture 211 Fill menu and across sheets dialog

- v. Choose the appropriate option and click **OK**.



*When you have finished filling the data, remember to deactivate group mode.*

## 9.2.5 3-D FORMULAE

When you have data on multiple worksheets, you often want a summary page that will collect data from cells across all the sheets and calculate it in a certain way. You can do this with a 3-D formula. 3-D formulae are no different from the formulae already discussed in an earlier section of this manual, however, the way you refer to cells on different worksheets has not yet been explored – that is what we will look at in this section.

	A	B	C	D	E	F	G
1			Sales				
2							
3							
4			Week 1	Week 2	Week 3	Week 4	Total
5		Fred	=SUM(Jan:Mar!C5)				£ -
6		Liz	SUM(number1, number2, ...)				£ -
7		Pete					£ -
8		John					£ -
9							
10							
11							
12							
13							
14							

**Picture 212** Calculate across sheets

### References to other sheets

When you refer to a cell that is in another worksheet, Excel uses the following syntax:

#### Single cell

**'Worksheet name'![Cell reference]**



*In the diagram on previous page, cell C5 on the Summary sheet would be referenced as follows:*

**'Summary'!C55**

#### Cells on adjacent worksheets

**1stWorksheet name:lastWorksheet name![Cell reference]**



*In the diagram on previous page, cell C5 across all Months would be referenced:*

**Jan:Mar!C5**

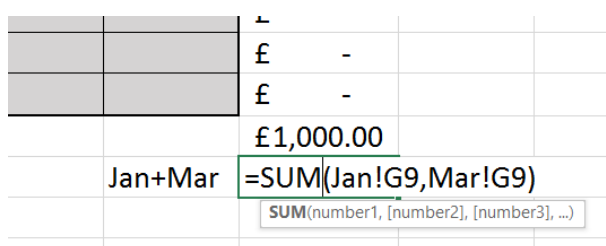
### Cells on non-adjacent worksheets

1st Worksheet name![Cell reference],2nd Worksheet name![Cell reference]

*In the diagram, cell G9 on Jan and March's sheets would be referenced:*

**Jan!G9,Mar!G9**

Luckily, because you can get Excel to put the references in automatically by pointing at the cells, you do not have to memorise the syntax!



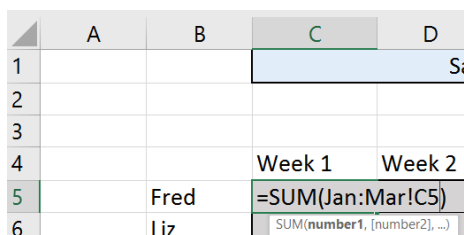
**Picture 213** Referring to non adjacent sheet cells

*Commas separate up the references when selecting ranges or cells in this manner from different sheets.*

➔ To create a 3-D formula:

**Mouse**

- i. Open the **EXERCISE GROUPING** file and go to summary sheet.
- ii. Select the cell where you want the result, in this case C5 Create a sum function using any method
- iii. Click on the **JAN** sheet, hold down **SHIFT**, click on **MAR** sheet and on the cell **C5**.
- iv. Close bracket if desired then Press **ENTER**. To return to the **SUMMARY** sheet.
- v. The function now sums up the same cell on multiple sheets.



**Picture 214** 3D function

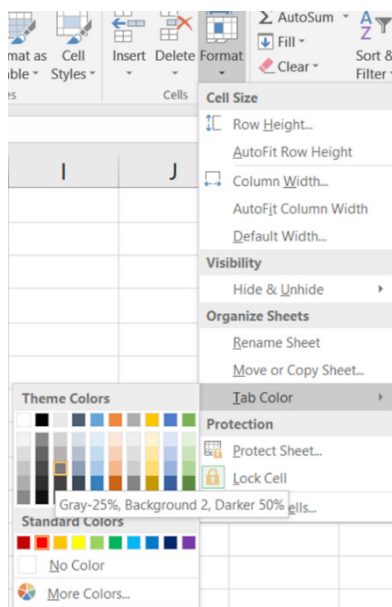
- vi. Using the fill handle copy the function across the range **C5:F8**. As values are entered on the month sheets Totals will appear in the summary sheet. Save file and close.

If you need to select the same cell on adjacent sheets, hold down the **SHIFT** key and click on the last sheet tab in the block of adjacent sheets. Press **ENTER** to complete the formula: **OR:** If you need to select the different cells on different sheets, type a comma and click the next sheet tab and cell you need to reference, insert another comma and click the next sheet tab and cell you need to reference and so on until all references have been entered. Press **ENTER** to complete the formula: **OR:** Click on the cell whose value you want in your formula. If you only need to refer to one cell, press **ENTER** to complete the formula.

### 9.2.6 CHANGE COLOUR OF WORKSHEET TAB

Colour coding your sheets may help with your data organisation if standard across work books irrespective of the sheet name.

**E.G.** Red for raw data, blue for calcs, yellow for compiled report etc.



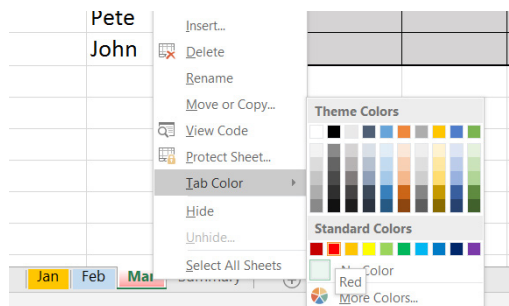
**Picture 215** Colour sheet tab from menu

→ To change the colour of a worksheet tab:

- i. Select the worksheet whose tab you want to re-colour.
- ii. Click the **FORMAT** button in the **CELLS** group, **HOME** Tab and move your cursor down the menu to **TAB COLOUR**.
- iii. Select the colour and click **OK**.

**OR**

- i. Right-click on the tab and choose the **TAB COLOUR** option.
- ii. Select the colour and click **OK**.



**Picture 216** Colour sheet tab – right click menu

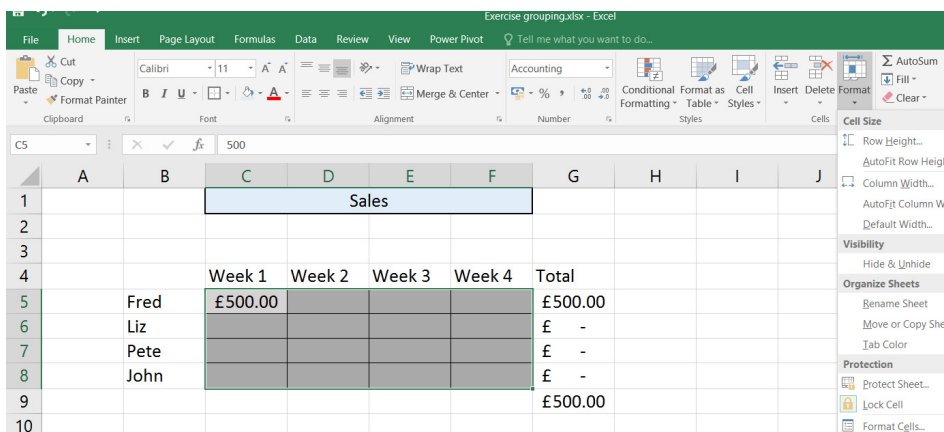
## 9.3 PROTECT WORKSHEET DATA

If you type in a cell that already has an entry, you overwrite that entry as soon as you press ENTER. Excel does have an Undo facility, but if you need to delegate data entry to someone who is not too familiar with Excel, they could quite feasibly end up overwriting your carefully constructed formulae. To prevent that happening, you can protect worksheets in workbooks. Protected sheets can allow access to some cells but not others. Those that are unavailable cannot be edited, formatted or cleared.

### 9.3.1 UNLOCK CELLS

By default, all cells in a worksheet are locked. This does not have any effect on data entry and editing until you switch on the worksheet protection at which point all locked cells are made unavailable. This means that if you want to have access to certain cells, but not others, you need to unlock those cells first.

In the diagram below, you would need to unlock the selected cells so that when you protect the worksheet, those cells are accessible.



**Picture 217** Lock cells and protect sheet – format menu

➔ To unlock cells:

**Method 1**

- i. Select the cells you want to be accessible when you protect the worksheet – you can select cells on multiple sheets using group mode if necessary.
- ii. Click the **FORMAT** button in the **CELLS** group on the **HOME** Tab.
- iii. The **LOCK CELL** button is already selected (all cells are locked by default). Click the **LOCK CELL** button to unlock the selected cells.



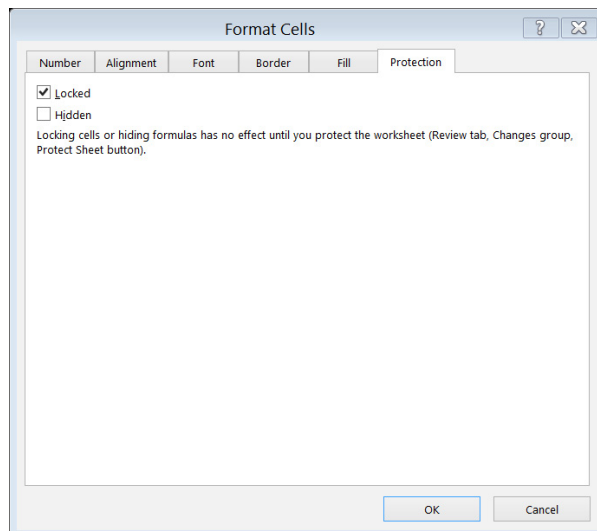
**Picture 218** Lock cell button

**Method 2**

- i. Select the cells you want to be accessible when you protect the worksheet – you can select cells on multiple sheets using group mode if necessary.
- ii. Click the dialog box launcher. From either the **FONT**, **ALIGNMENT** or **NUMBER** group on the **HOME** Tab.
- iii. Click the **PROTECTION** tab. And uncheck the **LOCKED** box.
- iv. Click **OK** to close the dialog and save the setting.

### 9.3.2 WORKSHEET PROTECTION

Once the cells you wish to allow people to access and change have been unlocked you may protect your sheet this will stop people entering or changing values or formats in the locked cells.



Picture 219 Format cells dialog – protection tab

"I studied English for 16 years but...  
...I finally learned to speak it in just six lessons"  
Jane, Chinese architect

ENGLISH OUT THERE

Click to hear me talking before and after my unique course download

The advertisement features a woman with sunglasses on her head, smiling. To her right is a green speech bubble containing the text 'ENGLISH OUT THERE'. Below the speech bubble is a call to action: 'Click to hear me talking before and after my unique course download'. The background is a blurred image of a classroom or office setting.

→ To protect a worksheet:

### Mouse

- i. Ensure that the sheet you want to protect is the active sheet.
- ii. Click the **FORMAT** button in the **CELLS** group on the **HOME** Tab. From the menu click on **PROTECT SHEET**. A dialog box is launched.



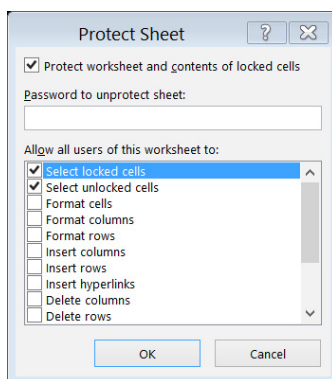
**Picture 220** Protect sheet from menu



**Picture 221** Protect sheet from review tab

### OR

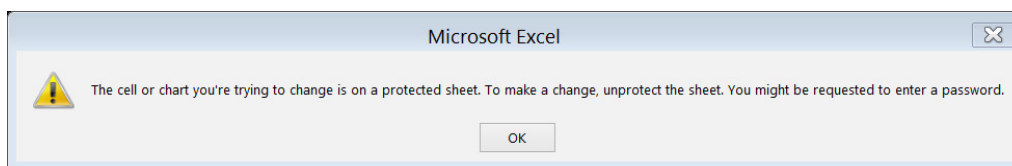
- i. In the **REVIEW** tab, **CHANGES** group click on the **PROTECT SHEET** button to open the dialog.



**Picture 222** Protect sheet dialog

- ii. Select from the checkboxes that you wish people be allowed to do (best left as default) Ticking the **FORMAT CELLS** option would then allow all users to change the formatting of cells (locked or unlocked) while still preventing them from changing the actual contents of the locked cells.
- iii. Type a password to prevent unauthorized users from removing sheet protection. A password is case sensitive, can be up to 255 characters long, and can contain any combination of letters, numbers, and symbols.
- iv. Click **OK** to close the dialog and switch on sheet protection.

- v. If you try to edit any of the locked cells now a message will appear to inform you that you cannot change them.



**Picture 223** Warning message while editing protected cells



Record all passwords somewhere as data can be lost If you cannot remember them *With worksheet protection active, only the unlocked cells are available to work with. If you try and type in a locked cell, the following warning appears:*

### 9.3.3 UNPROTECT SHEETS

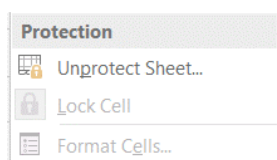
If you do need access to the locked cells, you can switch worksheet protection off, provided you know the correct password.

→ To switch off sheet protection:

#### Mouse

**Select the protected sheet.**

- i. Click the **FORMAT** button in the **CELLS** group on the **HOME** Tab.
- ii. Click on **UNPROTECT** sheet.



**Picture 224** Unprotect from menu

#### OR

- i. In the **REVIEW** tab, **CHANGES** group click on the **UNPROTECT SHEET** button to open the dialog.



**Picture 225** Unprotect from review tab

- ii. If you had a password then a dialog box will appear requesting the password  
Type the password and click **OK**. The sheet is now unprotected.
- iii. If no password was needed then it just unprotects the sheet.



Excel only lets you protect and unprotect sheets one at a time, that is to say, you cannot group all the sheets you want to protect or unprotect and do it in one go.

### 9.3.4 WORKBOOK PROTECTION

Protecting the contents of cells is one thing but you may need to stop people accessing hidden sheets or rearranging existing ones, or even deleting or inserting sheets. For this we need to protect the workbook itself.

→ To protect the workbook

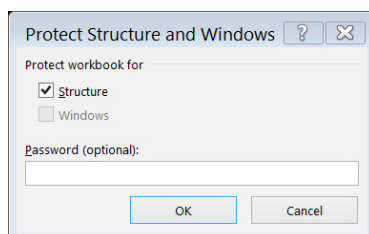
#### Mouse

- i. We need to click on the **PROTECT WORKBOOK** button in the **CHANGES** group on the **REVIEW** tab, a dialog will open.



Picture 226 Protect workbook button

- ii. Enter a password if desired, click **OK** to confirm the protection and activate it.



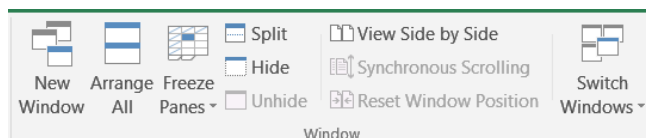
Picture 227 Protect workbook dialog

- iii. You will find now that you cannot insert, delete, rename or move sheets.

## 9.4 VIEWS AND WINDOWS TOOLS

### 9.4.1 COMPARE WORKBOOKS SIDE BY SIDE

You can display several worksheets in a workbook tiled in various ways on screen. These options can be found on the **VIEW** Tab and the **WINDOW** group.



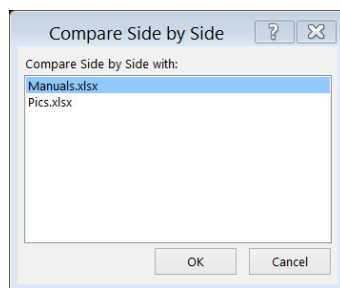
**Picture 228** Window group – view tab

### ➔ Comparing workbooks side by side:

You can compare two workbooks side by side and use synchronous scrolling to allow you to scroll through both workbooks at the same time.

#### Mouse

- i. Open all files you may wish to compare.



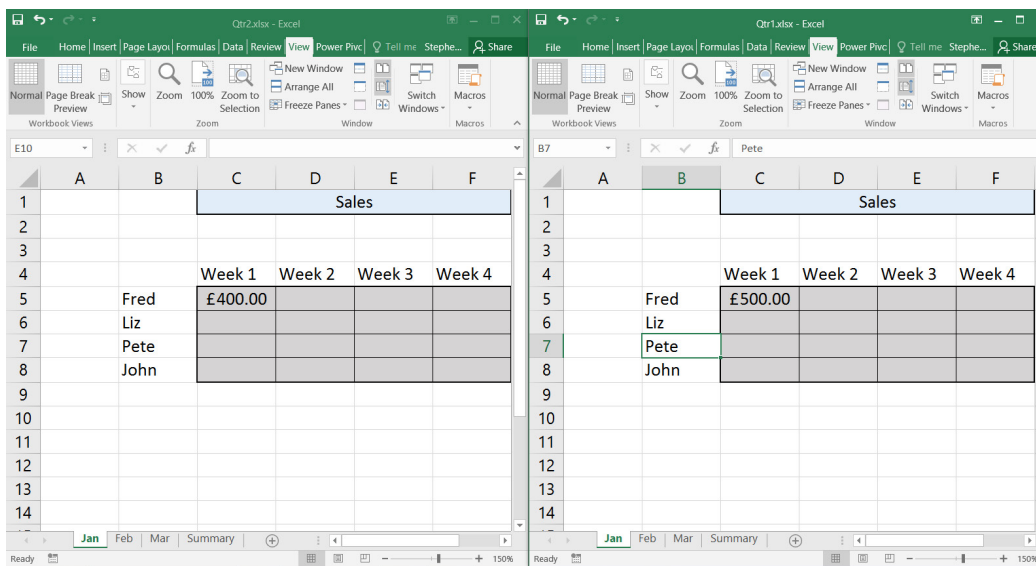
**Picture 229** Compare dialog

- ii. Go to the **VIEW** Tab and click on the **VIEW SIDE BY SIDE** **BUTTON** a dialog is launched
- iii. Choose the file you wish to compare your current file with, to see it side by side with your original file.
- iv. Click **OK**.
- v. Ensure the **SYNCHRONOUS SCROLLING** button just under the **VIEW SIDE BY SIDE** button is active, if not please click on it.



**Picture 230** Synchronous scrolling button

- vi. Your two windows should now be side by side, as you scroll down in one the other window should scroll down as well.



Picture 231 Workbook comparison

- vii. Click on the **VIEW SIDE BY SIDE** button to disable the feature and return to normal viewing.



Picture 232 Side by side button

### 9.4.2 TILING SEVERAL WINDOWS

Although the compare tool only works with two files, you may see more files than that at the same time you could see several at the same time although practically four windows would be the maximum. Any more than four and the size of the windows would be too small to give you any help.



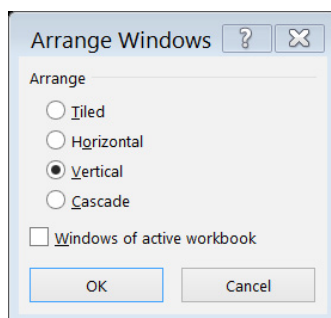
Picture 233 Arrange windows button

➔ To tile several windows

#### Mouse

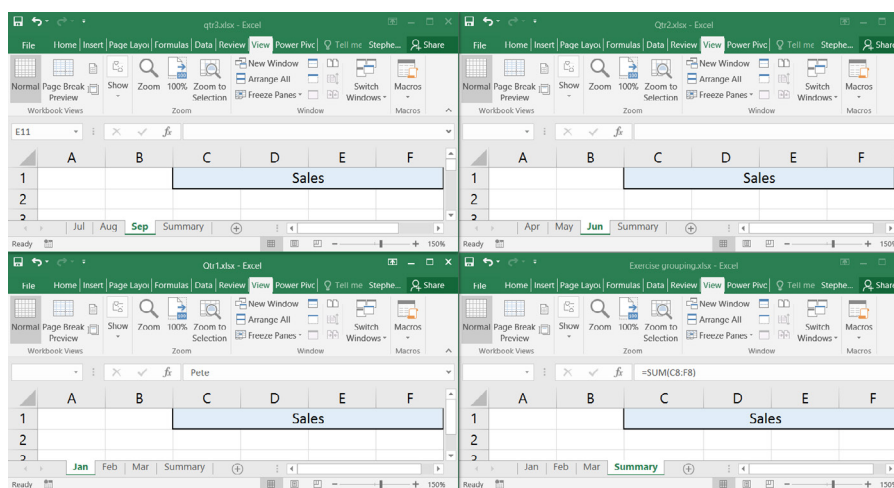
- i. Open the files you wish to see all at once.
- ii. On the **VIEW** Tab, click **ARRANGE ALL**. The **ARRANGE WINDOWS** dialog box will appear:

iii. Choose the arrangement you want your worksheet windows to follow.



**Picture 234** Arrange windows dialog

iv. Click **OK** to close the dialog and arrange the windows. Choose **TILED** initially. You can arrange as many times as you want.



**Picture 235** Tiled windows

- v. Picture above shows tiled windows, this is useful for copying and pasting, drag and dropping between files or just comparing.
- vi. Cascade is useful if you have many workbooks open as it layers them slightly offset and it is easier to switch files.



*If your initial window is maximised, you do not see any change to the screen when you issue the New Window command, you may not know how many windows you have. When you access the Window menu, the bottom section lists the number of windows currently open.*

## Synchronous scrolling info



**Picture 236** Synchronous scrolling button

When the windows are opened with the method viewed side by side, the button for synchronous scrolling will allow simultaneous scrolling for both documents. If this feature does not help it can be switched off. This is only available when documents are viewed side by side.

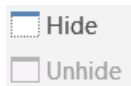
### 9.4.3 HIDE WINDOWS

Whole windows can be hidden. Although you may need them open for calculations, macros, referred tables, etc you may not wish to see them.

→ To hide a window

#### Mouse

- i. Select the window you wish to hide.
- ii. Go to the **VIEW** Tab and click the **HIDE** button in the **WINDOW** group. The window is now hidden.

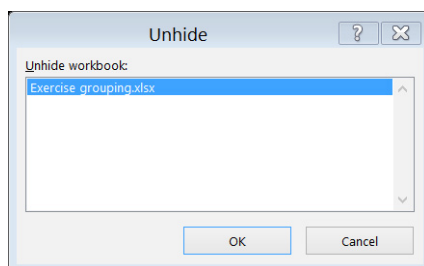


**Picture 237** Hide and unhide

→ To unhide a window

#### Mouse

- i. Go to the **VIEW** Tab and click the **UNHIDE** button. In the window group a dialog is launched.



**Picture 238** Unhide dialog

- ii. Choose window to unhide and click **OK**. The window reappears.

### 9.4.4 VIEW TWO SHEETS IN SAME WORKBOOK

While working in an Excel file, you can create a new window, and see two of the worksheets at the same time.

➔ To create a new window:

- i. On the **VIEW** tab, in the **WINDOW** group, Click the **NEW WINDOW** command.



Picture 239 New window button

- ii. The file name in the title bar will now show a number at the end.

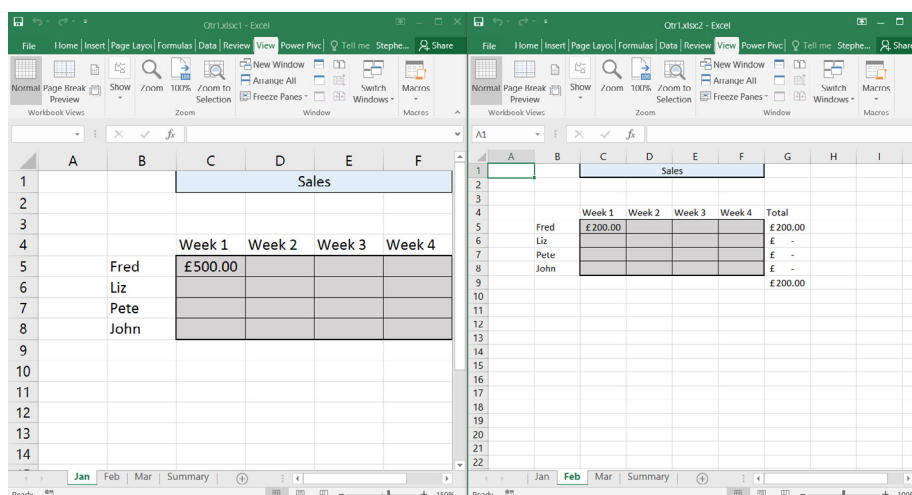
Qtr1.xlsx:2 - Excel

Picture 240 Window file name in title bar

➔ To see both windows:

#### Mouse

- i. On the **VIEW** tab, in the **WINDOW** group, Click the **ARRANGE ALL** command.
- ii. Select one of the Arrange options, such as **VERTICAL**.




Picture 241 Two windows from same workbook

- iii. If you have multiple workbooks open, and only want to see the windows for the active workbook, the box **WINDOWS OF ACTIVE WORKBOOK**.

- iv. Click **OK**.
- v. Both windows will initially show the same worksheet.
- vi. Change sheets in the second window. Scroll as needed.

 *Check the box **Windows of active workbook** (this prevents windows from other open files being included in the arrangement).*

 *Open 3 or 4 windows from the same file if you wish view several sheets at the same time but remember If you save the file with two windows open, and close Excel, those two windows will appear the next time that you open the file.*

#### 9.4.5 CLOSE WINDOW IN EXCEL WORKBOOK (SAME FILE)

If you have more than one window from the same file open within an Excel workbook, you can close one or more of the extra windows to go back to a single window.

 To close a window

##### **Mouse**

- i. Select the window that you want to close.

 ***NOTE:** It is best to leave open the window that is numbered 1 -- otherwise, some of the view settings, such as hidden gridlines, might be lost.*

- ii. Click the **X** at the top right of the selected window, to close it.

##### **OR**

- i. Use the keyboard shortcut, **CTRL + W**, to close the selected window.
- ii. To return the remaining window to full size, double-click its title bar, OR click the Maximize button at the top right of the file's window.

#### 9.4.6 WATCH WINDOW

If the only reason you wished to have several sheet windows open from the same file was to check on the results of calculations as you entered data on sheet this tool may have some use for you to save you opening all these windows. A watch window can be used to easily track results of multiple cells when you are working on a different sheet or workbook. This saves you from having to switch back and forth or scroll between sheets to keep track of important data.

→ To set a watch

**Mouse**

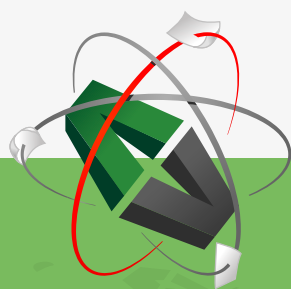
- i. Select a cell to which you want to add a Watch.
- ii. Go to the **FORMULAS** Tab and click on **WATCH WINDOW** in the **FORMULA AUDITING** group.



**Picture 242** Watch window button

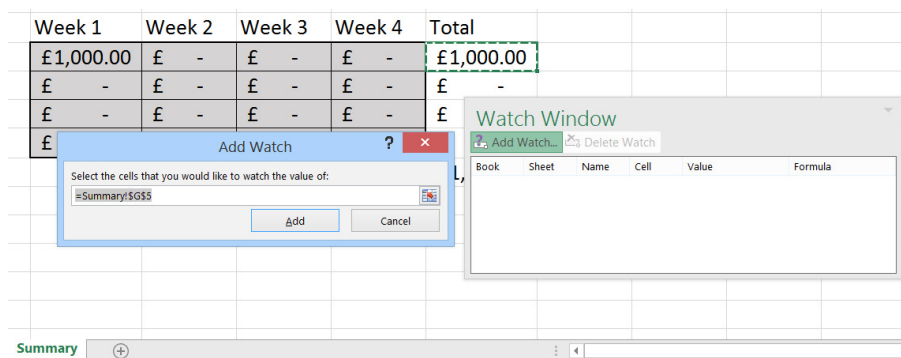
- iii. Click on the **ADD WATCH** button from the **WATCH WINDOW**, Another dialog opens.
- iv. In the **ADD WATCH** Dialog Select the cell you wish to monitor if different from the suggested.

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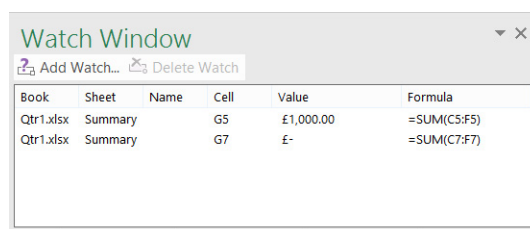
**Picture 243** Watch window and add watch dialog

- v. Click on **ADD**, It will appear in the watch window where you may monitor results You may add several watches from different locations on different sheets.
- vi. You may now switch windows or scroll and the watch window will monitor that cell for changes in result as you enter or manipulate figures elsewhere.

➔ To delete a watch

**Mouse**

- i. Go to the **FORMULAS** Tab and click on **WATCH WINDOW** in the **FORMULA AUDITING** group.
- ii. Select watch to delete.



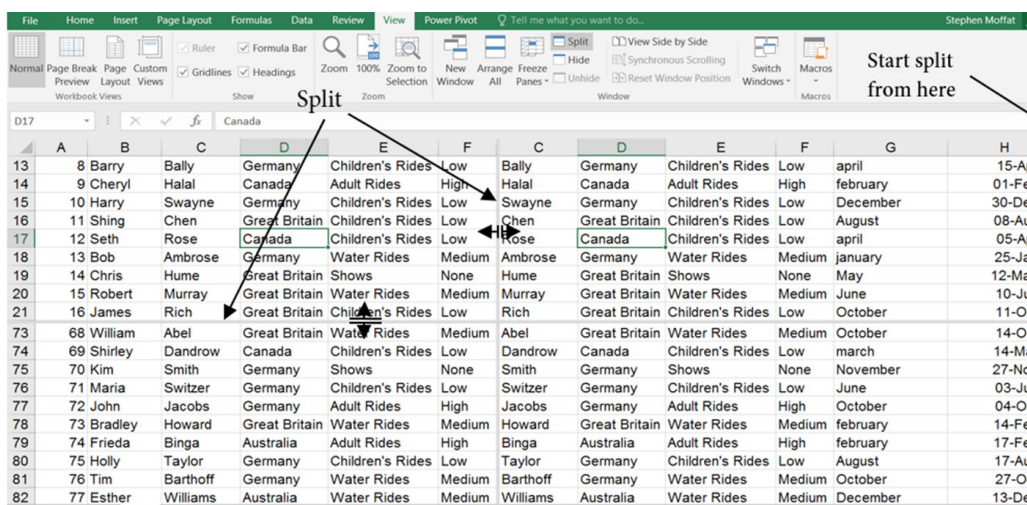
**Picture 244** Watch window with watches

- iii. Click on **DELETE WATCH** in watch window.
- iv. Use the **X** in the top right corner to close the watch window or the **WATCH WINDOW** button on the **FORMULAS** tab.

## 9.5 USEFUL TOOLS FOR LARGE SHEETS

### 9.5.1 SPLIT SCREEN

The visible worksheet area is relatively small. If the data you are working with spans a large number of columns and rows, you may find it difficult to move and copy information between areas, or even to view data in non-adjacent columns or rows on the same screen. Splitting the screen gives you the ability to scroll the data one side of the split independently of the other side – so you could be viewing cells Z100–AH116 on one side of your screen, and cells A1–G16 on the other.



Picture 245 Splitting the screen

➔ To split the screen horizontally:

#### Mouse

- i. Position the mouse along the top edge of the upward pointing arrow at the top of the vertical scroll bar – your pointer should display as shown in the diagram above.
- ii. Drag down – you will see a fuzzy line that follows your mouse down. Release the mouse when the line is at the position you want to split the screen.

➔ To split the screen vertically:

#### Mouse

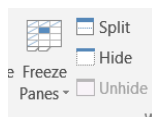
- i. Position the mouse along the top edge of the upward pointing arrow at the right of the horizontal scroll bar – your pointer should display as shown in the diagram above.
- ii. Drag left – you will see a fuzzy line that follows your mouse across. Release the mouse when the line is at the position you want to split the screen.

When the screen is split, you get scroll bars in each horizontal or vertical section of your window which you can use to move the display for just that section.

→ To apply both splits at same time

### Mouse

- i. Go to the **WINDOW** group on the **VIEW** Tab and click on the **SPLIT** button.



**Picture 246** Split button

- ii. Both horizontal and vertical splits will be applied at the same time. These can be adjusted by positioning the mouse over one and dragging in the desired direction. Clicking on this button again will remove both splits.

→ To remove a split:

### Mouse

- i. Position the mouse over the split.
- ii. Drag a split back up until it is flush with the column or row letters or numbers and release the mouse, Or Double click on the split.

## 9.5.2 FREEZE PANES

When you want certain rows or columns to remain static on screen while you scroll down or across data on a worksheet, you can use freeze panes.

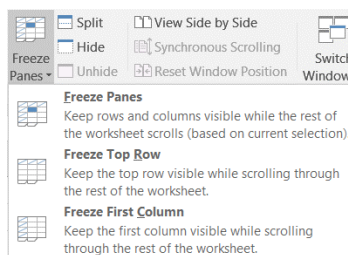
	A	B	C	
1		Jan	Feb	Mar
2	Britain	£1,019.93	£1,162.56	£1,305.19
3	France	£1,734.05	£1,901.87	£1,100.00
4	Germany	£1,241.52	£1,333.16	£1,100.00
5	Germany	£1,241.52	£1,333.16	£1,100.00

**Picture 247** Freeze panes

→ To freeze panes:

### Mouse

- i. Select the cell below and to the right of the cells you want to freeze.
- ii. Go to the **WINDOW** group on the **VIEW** Tab and click on the **FREEZE PANES** button
- iii. Make a selection from the displayed menu.



**Picture 248** Freeze pane options

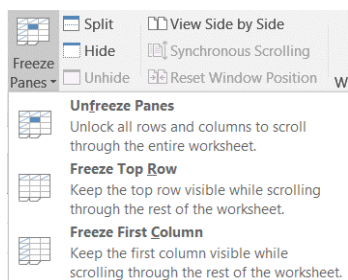


*If you only want the freeze for rows, select the cell in column A below the rows you want to freeze. If you only want the freeze for columns, select the cell in row 1 to the right of the columns you want to freeze.*

➔ To unfreeze panes:

#### Mouse

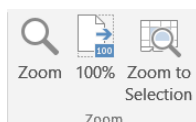
- i. Go to the **WINDOW** group on the **VIEW** Tab and click on the freeze panes button.
- ii. Select Unfreeze panes.



**Picture 249** Unfreeze panes

### 9.5.3 ZOOM

You can adjust the scale of the on-screen display with the Zoom command. Excel allows you to specify any percentage between 1% and 400% for viewing on-screen data. If there is a particular range that you need to make visible on one screen without scrolling, you can use the **FIT SELECTION** option.



**Picture 250** Zoom tools

→ To zoom screen display:

**Mouse**

- iii. In the bottom right hand corner of the screen click on the Plus or minus buttons to zoom in or out of your spreadsheet or drag the slider.



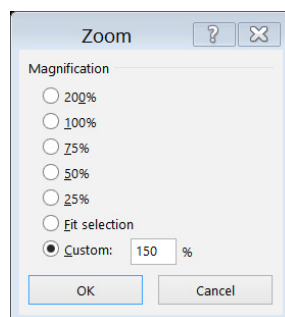
**Picture 251** Zoom slider

**OR**

- i. Click on the **PERCENTAGE** button on the bottom right hand corner of your screen and a dialog box will open.

**OR**

- i. Click on the **ZOOM** button on the **VIEW** Tab in the **ZOOM** group.
- ii. A dialog box will open.



**Picture 252** Zoom dialog

**Either**

- i. Choose a percentage from the dialog box.
- ii. Click **OK** to apply the zoom and close the dialog.

**OR**

- i. Highlight the percentage figure currently displaying in the **CUSTOM** text box and type the figure you want to use.
- ii. Click **OK** to apply the zoom and close the dialog.

→ **Zoom to selection**

**Mouse**

- i. Highlight the section of data you wish to see on your screen, even if it cannot all fit in the window at the moment for example too many rows to fit on screen.
- ii. Click on the **ZOOM TO SELECTION** button on the **VIEW** Tab in the **ZOOM** group.
- iii. Your selected data should now fit the window size perfectly.

## 9.6 ADVANCED NAVIGATION

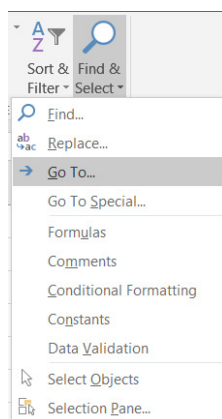
### 9.6.1 GOTO USING NAMES

As previously mentioned, the **GOTO** feature can be used to go to a specific cell address on the spreadsheet. It can also be used in conjunction with names.

→ To go to a name:

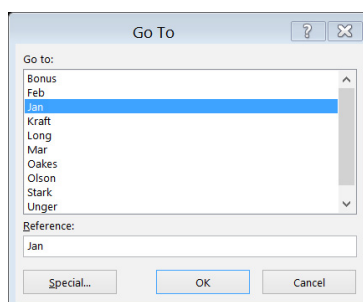
#### Mouse

- i. Click the **FIND & SELECT BUTTON** on the in the **EDITING** group on the **HOME** Tab.



**Picture 253** GoTo from menu

- ii. Select **GO TO**.
- iii. The following **GOTO** dialog appears.



**Picture 254** GOTO dialog

- iv. Click on the name required, then choose **OK**.

**OR**

#### Keyboard

- i. Press **[F5]**. The following dialog box appears;
- ii. Click on the name required, then choose **OK**.

Not only does the cell pointer move to the correct range, but it also selects it. This can be very useful for checking that ranges have been defined correctly, and also for listing all the names on the spreadsheet.

→ To move to a cell that belongs to two ranges:

You can also go to a specific cell that has been used in two range names. Such as Unger's, January figure.

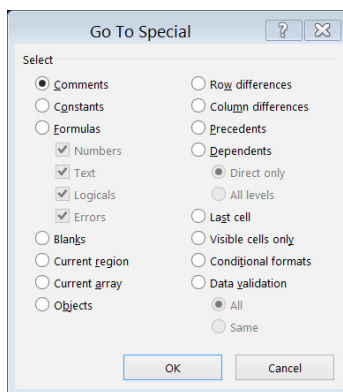
### Keyboard

- i. Open the **GOTO** Dialog and type the first range name (Unger) in the **REFERENCE** box, then type a space and the second range name. (Jan)
- ii. Click **OK**. The pointer immediately jumps to the correct cell where the ranges intersect.

→ To Go To locations in workbook based on different criteria than names. (special)

### Keyboard

- i. Open the **GOTO** Dialog and click the **SPECIAL** button.
- OR**
- i. Click the **FIND & SELECT BUTTON** on the in the **EDITING** group on the **HOME** Tab.
  - ii. Choose **GOTO SPECIAL**. The following dialog appears.



**Picture 255** GOTO Special Dialog

- iii. Make a selection and click on **OK**.
- iv. All cells of those criteria will be selected.
- v. Use **RETURN** or **TAB** keys to move around in the Range.

## 9.6.2 NAVIGATING WITH NAME BOX

If you wish to travel to a point on your spreadsheet you know the reference of then the name box can be used to enter a cell reference and it will take you there. Since it IS called the name box any named cells or ranges throughout your workbook can be moved to merely by choosing it from the name book.

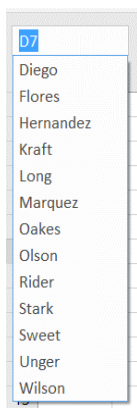
→ To use name box for navigation

### Mouse

- i. Click in **NAME** box.
- ii. Type cell reference.
- iii. Press return.

### OR












- i. Click drop down arrow to right of **NAME** box.
- ii. Select a **NAME** to take you to that location.



**Picture 256** Navigate by name

# 10 PRINTING

**By the end of this section you will be able to:**

-  Set up printing preferences using the page setup dialog
-  Use the ribbon for setting up page preferences
-  Insert and edit headers and footers
-  Use Print preview and page layout views
-  Scale printing to a fixed set of pages
-  Set page breaks
-  Set up and change margins by various methods
-  Print and collate multiple copies
-  Set up print areas
-  Change print quality
-  Print page ranges or entire workbooks.

## 10.1 PRINTING OPTIONS

When you want a hard copy of worksheet data, Excel gives you many tools for choosing how that printout will look. Swapping the page orientation between portrait and landscape, scaling the size of the printout and choosing whether to print worksheet gridlines are but a few of the options that can be set. Excel automatically assigns headers and footers to your worksheet data, but you can change or enhance these very easily.

### 10.1.1 PRINT PREVIEW

Before sending anything to print, it is always a good idea to preview what you will see on the page. The Print Preview window will show how your data is going to print. This is very different than the preview you would use in all previous versions of Excel.



Many of the page setup options can be found in either the **PAGE SETUP** group on the **PAGE LAYOUT** Tab or in the **PAGE SETUP** dialog box or in the **SETTINGS** options on the left hand side of the preview pane.

→ To go to print preview

#### Mouse

- i. Click the worksheet that you want to preview before you print it.
- ii. Click the **FILE** Tab, Click **PRINT** this will give you the version of **PRINT PREVIEW** in Excel 2016.

#### OR

#### Keyboard

- iii. Press **CTRL+F2**. To take you to the **PRINT PREVIEW**.

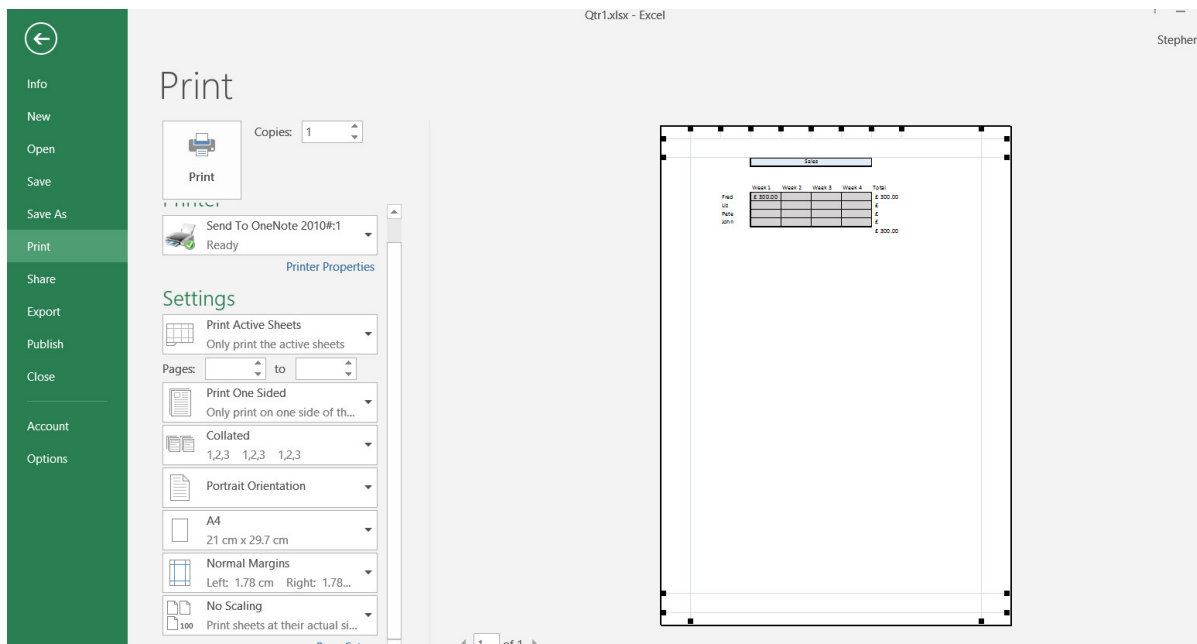
 **gaiTeye**<sup>®</sup>  
Challenge the way we run

**EXPERIENCE THE POWER OF  
FULL ENGAGEMENT...**

.....

**RUN FASTER.  
RUN LONGER..  
RUN EASIER...**

**READ MORE & PRE-ORDER TODAY  
WWW.GAITEYE.COM**



Picture 257 Print preview – margins

### 10.1.2 PRINT PREVIEW OPTIONS

Do one or more of the following:

- i. To preview the next and previous page, in the Preview group, click **NEXT PAGE** and **PREVIOUS PAGE**.



Picture 258 Page navigation

- ii. Zoom using the **ZOOM** button bottom right.



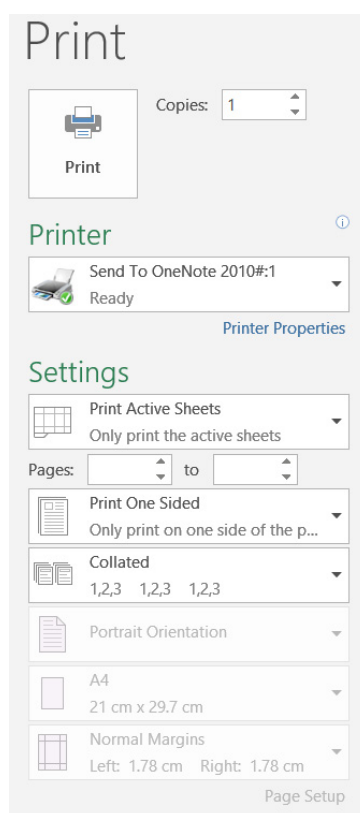
Picture 259 Zoom button

- iii. To view **PAGE MARGINS**, in the Preview Area, click the **SHOW MARGINS** button in the lower right hand corner.



Picture 260 Show/hide margins button

- iv. This displays the margins in the **PRINT PREVIEW** view. To make changes to the margins, you can drag the margins to the height and width that you want. You can also change the column widths by dragging handles at top of print preview page.
- v. The margins can also be changed using the drop down box to several presets and also a choice for custom margins which will open up the **PAGE SETUP** dialog box at the **MARGINS** tab discussed in next section.
- vi. To make page setup changes, Click **PAGE SETUP**, Bottom left, and then select the options that you want on the **PAGE, MARGINS, HEADER/FOOTER, OR SHEET TAB** of the **PAGE SETUP** dialog box. (Covered in the Views Topic)
- vii. You may only wish to print a section of your workbook, a sheet or the whole book. Be careful if you print a whole workbook be aware of how many pages there are in it.
- viii. Enter number of copies.
- ix. Collate your pages if you are printing several copies.
- x. The orientation, scaling and Paper sizes we will discuss in a later section.
- xi. As you can see here one of your first choices is to choose which printer you may wish to print to Change printer if desired.
- xii. Click **PRINT** to send to selected printer.



**Picture 261** Print options from print preview

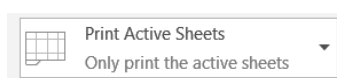
## 10.2 PRINTING DATA (FILE PRINT)

Excel will print all data on the selected worksheet (unless you tell it otherwise by setting a Print Area). If you want to print more than one worksheet, select the sheets you want first, before you click the Print button.

→ To print the active worksheets:

### Mouse

- i. Click the worksheet that you want to print.
- ii. Click the **FILE** Tab, click **PRINT**, Or Press **CTRL+[P]**.
- iii. Choose **PRINT ACTIVE SHEETS** from the drop down box.



**Picture 262** Print active sheets option button

- iv. Click **PRINT**.

→ To print a specific worksheet page or range of pages:

### Mouse

- i. Click the **FILE** TAB; click **PRINT**, Or Press **CTRL+[P]**.
- ii. Type in the page number that you want to start at in the **PAGES** box and the end page number in the **TO** box.



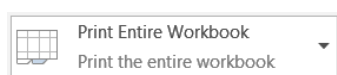
**Picture 263** Page range boxes

- iii. Click **PRINT** to launch the print

→ To print the entire workbook:

### Mouse

- i. Click the **FILE** Tab, click **PRINT**. Or Press **CTRL+[P]**.
- ii. Select **PRINT ENTIRE WORKBOOK** from the drop down box.



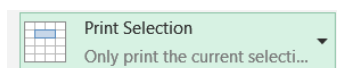
**Picture 264** Print entire workbook option

- iii. Click **PRINT** to launch the print.

→ To print the selection:

### Mouse

- i. Select the cells you want to print.
- ii. Click the **FILE** Tab, click Print. Or Press **CTRL+[P]**.
- iii. Choose the **PRINT SELECTION** option button from the drop down box.

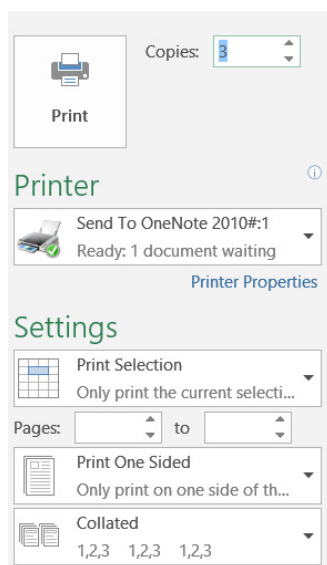


**Picture 265** Print selection option

- iv. Click **PRINT** to launch the print.

## 10.2.1 COPIES

By default, Excel will print one copy of the item you have sent to print. You can print multiple copies by changing the Print dialog settings. When you print multiple copies of a document, Excel lets you choose whether the copies are collated (Excel prints each whole document before it starts on the next copy) or uncollated (Excel prints however many copies you have requested of each page).



**Picture 266** Number of copies

➔ To print multiple copies:

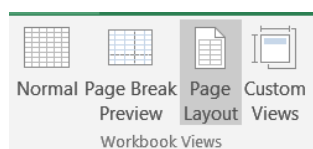
**Mouse**

- i. Click the **FILE** Tab, click **PRINT**. Or Press **CTRL+[P]**.
- ii. In the **COPIES** section of the window, use the up and down arrows to the right of the Number of copies text box to set the number of copies you require.
- iii. Choose how you wish them collated by making a selection from the drop down box.
- iv. Click **PRINT** to launch the print.

## 10.3 VIEWS

### 10.3.1 PAGE LAYOUT VIEW

A Relatively new view as an alternative to Print Preview is the page layout View which allows you more flexibility in setting up the page for printing while still allowing you to work with your data. It is also easier to set up Headers and footers and immediately see the effect of any changes made to them.



**Picture 267** Page layout view

➔ To change to page layout view

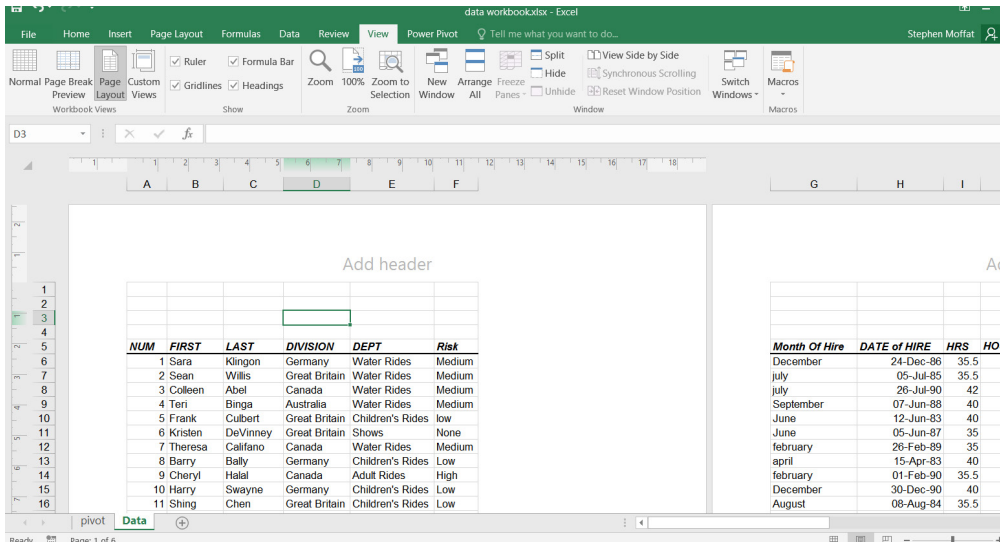
**Mouse**

- i. On the **VIEW** tab in the **WORKBOOK VIEWS** group click **PAGE LAYOUT**.
- OR**
- i. Click on the **PAGE LAYOUT** button near the zoom control bottom right.



**Picture 268** Page layout button – status bar

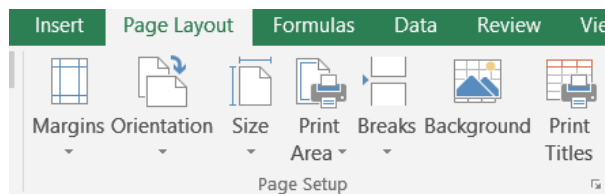
- ii. Your document should break into pages as in the illustration below.



Picture 269 Page layout view

### 10.3.2 LAYOUT TAB – PAGE SETUP GROUP

When you want to alter headers and footers, orientation and so on, you generally use the **PAGE SETUP** dialog box. There are four tabs within this dialog, each give settings for one aspect of your printout. You can access the **PAGE SETUP** dialog from either the worksheet or the **PRINT PREVIEW** window, however it is easier to and more user friendly to access these settings from the **PAGE SETUP** group on the **PAGE LAYOUT** Tab.



Picture 270 Page setup buttons

While in **PAGE LAYOUT** view It is easier to change and immediately see the changes of some of these most often used settings we will cover how to set them in the **PAGE SETUP** dialog later.

#### Orientation

➔ To change orientation

##### Mouse

- i. Click on the **ORIENTATION** button from the **PAGE SETUP** group (below).
- ii. Choose an **ORIENTATION**.

## Paper size

→ To change paper size

### Mouse

- i. Click on the **SIZE** button from the **PAGE SETUP** group (below).
- ii. Choose a size from the common sizes.
- iii. For an unusual size we have to use the **MORE PAPER SIZES** button.

→ To set margins

## Margins

### Mouse

- i. Click on the **MARGINS** Button from the **PAGE SETUP** group (below).
- ii. Choose a Margin size from the common margin settings.
- iii. For a different custom set of margins we have to click on the Custom margins.



*The last custom set of margins you set will appear in the margin settings menu to save you having to type them again.*

## Page break

→ To insert or remove a page break

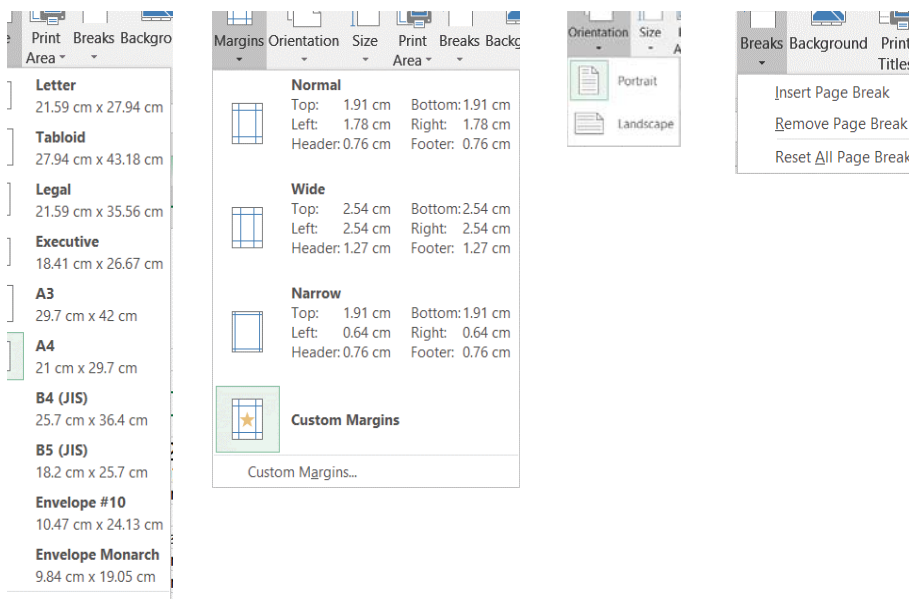
Page breaks Force the printing of following data onto the next page and can be useful when printing to organise specific data to be printed separately from others, usually this is used in conjunction with page break preview to organise exactly what data is printed on what page it is being mentioned here in relation to the Page setup group.



*If the FIT TO option is active in the PAGE SETUP dialog, you cannot set manual page breaks.*

### Mouse

- i. Click on the **BREAKS** Button from the **PAGE SETUP** group (below).
- ii. Select whether to insert or remove a page break.
- iii. Resetting ALL page breaks will set the pages to break naturally.



Picture 271 Page setup buttons menu options

## Background

→ To set a background

In 2016 a background can be set for the whole of the visual and printed workbook.

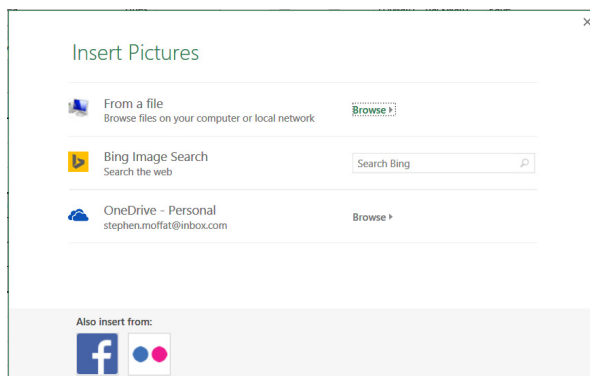
### Mouse

- i. Click on the **BACKGROUND** Button from the **PAGE SETUP** group.



Picture 272 Background button

- ii. Search or browse from the suggested locations to locate and select a background.



Picture 273 Background locations

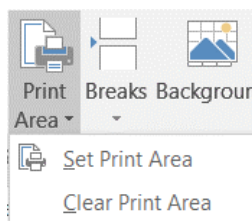
iii. Apply the background you desire.

	A	B	C	D	E	F	G	H	I	
1			Sales							
2										
3										
4			Week 1	Week 2	Week 3	Week 4	Total			
5		Fred	£300.00				£300.00			
6		Liz					£ -			
7		Pete					£ -			
8		John					£ -			
9							£300.00			
10										
11										
12										
13										

Picture 274 Applied background

### Print area

If you only wish to print a very specific section of your workbook. You could use the print selection option but if you regularly print the same section of information this can become tedious so instead we can set a specific section to be printed ignoring all other info.



Picture 275 Print area button

→ To set or clear a print area  
**Mouse**

- i. Select the specific info you wish to regularly print.
- ii. Click on the **PRINT AREA** button.
- iii. Select **SET PRINT AREA**.
- iv. If you already have a print area set, use the **CLEAR PRINT AREA** button to remove the existing area.
- v. Select a new area and set a new one.

### Print titles

If you have a large body of information that you wish to print you would lose column titles or row titles on the subsequent pages we can ensure that any column or row tiles are repeated on all printed pages to ensure that your data is understandable to read.

→ To set row/ column tiles to repeat when printed

### Mouse

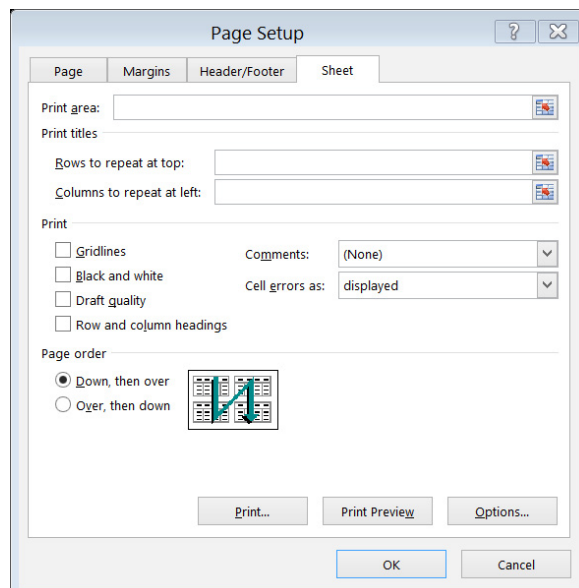
- i. Click on the **PRINT TITLES** button in the **PAGE SETUP** group.



**Picture 276** Print /repeat titles

- ii. This time there is no mini menu to make a selection from it immediately opens up the **PAGE SETUP** dialog at the **SHEET** Tab.

The advertisement features a background image of three smiling business professionals in a meeting. The Wethrive.net logo is in the top left. The main headline reads 'How to retain your top staff' with the sub-headline 'FIND OUT NOW FOR FREE'. A white callout box on the right contains the heading 'DO YOU WANT TO KNOW:' followed by three questions: 'What your staff really want?', 'The top issues troubling them?', and 'How to make staff assessments work for you & them, painlessly?'. At the bottom of the callout is a green button labeled 'Get your free trial' and the text 'Because happy staff get more done'.



**Picture 277** Page setup dialog – repeat titles

- iii. If you wish to repeat column titles click in the **ROWS TO REPEAT AT TOP** box and click on the title rows on your sheet it may appear in the box as **B:B** for example.
- iv. If you wish to repeat Row titles, click in the **COLUMNS TO REPEAT AT LEFT** box and click on the title rows on your sheet it may appear in the box as **1:1** for example.
- v. Deleting values from these boxes would clear the option in the future.
- vi. Click **OK** to apply your choices **CANCEL** to clear them.



*All choices made while in PAGE LAYOUT view will be immediately apparent on screen even repeated titles. Repeated titles can only be seen in page layout view and print Preview.*

## 10.4 PAGE SET UP DIALOG

Having already covered the print preview and the **PAGE LAYOUT** group on the **LAYOUT** tab this section will deal exclusively with the options on the **PAGE SET UP** Dialog.

➔ To access the page setup dialog:

#### Mouse

- i. Click the **DIALOG BOX LAUNCHER**. From **PAGE SETUP** group on the **PAGE LAYOUT** Tab.



**Picture 278** Dialog launcher

#### OR

- i. If you are in the **PRINT PREVIEW** window, click the **PAGE SETUP** link.

### 10.4.1 PAGE TAB

The **PAGE** tab allows you to set page orientation, scaling, paper size, print quality and a start number for page numbering.

#### Orientation

Use this setting to swap between portrait and landscape printouts.

➔ To change page orientation:

#### Mouse

- i. Access the **PAGE SETUP DIALOG** and click the **PAGE** tab.
- ii. The default orientation is Portrait. Click **LANDSCAPE** to switch to printing on a landscape page.
- iii. Click **OK** to close the dialog and save the setting – next time you access Print Preview; the new settings will be displayed.

#### Scaling

You can manually scale the size of your printout by choosing a percentage amount you want to increase or decrease it by. The Adjust to option reduces or enlarges the printed worksheet. The Fit to option will only reduce (not enlarge) the worksheet or selection when you print so that it fits on the specified number of pages.

Scaling

Adjust to: 100 % normal size

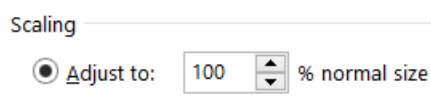
Fit to: 1 page(s) wide by 1 tall

**Picture 279** Scaling options

➔ To reduce or enlarge your printout:

### Mouse

- i. Access the **PAGE SETUP** dialog and click the **PAGE** tab.
- ii. Select the **ADJUST TO** check box, and then enter a percentage number in the % normal size box. You can reduce the worksheet to 10 percent of normal size or enlarge it to 400 percent of normal size.



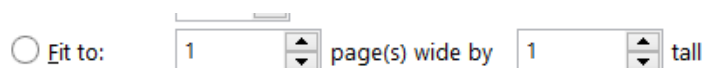
**Picture 280** Scaling – percentage

- iii. Click **OK** to close the dialog and save the setting –while in **PRINT PREVIEW**, or **PAGE LAYOUT** view the new settings will be displayed. Or they will be seen next time you access it.

➔ To fit your printout to a number of pages:

### Mouse

- i. Access the **PAGE SETUP** dialog and click the **PAGE** tab.
- ii. Select the **FIT TO** check box and then enter a number in the page(s) wide by box. If you want to limit the number of pages tall, enter a number in the tall box.



**Picture 281** Scaling – fit to

- iii. Click **OK** to close the dialog and save the setting – next time you access Print Preview or page layout view the new settings will be displayed.

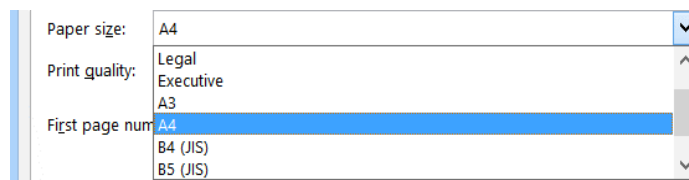
## Paper size

You can pick the size of the paper you want to print on by choosing from a list of pre-defined sizes.

→ To choose paper size:

### Mouse

- i. Access the **PAGE SETUP** dialog and click the **PAGE** tab.
- ii. Click the drop-down list arrow to the right of the **PAPER SIZE** box and click the paper size you want.



**Picture 282** Paper size options

- iii. Click **OK** to close the dialog and save the setting – next time you access Print Preview, or page layout view the new settings will be displayed.

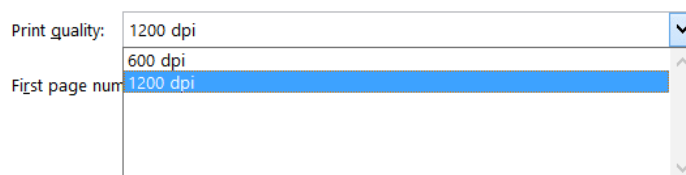
## Print quality

You can enhance the quality of the printout if you need a pristine copy.

→ To change print quality:

### Mouse

- i. Access the **PAGE SETUP** dialog and click the **PAGE** tab.
- ii. Click the drop-down list arrow to the right of the **PRINT QUALITY** box and click the resolution you want for the print quality of the active workbook.



**Picture 283** Print quality options

- iii. Click **OK** to close the dialog and save the setting – next time you access Print Preview, or page layout view the new settings will be displayed.



*Resolution is the number of dots per linear inch (dpi) that appear on the printed page. Higher resolution produces better quality printing in printers that support higher resolution printing.*

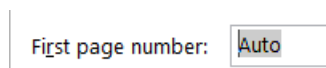
## Set first page number

If your printout is to form part of a larger document, you may need to change start number for pages.

→ To change first page number:

### Mouse

- i. Access the **PAGE SETUP** dialog and click the **PAGE** tab.
- ii. Drag across the word **AUTO** in the **FIRST PAGE NUMBER** box to select it.  
Type the number you want the page numbering to begin at.

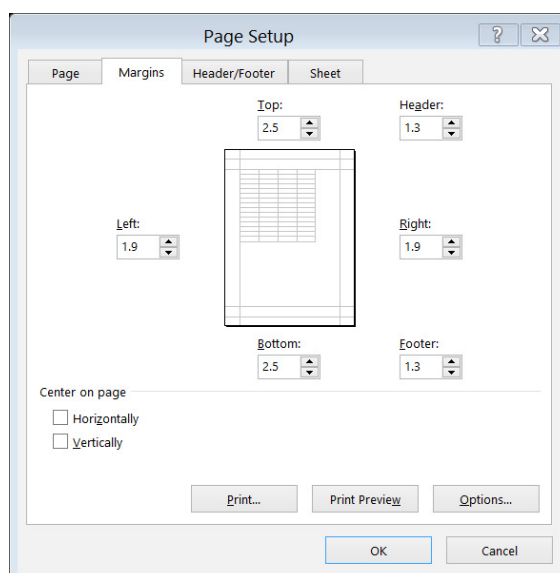


**Picture 284** Setting first page number

- iii. Click **OK** to close the dialog and save the setting.

## 10.5 MARGINS TAB

The Margins tab lets you set top, bottom, left and right margins and centre your data horizontally and vertically on the page. You can also determine how far from the bottom and top edges of the page your headers and footers print.



**Picture 285** Page setup dialog – margins tab

→ To change margins:

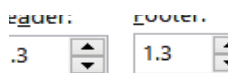
**Mouse**

- i. Access the **PAGE SETUP** dialog and click the Margins tab. (Previous)
- ii. Use the up and down arrows in the **TOP, BOTTOM, LEFT** and **RIGHT** boxes to increase and decrease margin measurements. The page sample in the middle of the dialog will update to show how your settings will look should you choose to apply them.
- iii. Click **OK** to close the dialog and save the settings these are then applied in Print Preview.

### 10.5.1 TO CHANGE HEADER AND FOOTER SIZE:

**Mouse**

- i. Access the **PAGE SETUP** dialog and click the **MARGINS** tab.
- ii. Use the up and down arrows in the **HEADER** and **FOOTER** boxes to increase and decrease the space between the header and footer and the top and bottom edges of the page.



**Picture 286** Header and footer size boxes

- iii. Click **OK** to close the dialog and save the settings these are then applied in Print Preview.

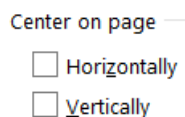
### Centre on page

Use these check boxes to centre the data you are printing horizontally (between left and right margins) and/or vertically (between top and bottom margins).

→ To centre horizontally and vertically:

**Mouse**

- i. Access the **PAGE SETUP** dialog and click the **MARGINS** tab.
- ii. Click the **HORIZONTALLY** check box to centre between left and right margins.  
Click the **VERTICALLY** check box to centre between top and bottom margins.



**Picture 287** Center on page options

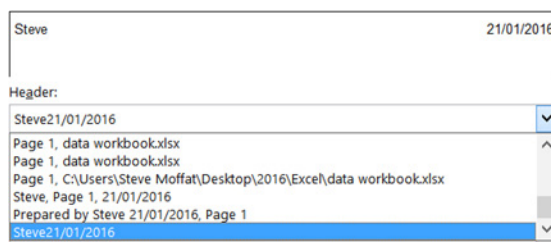
- iii. Click **OK** to close the dialog and save the settings – next time you access Print Preview, the new settings will be displayed.

## 10.6 HEADER/FOOTER TAB

Unless you specify otherwise, Excel uses the sheet name as the header for your printout and the page number as the footer. You can choose from a predefined list of options for your header and footer, or for total flexibility, you can build up the header and footer with codes that will generate dates, times, file names etc.

### 10.6.1 HEADER & FOOTER FROM PAGE DIALOG

Excel's default header is the sheet name. The Header box gives a list of options for you to use as your header. Excel spaces items out in the header at the top left, middle and top right of the page. Where an option has commas separating items Excel will interpret the comma as the spacing symbol.



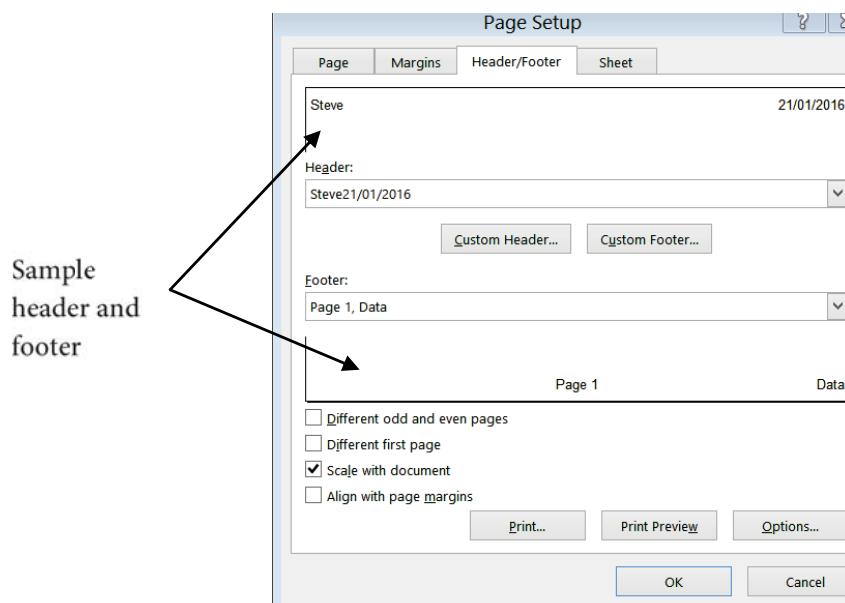
**Picture 288** Selecting a preset header

### Header options

→ To change the header:

#### Mouse

- i. Access the **PAGE SETUP** dialog and click the **HEADER/FOOTER** tab.



**Picture 289** Page setup dialog – header and footer

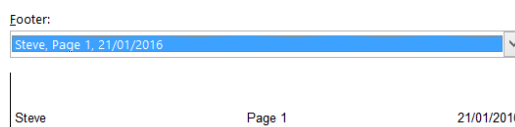
- ii. Click the drop-down list arrow to the right of the **HEADER** box to view a list of predefined headers and click the one you want. The sample area will show you what your choice will look like.
- iii. Click **OK** to close the dialog and save the settings – next time you access **PRINT PREVIEW**; the new settings will be displayed.

### Footer options

Excel's default footer is the page number. The Footer box, gives you the same options as the header box, but the position of the chosen item will be at the bottom of the page. Excel spaces items out in the footer at the top left, middle and top right of the page. Where an option has commas separating items Excel will interpret the comma as the spacing symbol.

➔ To change the footer:

1. Click the **DIALOG BOX LAUNCHER**. From **PAGE SETUP** group on the **PAGE LAYOUT** Tab, select the **HEADER/FOOTER** tab.
2. Click the drop-down list arrow to the right of the **FOOTER** box to view a list of predefined footers and click the one you want.



**Picture 290** Selecting a preset footer

3. Click **OK** to close the dialog and save the settings – next time you access Print Preview, the new settings will be displayed.

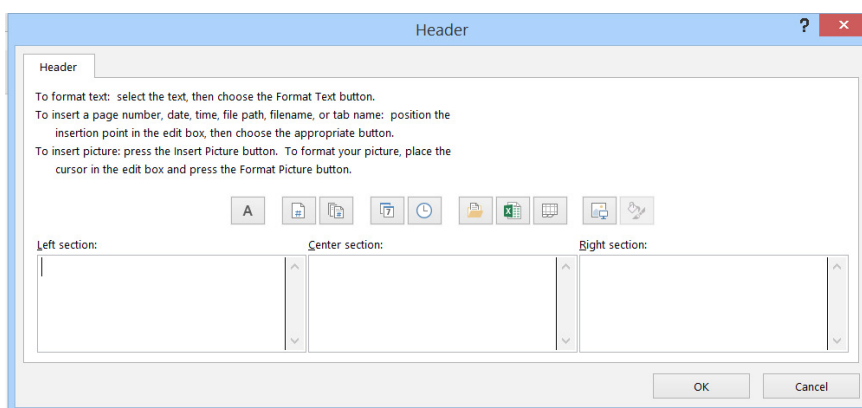
### Custom header and footer

If the choice of what you want for your header and footer is not within the list you may enter your own by choosing the custom button for header or footer.

→ To create custom header or Footer

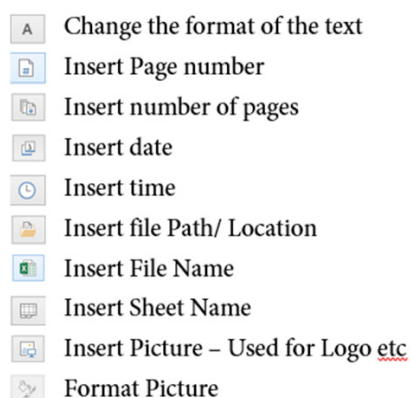
#### Mouse

- i. In the **PAGE DIALOG** box on the **HEADER/FOOTER** tab.
- ii. Click on **CUSTOM HEADER** or **CUSTOM FOOTER** a dialog will open in front of the **PAGE DIALOG** box but the options for either are the same.



**Picture 291** Building a custom header/footer

- iii. These items are inserted as fields within the left centre or right boxes choose a box and insert the appropriate choice of field you may type free text as well like your company name or department. Insert more than one field in a box if necessary.



You can type text into the left, centre and right sections, but if you want information to change dynamically according to alterations you make to filenames, sheet names or you want to always display the current date and time in the header (useful for seeing when a worksheet was printed), the dialog has buttons that generate codes. The codes instruct Excel to include information where you have positioned them and will update if the information that they generate changes. The list to the left details what each of the buttons do.

**Picture 292** Custom field buttons

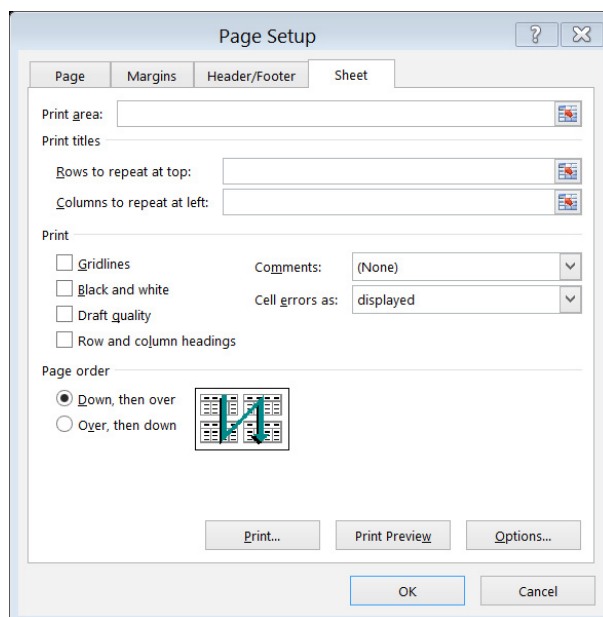
- iv. After entering your values click **OK** to confirm your choices the window will close and you may see a preview in the sample area on the **HEADER/FOOTER** Tab of the **PAGE SETUP** dialog
- v. Click **OK** again to accept and apply your header/footer and close the dialog.
- vi. The header and footer can be seen in the **PRINT PREVIEW** and **PAGE LAYOUT** views.

### 10.6.2 SHEET TAB

The sheet tab offers some option like print area and rows and columns to repeat, these we have covered earlier but it is good to know where we can come and alter the choices we made. It also offers some options not previously covered like in what direction you would like to print if you have much data. Whether to print gridlines or not.



The advertisement features a black header with the CMO Inspired Conference logo on the left, which consists of a green speech bubble containing the letters 'CMO'. To the right of the logo, the text reads 'INSPIRED CONFERENCE' in large white letters, followed by '25 OCTOBER | DE VERE BEAUMONT ESTATE | OLD WINDSOR UK' in smaller white letters. Below the header is a photograph of a large, white, classical-style building with a fountain in the foreground. At the bottom of the advertisement is a collage of four images: a panel discussion on a stage, a woman speaking at a podium, a large audience seated in a hall, and a man presenting a slide. Below the collage, the text 'Join Over 100 Chief Marketing Officers & Digital Innovators' is written in green.



**Picture 293** Page setup dialog – sheet tab

## Print options

### Mouse

- i. Tick the boxes within the print section of what you would like to print and what direction you would like to have your pages ordered.
- ii. Click **OK** to apply changes.



*Some settings on the Sheet tab are only available when you access the PAGE SETUP dialog from the layout Tab. If you are accessing it from the Print Preview window, you will not have access to the PRINT AREA and PRINT TITLES settings.*



*The Page Setup dialog saves print settings for the active sheet only. If you want several sheets to have the same print settings, select them before you access the Page Setup dialog.*

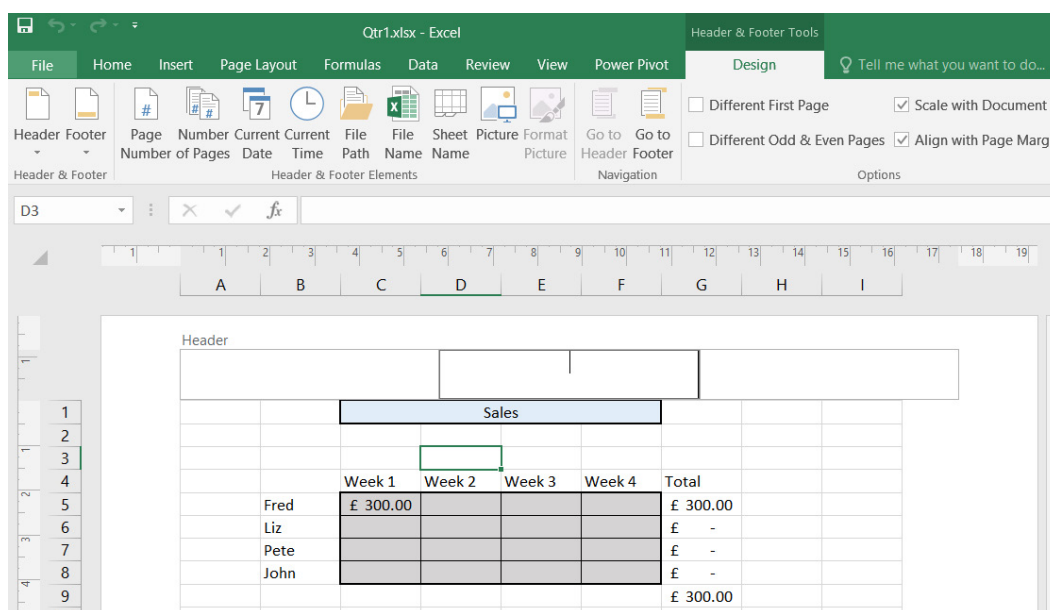
## 10.7 NEW METHODS FOR HEADERS AND FOOTERS IN 2016

In Microsoft Office Excel, you can quickly add or change headers or footers to provide useful information in your worksheet printouts. You can add predefined header and footer information or insert elements such as page numbers, the date and time, and the file name.

To define where in the printout the headers or footers should appear and how they should be scaled and aligned, you can choose from the header and footer options.

For worksheets, you can work with headers and footers in the new **PAGE LAYOUT** view. For other sheet types, such as chart sheets, or for embedded charts you have to work with headers and footers from the **PAGE SETUP** dialog box.

Entering headers and footers in the page layout view is relatively easy and painless and without the need for keep accessing dialog boxes.

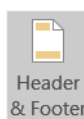


**Picture 294** Adding header in page layout view

→ To access the the header and footer tab

**Either**

- i. Click the **HEADER AND FOOTER** button on the **INSERT** tab.



**Picture 295** Header and footer button

**OR**

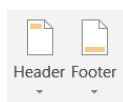
- i. Go to the **PAGE LAYOUT** view and click in the header and footer area.
- ii. A new **HEADER AND FOOTER** tab will appear on the ribbon.

### 10.7.1 PAGE LAYOUT HEADER / FOOTER

➔ Add a predefined header or footer to a worksheet in page layout view

#### Mouse

- i. Click the worksheet to which you want to add a predefined header or footer.
- ii. On the **INSERT** tab, in the **TEXT** group, click **HEADER & FOOTER**.
- iii. Excel displays the worksheet in **PAGE LAYOUT** view. You can also click the **PAGE LAYOUT VIEW** button on the status bar to display this view. Or go to the **VIEW** tab and select it there from the **WORKBOOK VIEWS** group.
- iv. Click the left, center, or right header or footer text box at the top or at the bottom of the worksheet page.
- v. Clicking any text box selects the header or footer and displays the **HEADER AND FOOTER TOOLS**, and **DESIGN** tab.
- vi. On the **DESIGN** tab, in the **HEADER & FOOTER** group, click **HEADER** or **FOOTER**, and then click the predefined header or footer that you want.



Picture 296 Predefined header and footer buttons

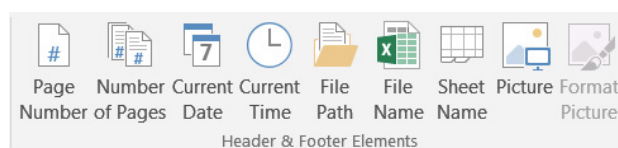
- vii. Clicking back on your spreadsheet will display the header or footer in the top or bottom margins (the design tab will disappear).
- viii. To return to **NORMAL** view, go to the **VIEW** tab, in the **WORKBOOK VIEWS** group, click **NORMAL**. You can also click the **NORMAL** button on the status bar.

➔ Add or change the header or footer text for a worksheet in page layout view

#### Mouse

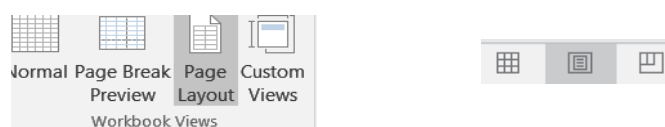
- i. Click the worksheet to which you want to add headers or footers, or that contains headers or footers that you want to change.
  - ii. On the **INSERT** tab, in the **TEXT** group, click **HEADER & FOOTER**.
  - iii. Excel displays the worksheet in **PAGE LAYOUT** view. You can also click the **PAGE LAYOUT VIEW** button on the status bar to display this view.
- OR**
- i. Just go to **PAGE LAYOUT VIEW** from the **VIEW** tab and click in a header or footer section
  - ii. To add a header or footer, click the left, centre, or right header or footer text box at the top or at the bottom of the worksheet page. And either:

- iii. You can type text into the left, centre and right sections, but if you want information to change dynamically according to alterations you make to filenames, sheet names or you want to always display the current date and time in the header (useful for seeing when a worksheet was printed), the dialog has buttons that generate codes. The codes instruct Excel to include information where you have positioned them and will update if the information that they generate changes.
- iv. Insert a header or footer element if you want from the **HEADER AND FOOTER ELEMENTS** group on the **DESIGN** Tab.





**Picture 297** Header and footer elements

- v. To *change* a header or footer, click the header or footer text box at the top or at the bottom of the worksheet page that contains header or footer text, and then select the text that you want to change.
- vi. To start a new line in a header or footer text box, press **ENTER**.
- vii. To delete a portion of a header or footer, select the portion that you want to delete in the header or footer text box, and then press **DELETE** or **BACKSPACE**. You can also click in the text and then press **BACKSPACE** to delete the preceding characters.



**Picture 298** View buttons

- viii. To return to **NORMAL** view, click on the worksheet and then click on the **NORMAL VIEW** button on the **VIEW** tab, in the **WORKBOOK VIEWS** group. You can also click **NORMAL** on the status bar.

-  To include a single ampersand (&) within the text of a header or footer, use two ampersands.
-  E.G., to include "Subcontractors & Services" in a header, type Subcontractors && Services.

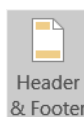
- ix. To close the **HEADERS OR FOOTERS**, click anywhere in the worksheet, or press **ESC**.

## 10.7.2 CHOOSE HEADER AND FOOTER OPTIONS

 Choose the header and footer options for a worksheet

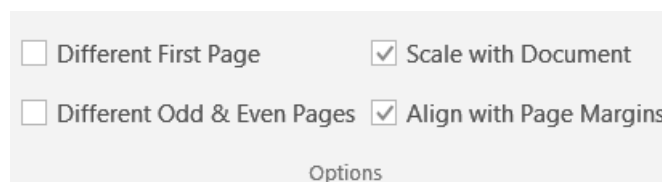
### Mouse

- i. Click the worksheet for which you want to choose header and footer options.
- ii. On the **INSERT** tab, in the **TEXT** group, click **HEADER & FOOTER**.



**Picture 299** Header and footer button

- iii. Excel displays the worksheet in **PAGE LAYOUT** view. You can also click **PAGE LAYOUT VIEW** on the status bar to display this view.
- iv. Click the left, center, or right header or footer text box at the top or at the bottom of the worksheet page.
- v. Clicking any text box selects the header or footer and displays the **HEADER AND FOOTER TOOLS**, as the **DESIGN** tab appears.
- vi. On the **DESIGN** tab, in the **OPTIONS** group, select one or more of the following:
- vii. To insert a different header or footer for odd pages on an odd page and for even pages on an even page, select the **DIFFERENT ODD & EVEN PAGES** check box.



**Picture 300** Header and footer options

- viii. To remove headers and footers from the first printed page, select the **DIFFERENT FIRST PAGE** check box.
- ix. To use the same font size and scaling as the worksheet, select the **SCALE WITH DOCUMENT** check box.
- x. To make the font size and scaling of the headers or footers independent of the worksheet scaling for a consistent display on multiple pages, clear this check box.
- xi. To make sure that the header margin or footer margin is aligned with the left and right margins of the worksheet, select the **ALIGN WITH PAGE MARGINS** check box.
- xii. To set the left and right margins of the headers and footers to a specific value that is independent of the left and right margins of the worksheet, clear this check box.
- xiii. To return to **NORMAL** view, on the **VIEW** tab, in the **WORKBOOK VIEWS** group, click **NORMAL**. You can also click **NORMAL** on the status bar.









*To include a single ampersand (&) within the text of a header or footer, use two ampersands. For example, to include "Subcontractors & Services" in a header, type Subcontractors && Services.*



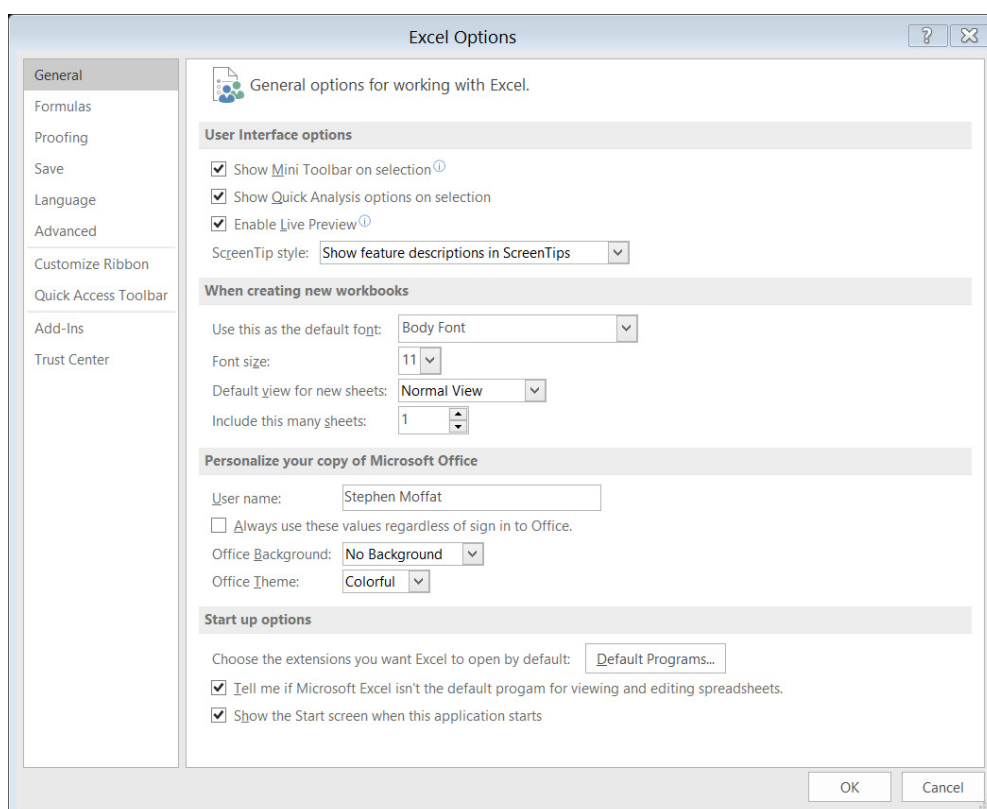
*If you insert a page break when you are not in either the first column or row, Excel will insert both a horizontal and vertical page break above and to the left of the active cell position.*

# 11 CUSTOMISING EXCEL

By the end of this section you will be able to:

-  Access and change Excel settings
-  Create Excel tabs
-  Edit existing tabs
-  Edit quick access toolbar
-  Set language choices
-  Set defaults for Excel

## 11.1 SET EXCEL OPTIONS



Picture 301 Excel general options

Options are set very differently in Excel 2016

- i. Click the **FILE** Tab, Click the **OPTIONS** button to open the dialog box above.

### 11.1.1 GENERAL

This sheet allows you to turn off the mini toolbar that appears whenever you float over selected text plus other basic options.

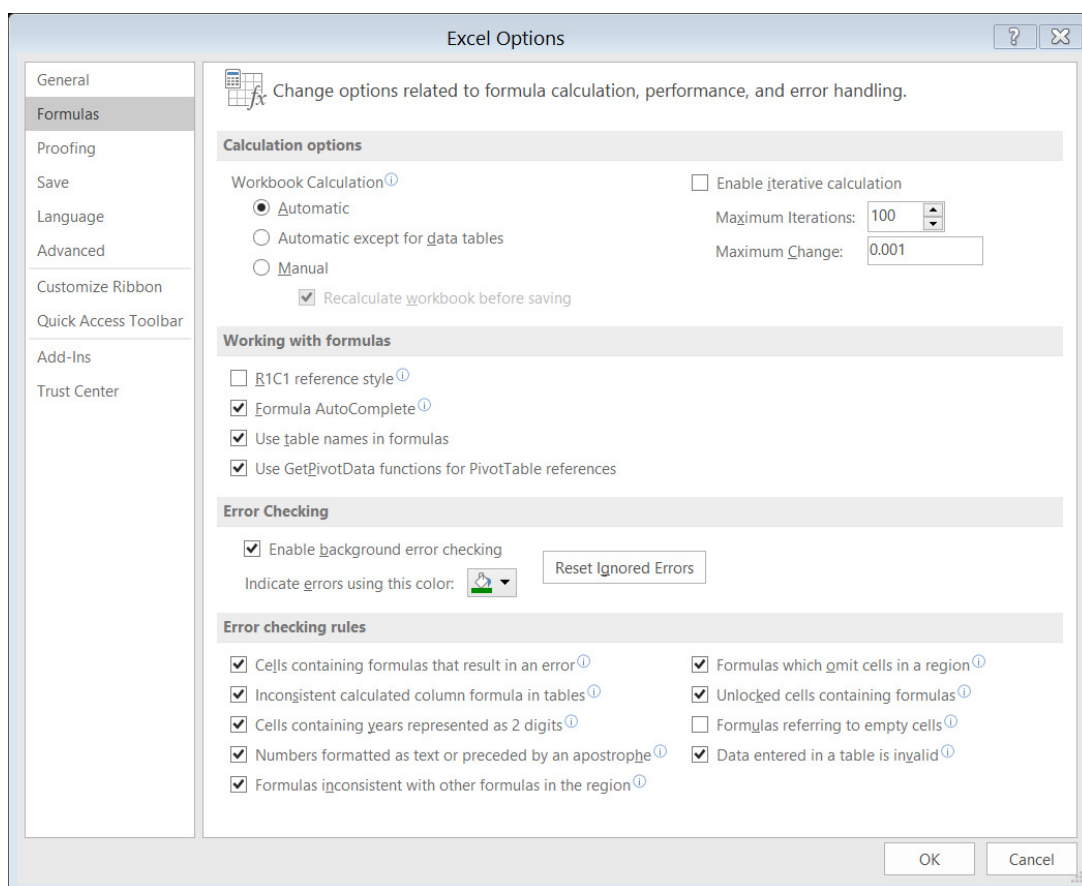
You may put in a different username which by default is the logon for windows.

You may change the default number of sheets from three to whatever you wish the limitations of excel will be in the next chapter.

You may even change the Office scheme for excel windows (not dialog boxes).

### 11.1.2 FORMULAS SHEET

This sheet allows the setting of options that changes the way excel will calculate your sheets and workbook.

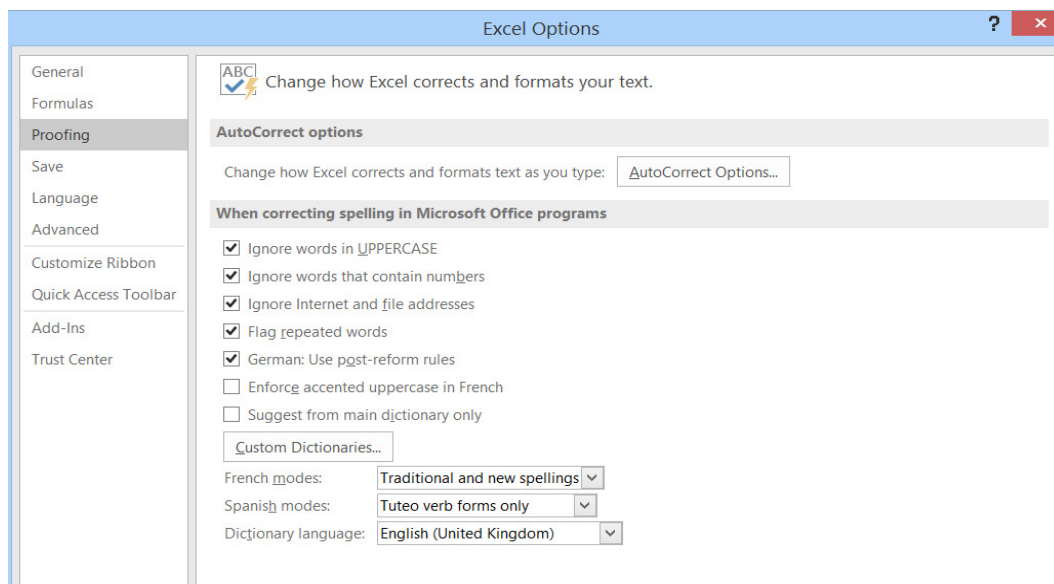


Picture 302 Excel options formulas shee

### 11.1.3 PROOFING

It is here on the Proofing sheet that the spell-check and grammar options are set for Excel.

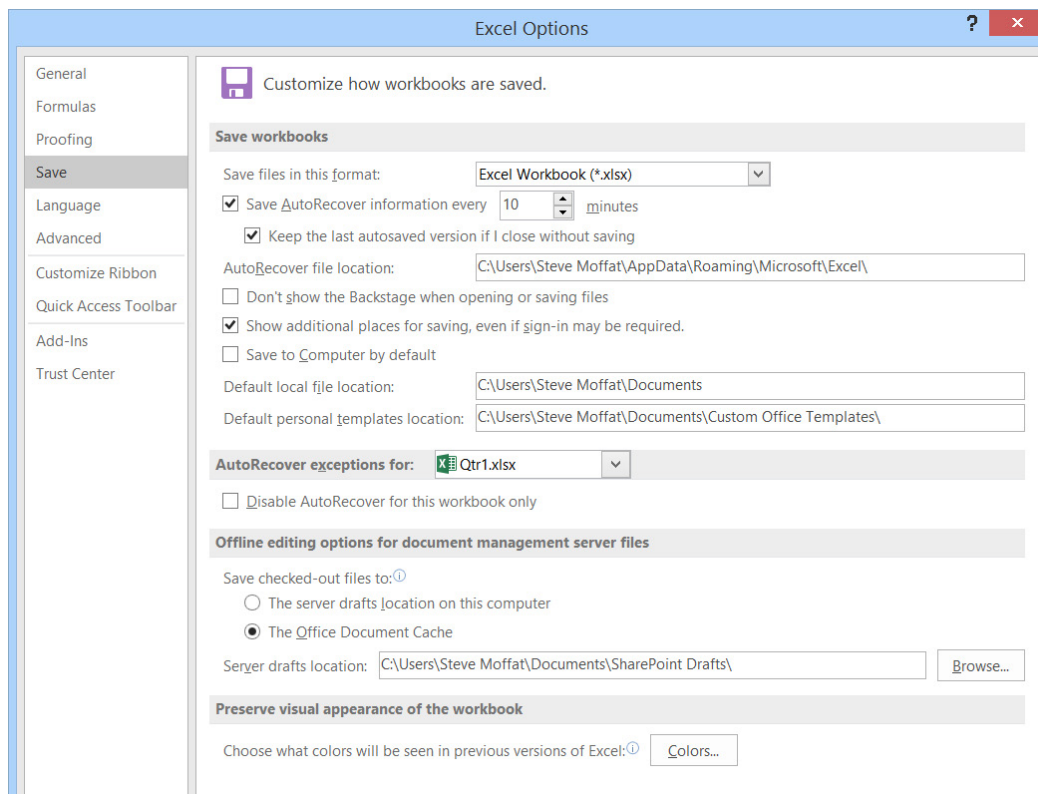
It also has the options for the autoformatting and autocorrection of entered text.



**Picture 303** Excel options proofing

### 11.1.4 SAVE

Save is an important sheet since excel 2016 saves in a completely different file format this sheet gives global options on what FileType to save the file as and where to save files by default. This sheet also has the autorecover options for where and how your files will be autosaved should windows crash. This saves your work regularly and automatically and should recover work should the worst happen.

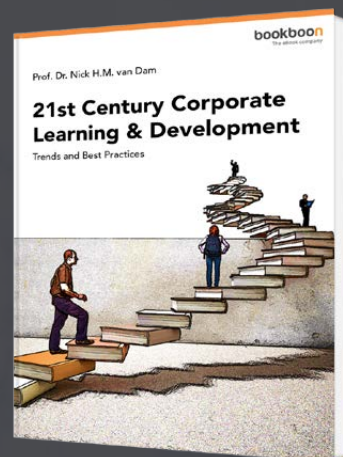


Picture 304 Excel options – save sheet

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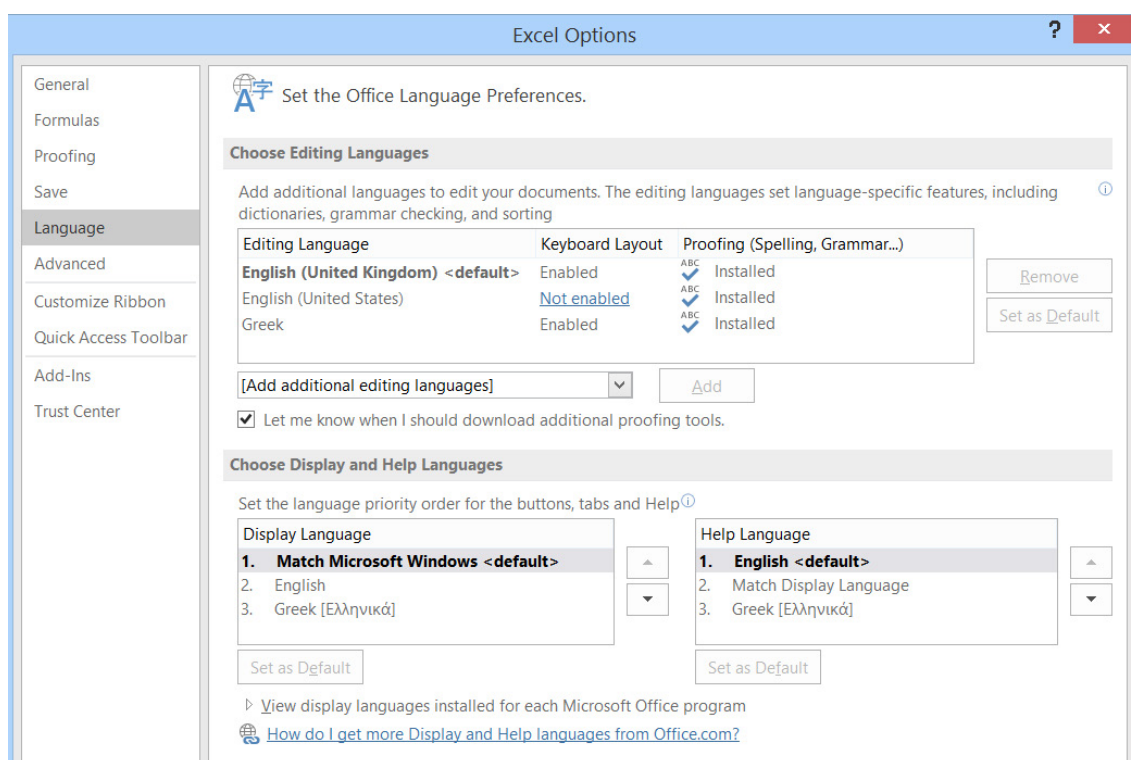


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### 11.1.5 LANGUAGE

Clicking the language settings button allows the setting of the default language not just for excel but for all the office programmes. It will allow you to change not only the typed language but the display and help language.

Even your screentip language can be set from here.



Picture 305 Excel options – languages settings

### 11.1.6 ADVANCED OPTIONS

These are all the options on the advanced sheet there are too many to go into but should be useful for reference.

Editing custom lists for various usages such as drag fill, series and sorting can be done from this sheet:

Advanced options for working with Excel.

**Editing options**

- After pressing Enter, move selection  
Direction: **Down**
- Automatically insert a decimal point  
Places: **2**
- Enable fill handle and cell drag-and-drop
  - Alert before overwriting cells
- Allow editing directly in cells
- Extend data range formats and formulas
- Enable automatic percent entry
- Enable AutoComplete for cell values
  - Automatically Flash Fill
- Zoom on roll with IntelliMouse
- Alert the user when a potentially time consuming operation occurs  
When this number of cells (in thousands) is affected: **33,554**
- Use system separators  
Decimal separator: **.**  
Thousands separator: **,**
- Cursor movement:
  - Logical
  - Visual
- Do not automatically hyperlink screenshot

Show gridlines  
Gridline color: **[Color Picker]**

**Formulas**

- Enable multi-threaded calculation  
Number of calculation threads:
  - Use all processors on this computer: **4**
  - Manual **1**
- Allow user-defined XLL functions to run on a compute cluster ⓘ  
Cluster type: **[Dropdown]** Options...

**When calculating this workbook:** **Qtr1.xlsx**

- Update links to other documents
- Set precision as displayed
- Use 1904 date system
- Save external link values

**General**

- Provide feedback with sound
- Provide feedback with animation
- Ignore other applications that use Dynamic Data Exchange (DDE)
- Ask to update automatic links
- Show add-in user interface errors
- Scale content for A4 or 8.5 x 11" paper sizes

At startup, open all files in: **[Text Box]**

**Show paste options**

- Show Paste Options button when content is pasted
- Show Insert Options buttons
- Cut, copy, and sort inserted objects with their parent cells

**Image Size and Quality** **Qtr1.xlsx**

- Discard editing data ⓘ
- Do not compress images in file ⓘ
- Set default target output to: **220 ppi**

**Print**

- High quality mode for graphics

**Chart**

- Show chart element names on hover
- Show data point values on hover
- Properties follow chart data point for all new workbooks ⓘ  
Current workbook: **Qtr1.xlsx**
- Properties follow chart data point for current workbook

**Display**

- Show this number of Recent Workbooks: **25** ⓘ
- Quickly access this number of Recent Workbooks: **4**
- Show this number of unpinned Recent Folders: **20**
- Ruler units: **Default Units**
- Show formula bar

---

- Show function ScreenTips
- Disable hardware graphics acceleration
- For cells with comments, show:
  - No comments or indicators
  - Indicators only, and comments on hover
  - Comments and indicators
- Default direction:
  - Right-to-left
  - Left-to-right

**Display options for this workbook:** **Qtr1.xlsx**

- Show horizontal scroll bar
- Show vertical scroll bar
- Show sheet tabs
- Group dates in the Autofilter menu
- For objects, show:
  - All
  - Nothing (hide objects)

**Display options for this worksheet:** **Mar**

- Show row and column headers
- Show formulas in cells instead of their calculated results
- Show sheet right-to-left
- Show page breaks

Picture 306 Excel options advanced sheet

### 11.1.7 MORE ADVANCED OPTIONS

Web Options...

Enable multi-threaded processing

Create lists for use in sorts and fill sequences:

**Data**

Disable undo for large PivotTable refresh operations to reduce refresh time

Disable undo for PivotTables with at least this number of data source rows (in thousands):

Prefer the Excel Data Model when creating PivotTables, QueryTables and Data Connections ⓘ

Disable undo for large Data Model operations

Disable undo for Data Model operations when the model is at least this large (in MB):

Enable Data Analysis add-ins: Power Pivot, Power View, and Power Map

**Lotus compatibility**

Microsoft Excel menu key:

Transition navigation keys

**Lotus compatibility Settings for:**  ▼

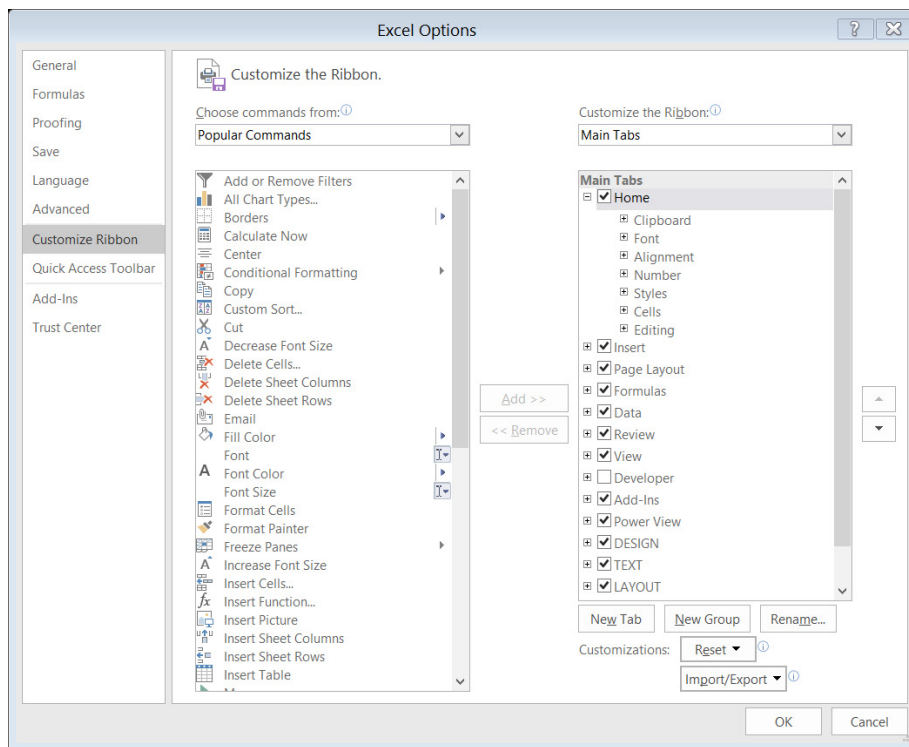
Transition formula evaluation

Transition formula entry

**Picture 307** Other options from advanced sheet

### 11.1.8 CUSTOMISE EXCEL TABS

In 2016 is the ability to customise existing Tabs and create new Tabs with all the most useful tools for the way you work with excel. These customisations can be exported and imported into other computers using excel 2016 or simply store the exports in case your machine has to be reinstalled. Then simply import your customisations into the new installation.

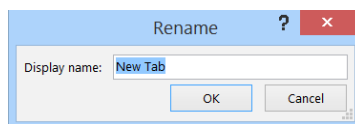


**Picture 308** Customise the ribbon

➔ To create a new tab

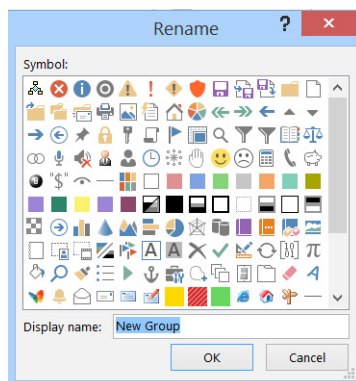
**Mouse**

- i. Go to the **FILE** Tab and open the **OPTIONS** from the button on the below left.
- ii. Go to the **CUSTOMISE RIBBON** button the dialog box above will be seen.
- iii. Click on the **NEW TAB** button a new tab will appear in the right hand frame.
- iv. Use the arrow buttons on the far right to position the tab where you wish it to appear.
- v. Click on **RENAME**.



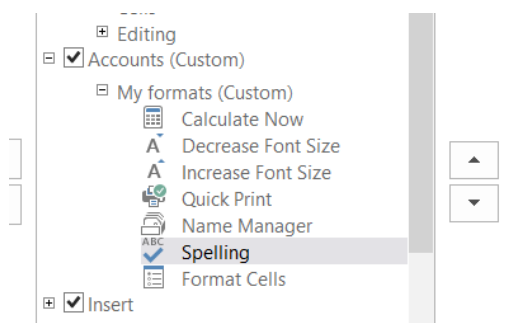
**Picture 309** Rename tab dialog

- vi. Give your tab a name and press **OK**.
- vii. Select the custom group on your created tab.
- viii. Click **RENAME**.



**Picture 310** Rename group dialog

- ix. Select an icon and name the group then click on **OK**.
- x. You may add several groups onto your tab if you wish, just rename each of them with appropriate labels.
- xi. Now you may drag the buttons you wish from the commands box on the left onto your group on the right.
- xii. If you cannot find a button you wish, go to the drop down box at the top of the commands and select the all commands option for example or commands not in the ribbon. You will now have other buttons you may wish to use.
- xiii. When all the buttons have been added that you wish You will end up with your own Tab on the right with the commands you would most like to access easily.
- xiv. When you click ok you will find your Tab amongst the others selecting it you will be able to use the commands you have added.

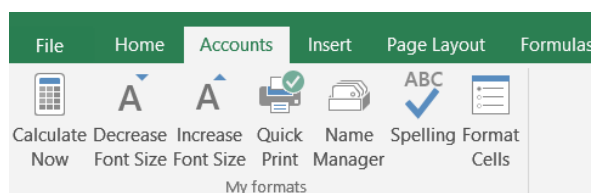


**Picture 311** Editing your tab or groups

→ To show or hide a tab

**Mouse**

- i. Access the excel options from the **FILE** Tab
- ii. Go to the **CUSTOMISE RIBBON** button
- iii. Tick or untick the tabs in the right hand box to show or hide Tabs from use.
- iv. Return to normal view and you will find your tab with its buttons.



**Picture 312** Your tab on the ribbon

### 11.1.9 CUSTOMISE QUICK ACCESS TOOLBAR



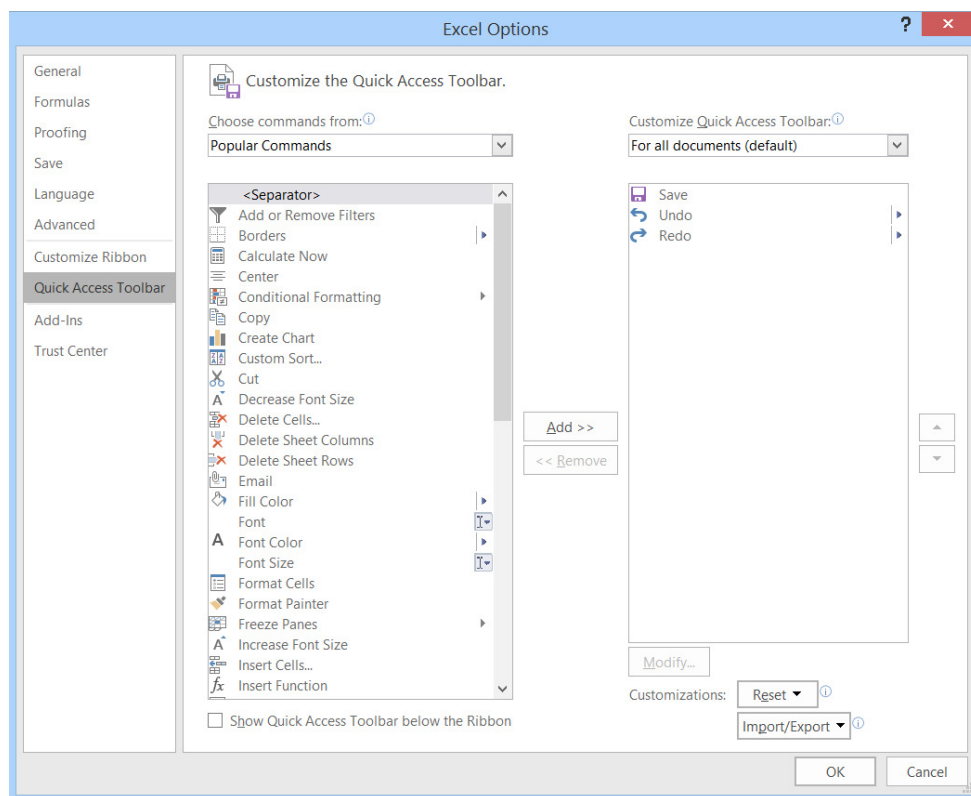
**Picture 313** Quick access toolbar

This is the location where you are able to customise the quick access toolbar (above the **FILE** Tab) and add your most often used buttons to it.

→ To customise quick access toolbar

**Mouse**

- i. Open up the **OPTIONS** dialog from the **FILE** Tab.



**Picture 314** Customising the quick access toolbar

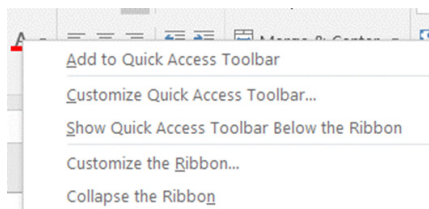
- ii. Go to the **QUICK ACCESS TOOLBAR** button on the left.
- iii. From the drop down arrow on the top left of the box you may choose which group of commands you may wish to see.
- iv. Select the buttons on the left and click on the add button in the middle to move them to the toolbar.
- v. If you make a mistake then select the button on the right and click remove.
- vi. Once all the buttons you want are on the right hand side click **OK** to finalise your choices and apply them.
- vii. You may click on **RESET** at any time to return to the default quick access toolbar.

## Editing quick access from ribbon

→ To edit from the ribbon

### Mouse

- i. Right click on any button or gallery on any tab of the ribbon and from the menu choose, **ADD TO QUICK ACCESS TOOLBAR**. You may build your Quick access toolbar this way if you prefer.



Picture 315 Editing by the right click on the ribbon

- ii. If you right click on any button on the **QUICK ACCEESS TOOLBAR** you may choose **REMOVE FROM QUICK ACCESS TOOLBAR**.

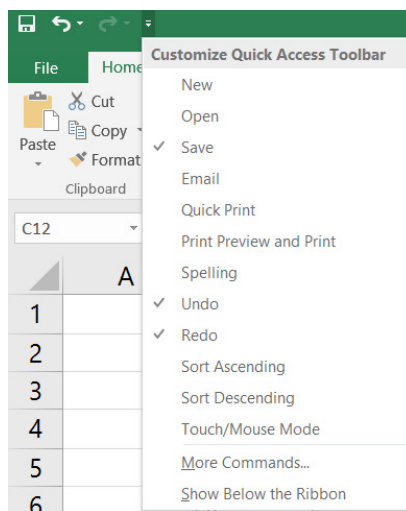
→ To move quick access toolbar



Picture 316 Quick access toolbar

### Mouse

- i. Use the button to the far right to access the quick access toolbar menu for further options including Move below the ribbon.
- ii. You may also add the most popular buttons by selecting them from the menu without having to go to the options.



Picture 317 Quick Access toolbar menu options

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