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# Microsoft Excel 2016

## Essentials

INFOCUS COURSEWARE

Designed to fast-track you through the process of learning about computers and information technology, the *In Focus* range is a unique and innovative concept in learning.

A quick reference summary of key procedures is provided at the bottom of each page together with handy tips and additional information.

Each title in the *In Focus* series can be used as:

- a classroom workbook for instructor-led teaching and training;
- a self-study guide for self-paced learning;
- a tutorial guide for distance education programs;
- a resource collection of just-in-time support and information for help desk users and support staff;
- a handy, desk-side reference for computer users.

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Microsoft Excel 2016
Essentials

WATSONIA PUBLISHING

# MICROSOFT EXCEL 2016
## ESSENTIALS

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# READ ME FIRST

In case you're not familiar with the terminology, *Read Me First* is quite often the name given to a computer file that contains important information for people to know prior to using an application.

This section contains some important information to help you use this book so we thought we'd start with a *Read Me First* section.

---

**What skills and knowledge you will acquire...**

The skills and knowledge acquired in Microsoft Excel 2016 - Essentials are sufficient to be able to use and operate the software effectively.

**What you'll need to know before beginning this course...**

Microsoft Excel 2016 - Essentials assumes little or no knowledge of the software. However, it would be beneficial to have a general understanding of personal computers and the Windows operating system environment.

**The objectives of this guide…**

At the completion of this course you should be able to:

- navigate your way around ***Microsoft Excel 2016***
- create and work with a new workbook
- make changes to data in a workbook
- understand, create and work with formulas and functions
- use font formatting techniques
- understand and use the number formatting features in ***Excel***
- print your workbook data
- apply a variety of page setup techniques
- understand and use ***Excel's Quick Analysis*** tools
- share workbooks with other users

**What you get in a chapter...**

Each chapter begins with a summary page listing the topics covered in that chapter. The chapter then consists of single-page topic sheets pertaining to the theme of the chapter.

**What you'll need to have before commencing this course...**

Many of the topics in this learning guide require you to open an existing file with data in it. These files can be obtained from your instructor and need the product code for this course which is ExcelEssentials.

**As you work through this guide…**

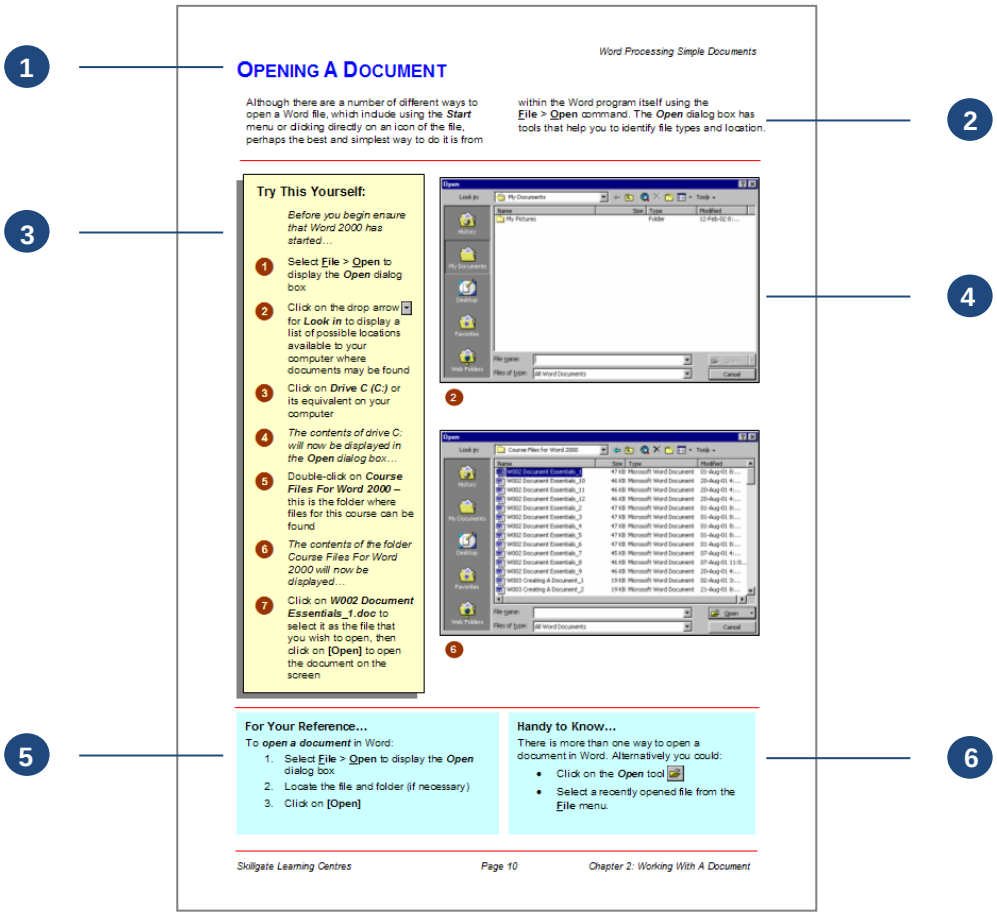
It is strongly recommended that you close all open files, if any, prior to commencing each new chapter in this learning guide. Each chapter, where relevant, has its own set of exercise files and any from a previous chapter are no longer required.

**Where to from here...**

Have a look at the next page which explains how a topic page works, ensure that you have access to the exercise files (see above), and you're ready to make a start.

# WORKING WITH TOPIC SHEETS

The majority of this book comprises single-page topic sheets. There are two types of topic sheets: ***task*** and ***reference***. The layout of both is similar – an *overview* at the top, *detail* in the centre and *additional reference* (optional) material at the bottom. *Task* sheets contain a *Try This Yourself* step-by-step exercise panel in the detail area as shown below.




| | |
|---|---|
| 1 | Topic name |
| 2 | General topic overview provides an introduction to the topic |
| 3 | *Try This Yourself* (*Task*-based topic sheets) is a detailed step-by-step practice exercise for you to work through. In *Reference* topic sheets this is usually replaced by a box with reference information. |
| 4 | In *Task* topic sheets screen shots and graphics provide a visual clue as to what will happen when you work through the *Try This Yourself* practice exercise. In *Reference* topic sheets the screen shots and graphics are used to visually represent information and concepts. |
| 5 | The *For Your Reference* (optional) element provides a quick summary of the steps required to perform a task. These usually only appear in Task-based topic sheets. |
| 6 | The *Handy To Know* (optional) element provides additional information such as alternate ways of accomplishing a task or further information providing handy tips. |

# CONTENTS

CHAPTER 1

# GETTING TO KNOW EXCEL 2016

INFOCUS

***Microsoft Excel*** is a *spreadsheet* application that is usually part of a suite of Microsoft applications, known as ***Microsoft Office***.

You can use Excel for all sorts of tasks involving numbers such as budgeting, sales analysis, forecasting, charting and graphing and much more. Excel is a tool used to perform calculations with numbers, so virtually any task that requires calculation and number crunching can be setup and performed in Excel.

Before you start creating anything, it is worth taking some time to become familiar with the Excel environment and its features.

**In this session you will:**

- ✓ learn how to start ***Excel*** from the desktop in ***Windows 10***
- ✓ gain an understanding of the ***Excel Start*** screen
- ✓ gain an understanding of the ***Excel 2016*** workbook screen
- ✓ gain an understanding of how ***Excel*** works
- ✓ learn how to use the ribbon to access commands
- ✓ learn how to show and collapse the ribbon
- ✓ gain an understanding of ***Backstage*** view in ***Excel***
- ✓ learn how to access the ***Backstage*** view
- ✓ learn how to use shortcut menus
- ✓ gain an understanding of how dialog boxes work
- ✓ learn how to launch a dialog box
- ✓ gain an understanding of the ***Quick Access Toolbar***
- ✓ learn how to add commands to the ***Quick Access Toolbar***
- ✓ gain an understanding of the status bar
- ✓ learn how to exit correctly and safely from ***Excel***.

# STARTING EXCEL FROM THE DESKTOP

To create or edit a workbook, the first thing you must do is start Excel. The first time you use Excel you will need to open it from the taskbar ***Search the web and Windows*** bar or the ***All apps*** list in the ***Start*** menu. You can then choose to pin it to the ***Start*** menu or the taskbar so that you can access it more quickly and easily the next time you use it.

## Try This Yourself:

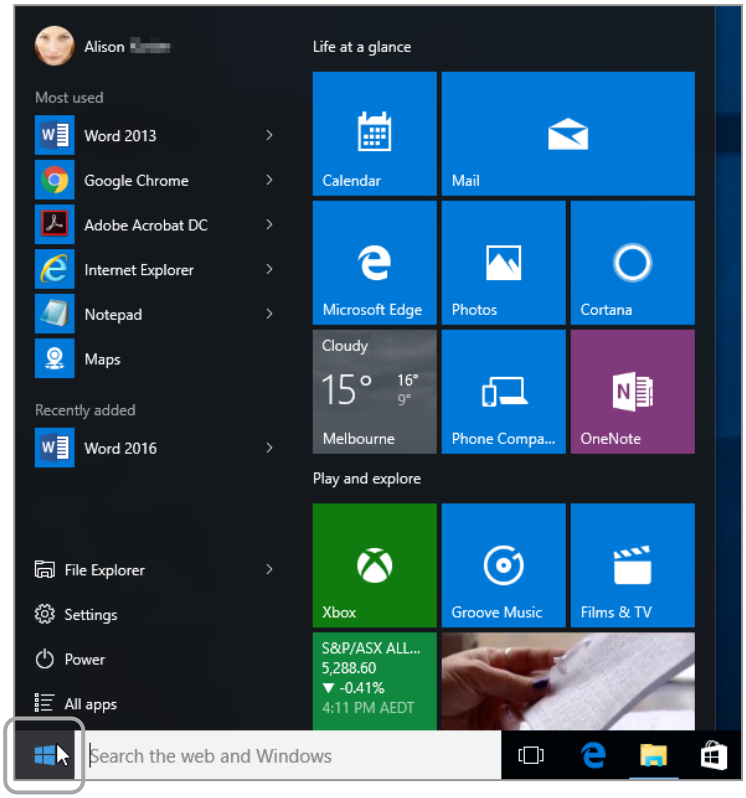
*Before you begin, ensure that your computer is switched on and the desktop is displayed…*

1. If there is no ***Excel*** icon in the taskbar at the bottom of the desktop, click on the ***Windows*** icon in the taskbar, as shown, to display the ***Start*** menu
2. Click on ***All apps*** to display a list of all the apps on your computer
3. Scroll down to the ***E*** section

   *Excel 2016 is listed here…*
4. Click on ***Excel 2016*** to start Excel
5. Right-click on the Excel icon in the taskbar to display a menu of options, as shown, then select **Pin this program to taskbar**

   *You can now click on this icon to open Excel from the desktop. This icon will remain in the taskbar unless you remove it…*
6. Repeat step ***5*** to select **Close window** to close Excel
7. Click on the Excel icon in the taskbar to open ***Excel*** again

1

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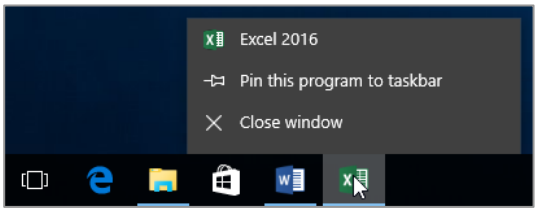



### For Your Reference…

To ***add*** an ***Excel icon*** to the ***desktop taskbar***:

1. Display the ***Start*** menu, then click on ***All apps***
2. Right-click on ***Excel 2016***
3. Select **Pin to taskbar**

### Handy to Know…

- You can start Excel by clicking in the taskbar ***Search…*** bar, typing **excel**, then clicking on Excel in the list of search results.
- You can pin Excel to the ***Start*** menu by displaying the ***All apps*** list, right-clicking on ***Excel 2016*** and selecting **Pin to Start**.

# UNDERSTANDING THE EXCEL START SCREEN

Unless you start Excel with a specific data file, ***Excel 2016*** will open with the Excel ***start*** screen displayed. This acts as a gateway into Excel and from this initial screen you can choose what kind of workbook you want to work with. You can choose to work with a recent file, open an existing file, or create a new file using the available templates.

## The Excel 2016 Start Screen

In Microsoft Excel your data is stored in a file referred to as a workbook.

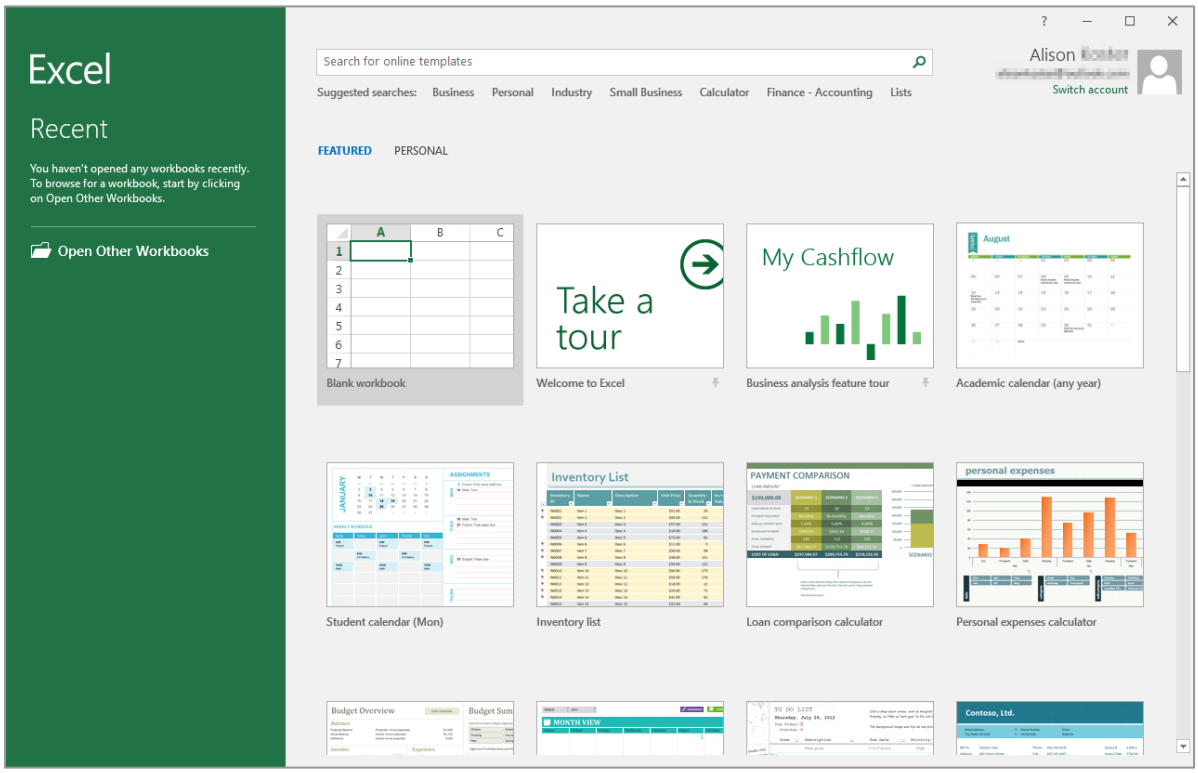
The Excel 2016 start screen is very helpful if you want to quickly access files you have worked on recently or create a new workbook file based on one of the available templates (including the default Blank workbook template). It acts as a gateway into the program.

If you have already worked on workbooks, a list of recent files will display below ***Recent*** in the green pane to the left of the screen. If you haven't worked on any workbooks yet you can open existing files by clicking on ***Open Other Documents*** (below ***Recent*** in the left green pane). This allows you to open an existing workbook file from your computer or ***OneDrive***.

The right side of the start screen displays thumbnail previews of available templates you can use to create a new workbook. It also contains the ***Search for online templates*** box, which you can use to search the internet for additional templates.

Templates are simply layouts that have already been created which you can customise to suit your needs and then enter relevant data. If you want to start with a clean slate you can choose the ***Blank workbook*** template – you'll probably find this is the one you'll use the most.

In the top right corner of the start screen you'll see information about the account you've used to sign into Windows, as well as commands such as ***Microsoft Excel Help***, ***Minimise***, ***Restore Down*** (or ***Maximise***) and ***Close***.

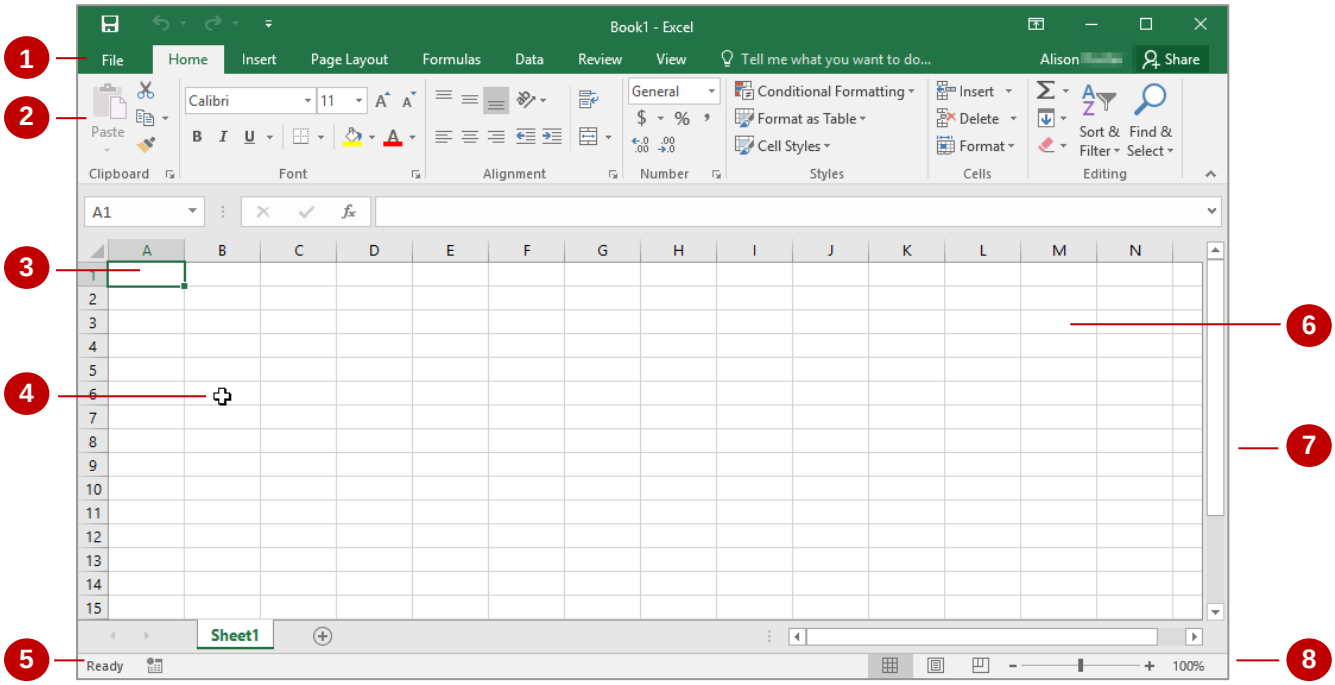



The ***start*** screen will only display when you launch the ***Excel 2016*** application directly – that is, by clicking on ***Excel 2016*** in the ***All apps*** list in the ***Start*** menu, searching for Excel and clicking on it in the search results, or clicking on the taskbar icon if the application has been pinned to the desktop taskbar.

***Excel 2016*** can also be started by double-clicking on a workbook file in ***File Explorer***. When this occurs ***Excel 2016*** will bypass the ***start*** screen shown above and open the workbook directly.

# THE EXCEL WORKBOOK SCREEN

The ***Excel*** screen is made up of several key components which are described on this page. Some of these components, such as the ***ribbon*** and ***Backstage*** view, are common to all other Office 2016 applications so once you know how they work you won't have to relearn them when you use other applications.




1. The ***File*** tab is used to access the ***Backstage*** view which contains file management functions, such as saving, opening, closing, printing, sharing, and so on. There is also information contained here such as your document ***Properties***. ***Options*** are also available so that you can set your working preferences for Excel.

2. The ***ribbon*** is the tabbed band that appears across the top of the window. It is the control centre of Excel. You use the ***tabs*** on the ribbon to access the ***commands*** that are categorised into ***groups***.

3. The ***active cell*** is where text, numbers, and formulas will appear when you start typing.

4. The ***mouse pointer*** is used, amongst other things, to select a cell and make it active. It may appear as a large cross, as in this example, as an I-bar, or any number of other forms, depending upon its function at that position on the screen.

5. The ***status bar*** appears across the bottom of the window and displays useful information about what is happening in the worksheet. At present it shows ***Ready*** which means that Excel is ready to be used for your project.

6. The ***worksheet*** is like an electronic piece of paper ruled into columns and rows. The worksheet is where you type numbers, letters, and formulas to perform calculations. Notice that columns are headed using letters of the alphabet (A, B, C, etc.) while rows are designated using numbers down the left side.

7. The ***scroll bar*** indicates your current position in the worksheet and lets you move to other positions in the worksheet by clicking or dragging. The arrows can also be used to move through the worksheet.

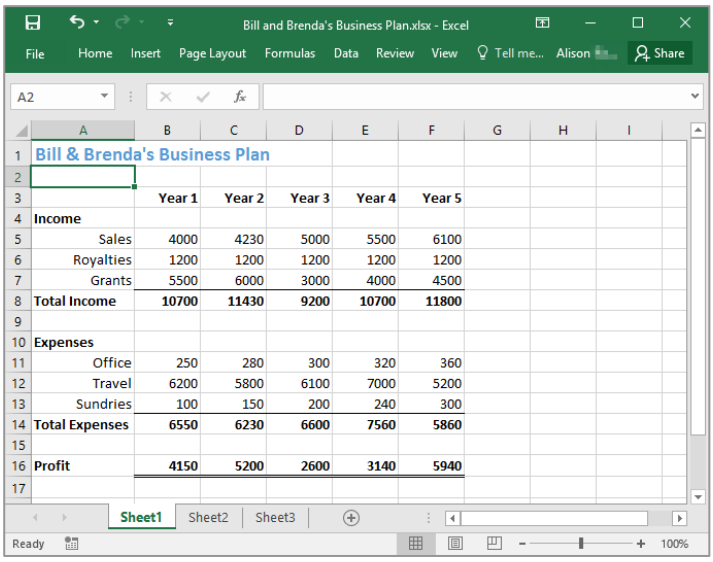
8. The ***View*** buttons and the ***Zoom Slider*** are used to change the view or to increase/decrease the zoom ratio for your worksheet.

# HOW EXCEL 2016 WORKS

For a new user the Microsoft Excel 2016 screen can seem intimidating. However, you'll soon see that it is made up of three key areas. The data you type is placed on a ***worksheet***. The data within the worksheet can be manipulated and changed using commands on the ***ribbon***. The worksheet is part of a larger entity known as a workbook which is controlled on the ***Backstage***.

## The Worksheet

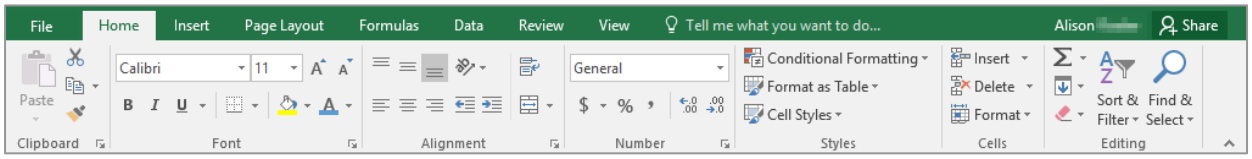
A worksheet appears as a number of rows and columns which form squares known as ***cells***. Everything you type in Excel is entered into these cells. In the simple business plan shown to the right there are numbers and words entered into a worksheet. ***Formulas*** are also entered that automatically perform calculations. The *worksheet* is part of a larger entity known as a ***workbook*** – workbooks can be filed away for future use or for sharing and can also be printed.




| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | Bill & Brenda's Business Plan | | | | | |
| 2 | | | | | | |
| 3 | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
| 4 | Income | | | | | |
| 5 | Sales | 4000 | 4230 | 5000 | 5500 | 6100 |
| 6 | Royalties | 1200 | 1200 | 1200 | 1200 | 1200 |
| 7 | Grants | 5500 | 6000 | 3000 | 4000 | 4500 |
| 8 | Total Income | 10700 | 11430 | 9200 | 10700 | 11800 |
| 9 | | | | | | |
| 10 | Expenses | | | | | |
| 11 | Office | 250 | 280 | 300 | 320 | 360 |
| 12 | Travel | 6200 | 5800 | 6100 | 7000 | 5200 |
| 13 | Sundries | 100 | 150 | 200 | 240 | 300 |
| 14 | Total Expenses | 6550 | 6230 | 6600 | 7560 | 5860 |
| 15 | | | | | | |
| 16 | Profit | 4150 | 5200 | 2600 | 3140 | 5940 |
| 17 | | | | | | |

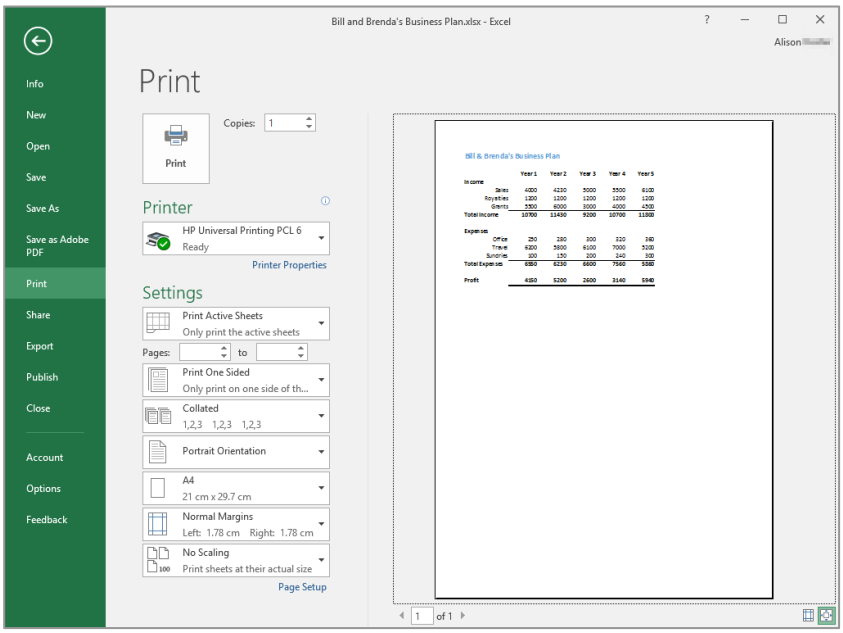
## The Ribbon

When you need to do something with the data in a worksheet, such as format it, colour it, analyse it, move it, copy it, and much more, you'll find all of the relevant commands on the ***ribbon***. The ribbon has commands organised thematically using a series of tabs across the top.




## The Backstage View

When you want to do something with the data in your workbook, such as save it so that you can access it again later, print it, share it with a colleague, send it to your boss, protect it from prying eyes, or whatever, you will need to access the ***Microsoft Office Backstage*** area of Microsoft Excel. The ***Backstage*** is accessed using the ***FILE*** tab on the ribbon. Rather than offering you commands on a ribbon, ***Backstage*** occupies the entire screen and has a series of options down the left side. Here the ***Print*** option is active, and that is why you can see a preview of the worksheet and a series of print-related options.



# USING THE RIBBON

The ***ribbon*** is the command centre for Microsoft Excel. It provides a series of ***commands*** organised into ***groups*** and placed on relevant ***tabs***. Tabs are activated by clicking on their name to display the command groups. ***Commands*** are activated by clicking on a button, tool or gallery option. Everything you could possibly want to do in Excel will be found somewhere on this ribbon.

## Try This Yourself:

*Before you begin ensure Excel has started and you have a blank workbook open…*

1. Examine the ***groups*** on the ***Home*** tab of the ribbon

   *These are the most commonly used commands, including copy and paste, font and number formatting, styles and editing...*

2. Click on the ***Insert*** tab

   *The commands on this tab are used to create tables, illustrations, charts, headers and footers, text objects and symbols...*

3. Click on ***Shapes*** in the ***Illustrations*** group

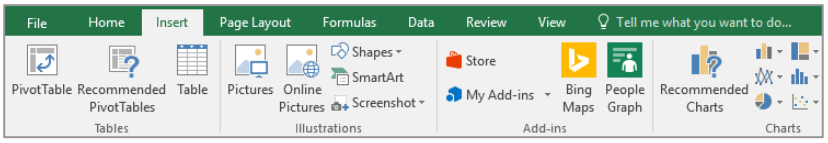
   *A gallery of shapes will appear which can be inserted into the worksheet…*

4. Click on some of the other ***tabs*** across the top of the ribbon (***Page Layout***, ***Formulas***, etc.) and examine the commands on them

   *Some of these open "dialog boxes"...*

5. On the ***View*** tab, click on ***Zoom*** in the ***Zoom*** group to display the ***Zoom*** dialog box

6. Click on **[Cancel]** then click on the ***Home*** tab

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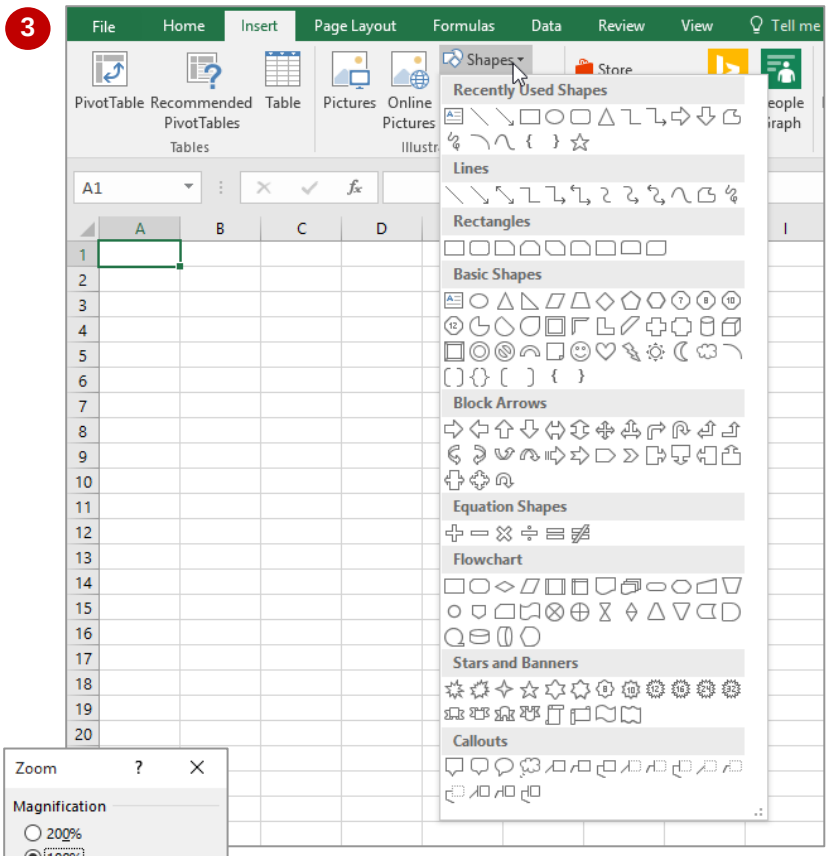
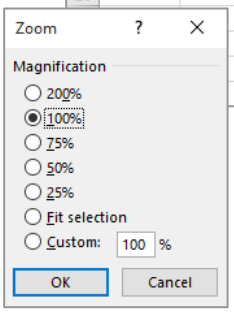



5

*Dialog boxes like this one provide settings or options for you to choose from. For example, in this one you can zoom the screen by varying percentages. We won't actually do anything at this point. You'll get plenty of opportunity for using dialog boxes at a later stage.*

### For Your Reference…

To ***use*** the ***ribbon***:

1. Click on a ***tab*** to display the commands
2. Click on a ***button*** to activate a *command*, display a *gallery*, or display a *dialog box*

### Handy to Know…

- Additional tabs known as ***contextual tabs*** appear in specific circumstances. For example, if you insert a picture, the ***Picture Tools: Format*** tab will appear. This provides quick access to all of the tools you may need in order to modify and work with the picture.

# SHOWING AND COLLAPSING THE RIBBON

The ***ribbon***, valuable as it is, does occupy a reasonable amount of space. To maximise your working space you can minimise the ***ribbon*** so only the tabs are visible, minimise it as a once-off operation or have it constantly minimised and display full commands only briefly when a tab is clicked. You can do all this by using ***Ribbon Display Options*** button.

## Try This Yourself:

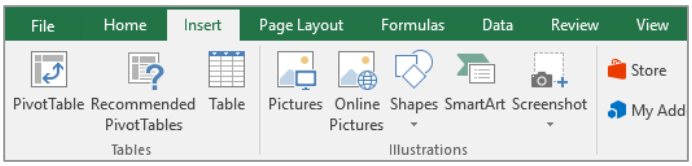
*Before you begin ensure Excel has started and you have a blank workbook open…*

1. Click on the ***Insert*** tab to display the ***Insert*** commands
2. Double-click on the ***Insert*** tab to minimise the ribbon

   *While the tabs stay visible, the rest of the commands are hidden...*
3. Click on ***Ribbon Display Options*** in the top right of the ***title bar*** to display a menu
4. Click on ***Show Tabs and Commands*** to redisplay the ribbon with the commands

   *The ribbon is now displayed permanently but we can change this so that the ribbon only appears when we are using a tab…*
5. Click on ***Ribbon Display Options*** and click on ***Show Tabs***
6. Click on the ***Home*** tab to display the ribbon, then click back into the worksheet

   *The ribbon will hide again – it only becomes visible when you click on a tab…*
7. Double-click on the ***Insert*** tab to redisplay the ribbon permanently again

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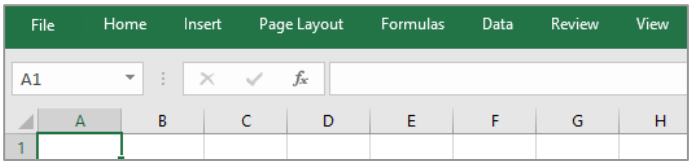


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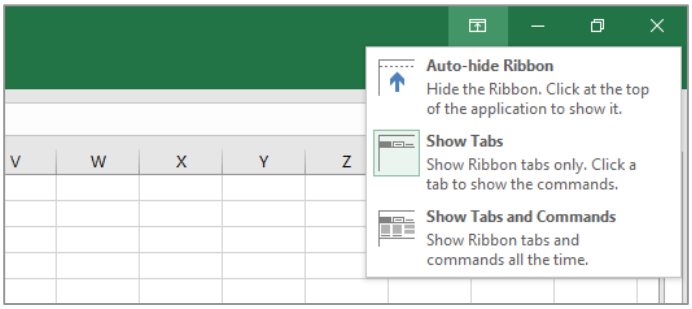



3 *The Auto-hide Ribbon function hides both the tabs and the commands on the ribbon. You can access the ribbon by pointing to the top of the screen and double-clicking on the blue bar when it appears. The ribbon will automatically hide when you click back into your worksheet.*

### For Your Reference…

To ***hide/display*** the ***ribbon***:

1. Double-click on the active tab to hide the ribbon
2. Click on a tab to see the ribbon temporarily
3. Double-click on a tab to show the ribbon permanently

### Handy to Know…

- You can hide the ribbon by clicking on ***Collapse the Ribbon.*** This button is located at the far right end of the ribbon.
- You can use the keyboard shortcut Ctrl + F1 to show or hide the ribbon.

# UNDERSTANDING THE BACKSTAGE VIEW

The ribbon lets you work on the content in a document so that you can add more content, format it, insert pictures into it, copy it, and much more. The ***Backstage*** view, which is accessed using the ***File*** tab, lets you do something with the content you create, such as save it for later use, print it on paper, send it via email, and more by using the options found in ***Backstage*** view.

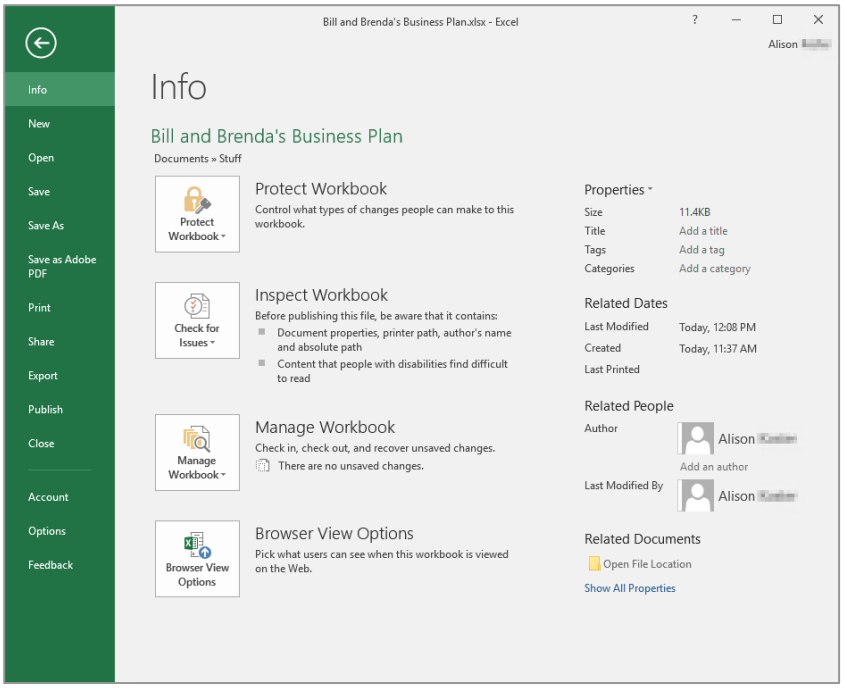
## The Backstage View

The ***File*** tab on the ribbon is not a normal tab. Clicking on the ***File*** tab launches a mini-program within Microsoft Excel known as ***Backstage*** view. ***Backstage***, as it's known for short, occupies the entire screen.

At the left of the ***Backstage*** is a navigation pane which is made up of ***tabs***. These tabs provide you with access to various operations, such as printing, saving and sharing. They can also provide you with information about your workbook such as the file size.

Clicking on one of these tabs displays a range of options associated with the particular operation.

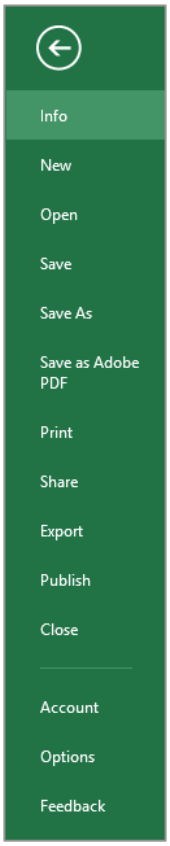
The whole underlying purpose of ***Backstage*** is to let you protect your data, share it with others, and provide you with valuable information about your workbook. Depending on what type of workbook it is and what has been done to it, different information may display when the ***Info*** tab is selected.




## Backstage Tabs

The ***Backstage*** tabs provide more options for working with a document.

| | |
|---|---|
| ***Info*** | Provides status information about the current workbook and lets you manage versions and permissions. |
| ***New*** | Lets you create a new workbook and provides access to a gallery of inbuilt templates and ready access to a range of online templates. |
| ***Open*** | Provides a list of recent workbooks as well as the option to search through your Computer, OneDrive or other place, to find what you are looking for. |
| ***Save*** | Saves your current workbook (if already saved to a location) or prompts you to save to a location. |
| ***Save As*** | Allows you to name your workbook and save it to a location. |
| ***Print*** | Allows you to print the current workbook and preview it. |
| ***Share*** | Allows you to share your workbook with other people via email, online presentation, blog or Cloud (OneDrive). |
| ***Export*** | Allows you to create a PDF/XPS document or change the file type of your workbook. |
| ***Close*** | Closes your current workbook. |
| ***Account*** | Contains product and user information. |
| ***Options*** | Presents you with a range of options which assist in the creation and editing of your workbook. |
| ***Feedback*** | Allows you to provide Microsoft with feedback regarding Excel 2016. |



# ACCESSING THE BACKSTAGE VIEW

The ***Backstage*** view provides options for working on workbook files and key information about the status of Microsoft Excel 2016. It is usually accessed by clicking on the ***File*** tab to the left of the ribbon but can also appear when specific commands and options in the ribbon have been selected.

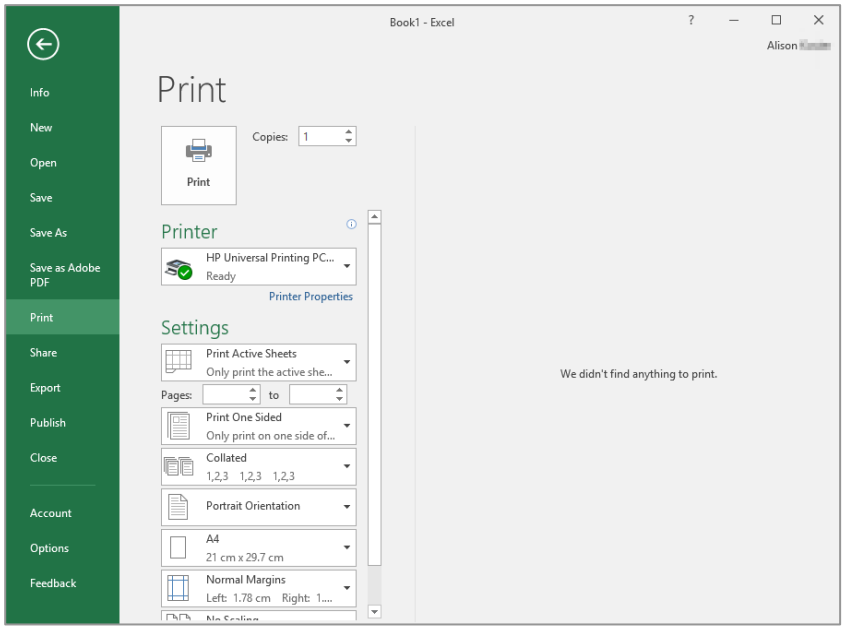
## Try This Yourself:

*Before you begin ensure Excel has started and you have a blank workbook open…*

1. Click on the ***File*** tab to display the ***Backstage*** view
2. Click on ***Info*** in the left green pane if it is not already selected to view information relating to your workbook such as the ***Properties***
3. Click on ***Print*** to see the printing options

   *If the worksheet has data in it a preview of how the printing will look will appear. If this is a new worksheet no preview will appear…*
4. Click on the ***Account*** tab to see the account options and product licensing information
5. Click on the ***Back*** arrow at the top of the left green pane to close ***Backstage*** view and return to the document

3

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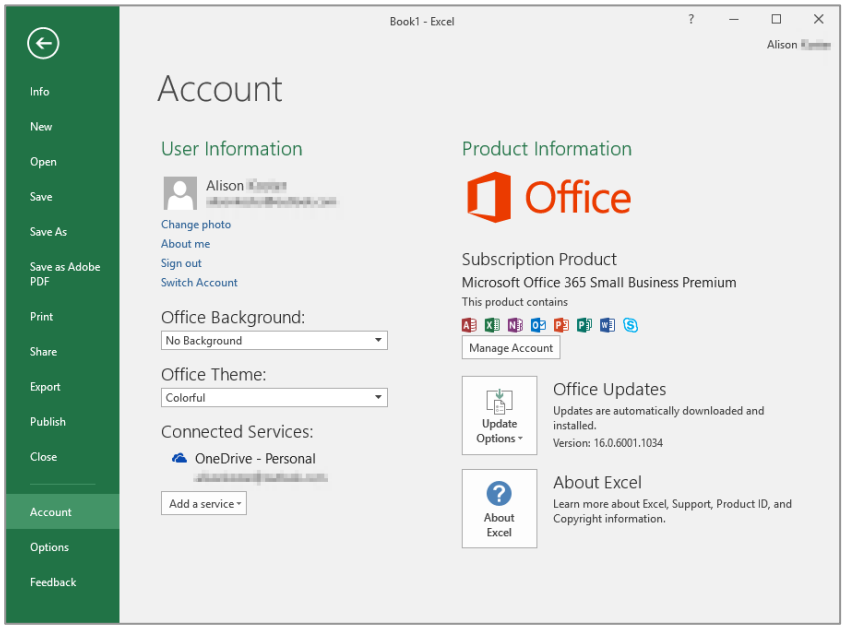



### For Your Reference…

To ***access*** the ***Backstage view***:

1. Click on the ***File*** tab
2. Click on the desired tab in the green pane to the left of the screen

### Handy to Know…

- You can close the ***Backstage*** view by pressing Esc.

# USING SHORTCUT MENUS

In addition to the ribbon, Excel also features ***shortcut menus*** (also known as ***contextual menus***) that appear when you right-click in an area on the screen or on an object. The content of the menu will vary depending upon where you click. ***Shortcut menus*** provide an alternative (and usually a quicker) way to searching the ribbon to find a specific operation or command.

## Try This Yourself:

*Before you begin ensure Excel has started and you have a blank workbook open…*

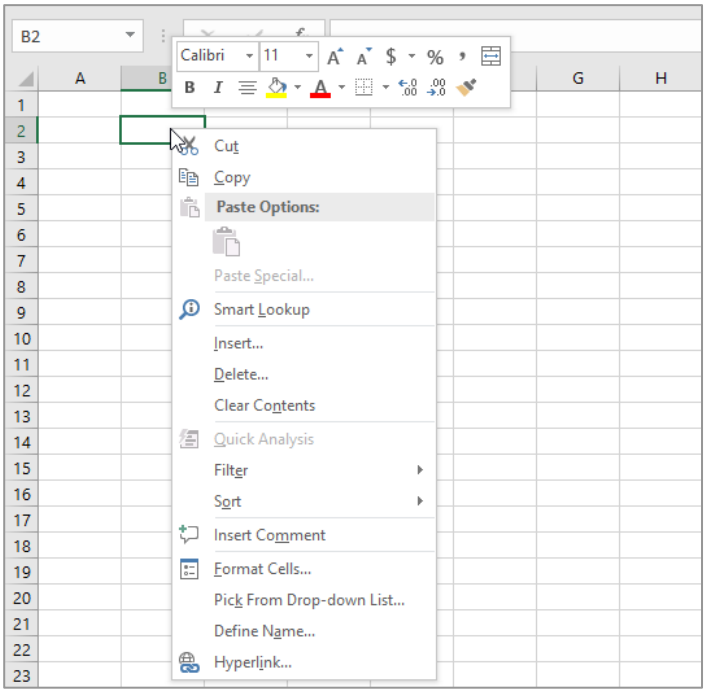
1. Click in cell ***B2*** (column ***B***, row ***2***) in the worksheet, then click with the right mouse button to display a shortcut menu

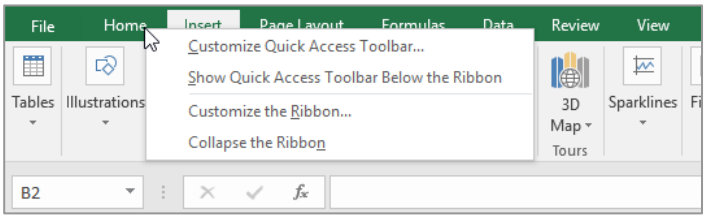
   *Because you have clicked in a worksheet cell the menu includes a number of options specific to what can be done in and with the cell...*

2. Click anywhere else on the worksheet with the left mouse button to close the shortcut menu
3. Point to any of the tabs on the ribbon
4. Right-click on the tab to display a shortcut menu

   *This menu differs from the previous one and displays toolbar and ribbon options instead of text options. Excel has made an educated guess about what you want to do based upon what you have clicked...*

5. Click anywhere in the worksheet with the left mouse button to close the shortcut menu




## For Your Reference…

To ***display*** a ***shortcut menu***:

1. Point to the object or area of the screen on which you want to perform an operation
2. Right-click to display the shortcut menu

## Handy to Know…

- Once a ***shortcut menu*** appears, the options in it are selected by clicking on them with the left mouse button, or pressing the letter underlined in the menu option.

# UNDERSTANDING DIALOG BOXES

Dialog boxes contain a series of controls that are used to adjust settings for a particular aspect of a worksheet or cell. They appear either when you click on a ***dialog box launcher*** at the bottom right corner of a ribbon group, or when you click on a command that displays a dialog box. Dialog boxes are often used for adjusting some of the more advanced aspects of a worksheet or cell.

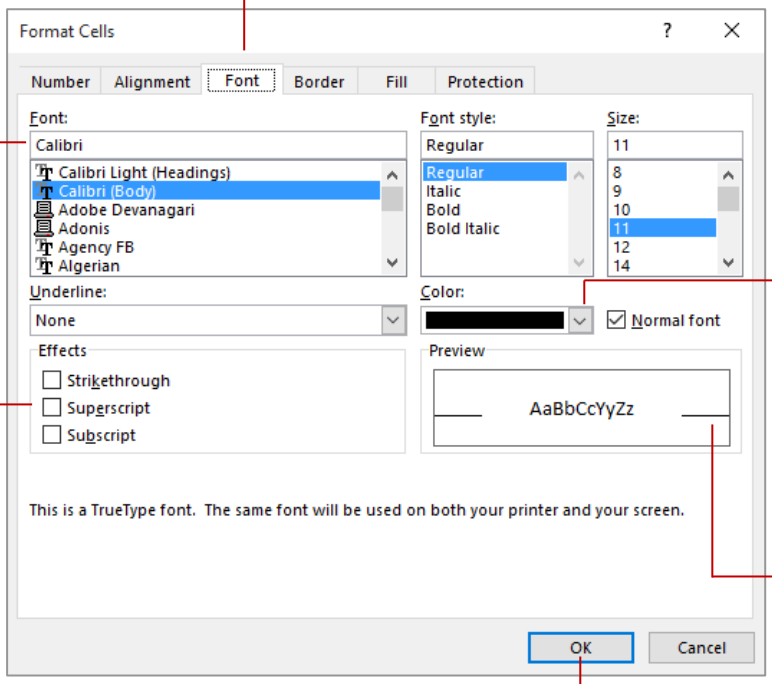
## Typical Dialog Box Controls

***Dialog boxes*** have various tools to help you perform tasks. These tools are known as ***controls*** and some typical ones are shown below.

***Tabs*** *are used to provide more settings on the one dialog box.*

***Text boxes*** *are used to enter details such as font or size.*

***Check boxes*** *turn settings either on or off. When on they display a tick and therefore these controls are also known as tick boxes.*




***Drop arrows*** *provide a list of options for the text box when the arrow is clicked. The list "drops down" from the arrow.*

***Preview boxes*** *provide a preview of what the selected settings will look like.*

***Command buttons*** *provide a means of saving the changed settings [OK], or closing the dialog box without accepting any changes made [Cancel].*

# LAUNCHING DIALOG BOXES

Dialog boxes can be launched either as the result of clicking on a ***dialog box launcher*** icon or a command button, or by selecting a command from a menu. In a menu, the presence of three dots (an ellipsis) ... after a menu option indicates that the menu option, when selected, will display a dialog box. Dialog boxes are generally used for advanced features or detailed settings.

## Try This Yourself:

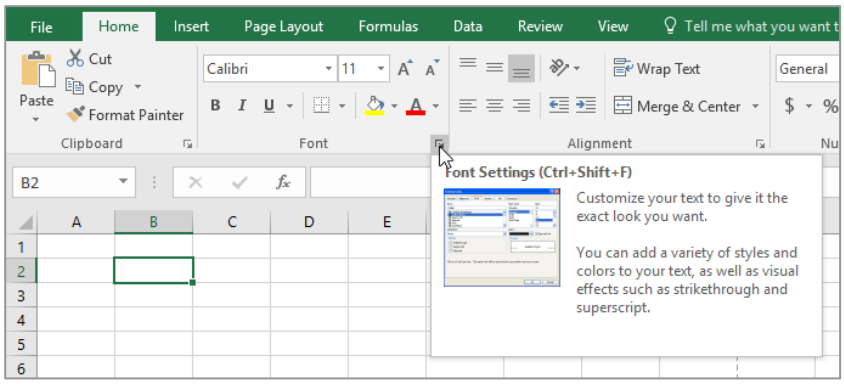
*Before you begin ensure Excel has started and you have a blank workbook open…*

1. On the ***Home*** tab, point to the dialog box launcher icon in the ***Font*** group to display a tooltip that explains what will happen if you click on it
2. Click on the dialog box launcher icon to open the ***Font*** dialog box

   *This dialog box has a selection of controls to make formatting fonts easier…*
3. Click on the ***Border*** tab

   *This displays additional controls that you can use to adjust the borders around the active cell or range of cells...*
4. Click on **[Cancel]** to close the dialog box

   *Some commands on the ribbon automatically launch a dialog box…*
5. Click on the ***Page Layout*** tab, then click on ***Print Titles*** in the ***Page Setup*** group to display the ***Page Setup*** dialog box
6. Click on **[Cancel]**

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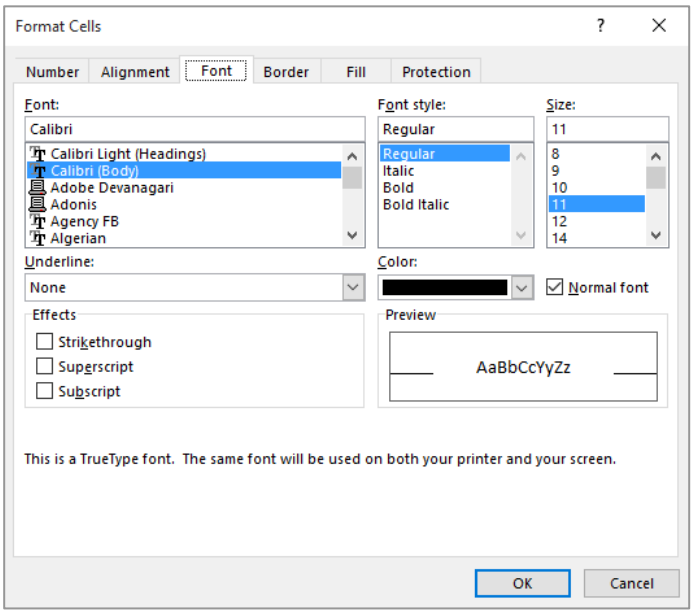



2

## For Your Reference…

To ***launch*** a ***dialog box***:

- Click on a dialog box launcher icon, or
- Click on a relevant command button, or
- Click on a menu option

## Handy to Know…

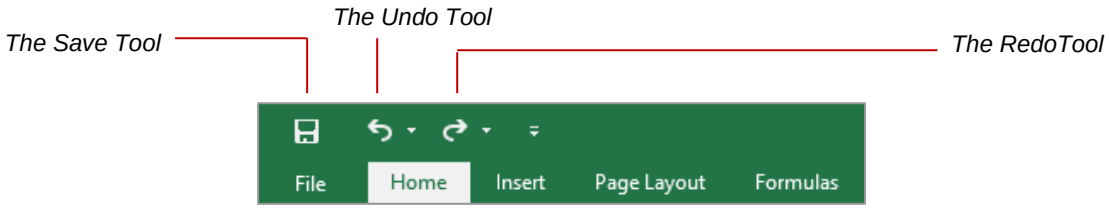
- In some situations, the dialog box launcher icon actually displays a ***pane***. For example, if you click on the dialog box launcher icon in the ***Clipboard*** group on the ***Home*** tab, the ***Clipboard*** pane appears.

# UNDERSTANDING THE QUICK ACCESS TOOLBAR

The ***Quick Access Toolbar***, also known as the ***QAT***, is a small toolbar that appears at the top left corner of the Excel window. It is designed to provide access to the command tools you use most frequently, such as ***Save***. By default the ***QAT*** also contains the ***Undo*** and ***Redo*** buttons. You can add buttons to the ***Quick Access Toolbar*** to make finding your favourite commands easier.

## The Quick Access Toolbar

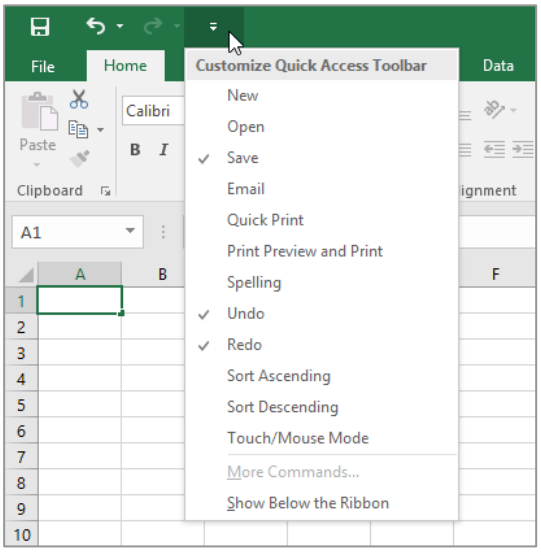
The ***Quick Access Toolbar*** is positioned at the top left corner of the Excel 2016 screen. In its default state, it includes the ***Save*** tool, the ***Undo*** tool and the ***Redo*** tool.



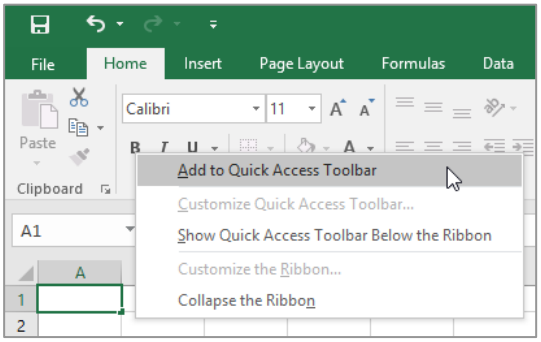

## Customising the Quick Access Toolbar

Appearing immediately to the right of the ***Quick Access Toolbar*** is the ***Customise Quick Access Toolbar*** tool. Clicking on this tool displays a list of commonly used commands that you can add to the toolbar. You can select the items that you want to add from the list by clicking on them. The ticks that appear to the left of the menu options show which options already appear on the ***Quick Access Toolbar***.

You can also add commands to the ***Quick Access Toolbar*** by right clicking on a command in the ribbon and selecting **Add to Quick Access Toolbar**.




You can also add commands to the ***Quick Access Toolbar*** by right clicking on a command in the ribbon and selecting **Add to Quick Access Toolbar**.



# ADDING COMMANDS TO THE QAT

The ***Quick Access Toolbar*** is a handy location to place commands from the ribbon that you use most frequently. Adding commands from the ribbon involves locating the command, right-clicking on it and choosing the ***Add to Quick Access Toolbar*** option from the short cut menu that appears.

## Try This Yourself:

*Before you begin ensure Excel has started and you have a blank workbook open…*

1. Point to the first tool on the ***Quick Access Toolbar*** to see the name of the tool and its shortcut

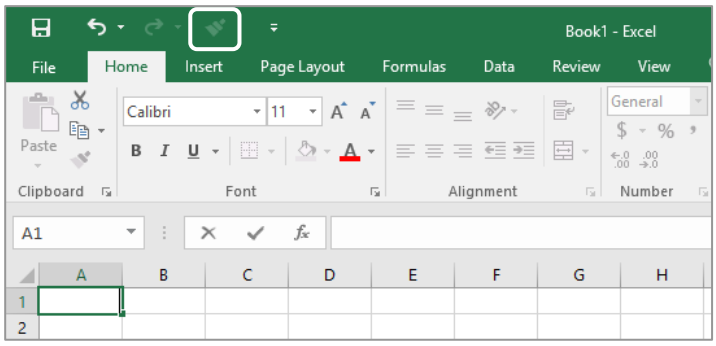
   *In our case it's the Save tool…*

2. On the ***Home*** tab, right-click on ***Format Painter*** in the ***Clipboard*** group to display a shortcut menu
3. Select **Add to Quick Access Toolbar** to add the ***Format Painter*** tool to the ***QAT***
4. Click on the ***Customise Quick Access Toolbar*** tool to display a menu
5. Select **Open** to add the ***Open*** tool to the ***QAT***

   *It is just as easy to remove tools you don't want from the QAT…*

6. Right-click on the ***Format Painter*** tool and select **Remove from Quick Access Toolbar**
7. Repeat step ***6*** to remove the ***Open*** tool from the ***QAT***

3

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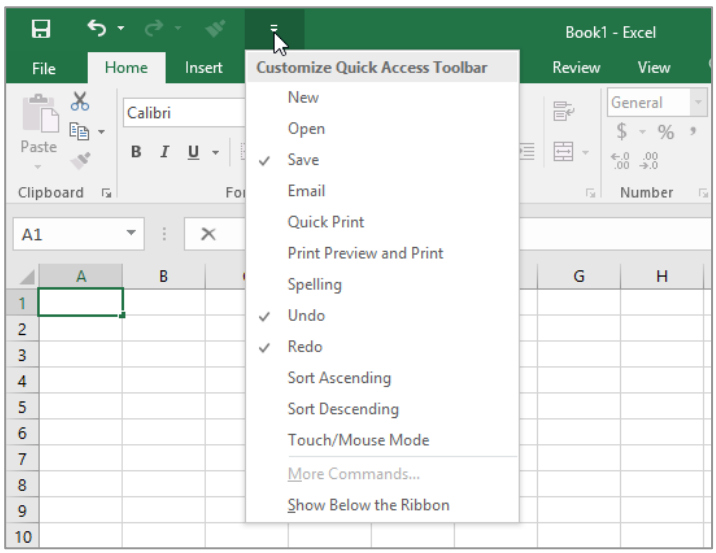


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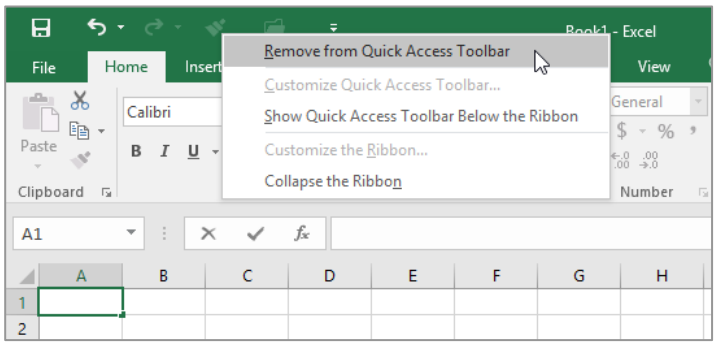



### For Your Reference…

To ***customise*** the ***Quick Access Toolbar***:

- Right-click on the command you want to add and select **Add to Quick Access Toolbar**, or

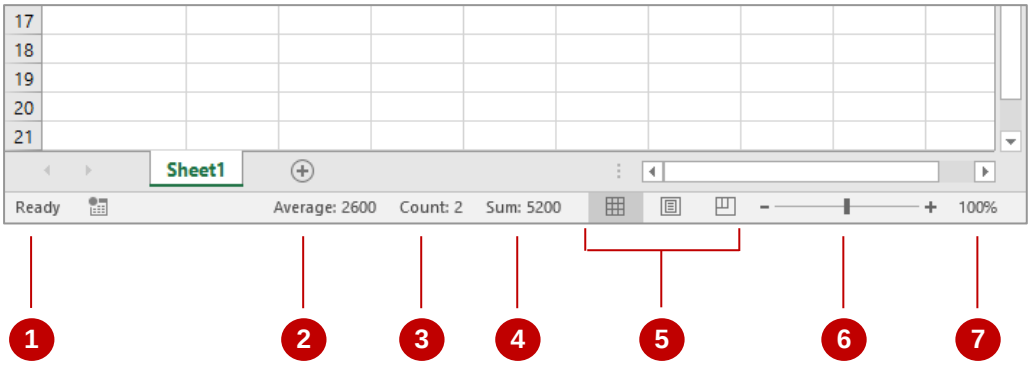
  Click on the ***Customise Quick Access Toolbar*** tool and select a command

### Handy to Know…

- You can position the ***QAT*** under the ribbon by clicking on the ***Customise Quick Access Toolbar*** tool and selecting **Show Below the Ribbon**. This puts the tools that you use most frequently closer to your document making it quicker to access them.

# UNDERSTANDING THE STATUS BAR

The ***status bar*** is the bar across the bottom of the Excel window. It is a very useful aid that tells you the current status of Excel, performs quick calculations on the selected range in the worksheet, and allows you to zoom in and out of the worksheet. It also includes tools that can change the worksheet view. You can customise the status bar to change the information shown.




| | | |
|---|---|---|
| 1 | ***Status Indicator*** | The ***Status Indicator*** indicates the current status of Excel and the worksheet. The most common indicator you'll see here is ***Ready*** indicating that Excel is ready and waiting for you to do something. |
| 2 | ***Average*** | This tells you the average value in the cells currently selected in the worksheet – providing the cells contain numeric data. Selected cells are the ones that have the active cell indicator around them and are commonly referred to as a *range* of cells. Obviously for a calculation to be performed there will need to be numbers in the active range of cells. |
| 3 | ***Count*** | This tells you how many non-empty cells are in the cells currently selected in the worksheet. |
| 4 | ***Sum*** | This tells you the sum total of the cells currently selected in the worksheet – providing the cells contain numeric data. |
| 5 | ***View Tools*** | The ***Worksheet View*** tools allow you to change the view of the worksheet. You can select from ***Normal***, ***Page Layout*** and ***Page Break Preview***. |
| 6 | ***Zoom Slider*** | The ***Zoom Slider*** indicates the current zoom level, where the centre mark indicates 100%. You can either drag the marker to the left or right, or click on a specific point of the slider to set a zoom percentage. You can also click on the buttons at either end of the slider to zoom in or zoom out. |
| 7 | ***Zoom Level*** | This button displays the current zoom percentage. If you click on the button, the ***Zoom*** dialog box will appear so that you can select a specific zoom percentage. |

*What appears on the status bar can vary greatly. The status bar on your screen may not exactly match the example shown above.*

*One way you can change your status bar is by right-clicking on the status bar itself and selecting from the shortcut menu any additional tools you may want to add to it.*

# EXITING SAFELY FROM EXCEL 2016

When you are finished working with Excel you'll find there are several ways to exit from it. If you have made changes to the workbook Excel will ask if you wish to save these changes before exiting. You'll learn all about saving a little later on. If you don't wish to retain any changes you've made you can decline Excel's offer to save your work.

## Try This Yourself:

*Before you begin ensure Excel has started and you have a blank workbook open…*

1. Click in cell ***A1*** (the top left cell), type your name and press Enter

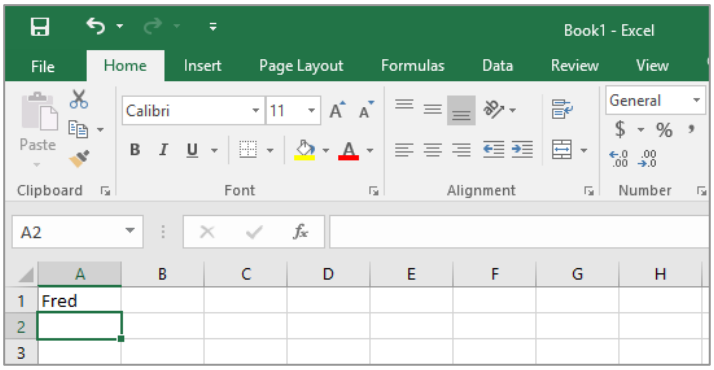
   *Doing this has made a change to your workbook which will be picked up when you attempt to exit…*

2. Click on ***Close*** at the top right hand corner of the Excel screen

   *You will now be prompted to save your workbook if you wish to retain your data. The message you receive will look like the one shown. We have no reason for keeping a workbook with our name in it so we won't bother saving…*

3. Click on **[Don't Save]** to exit from Excel

1

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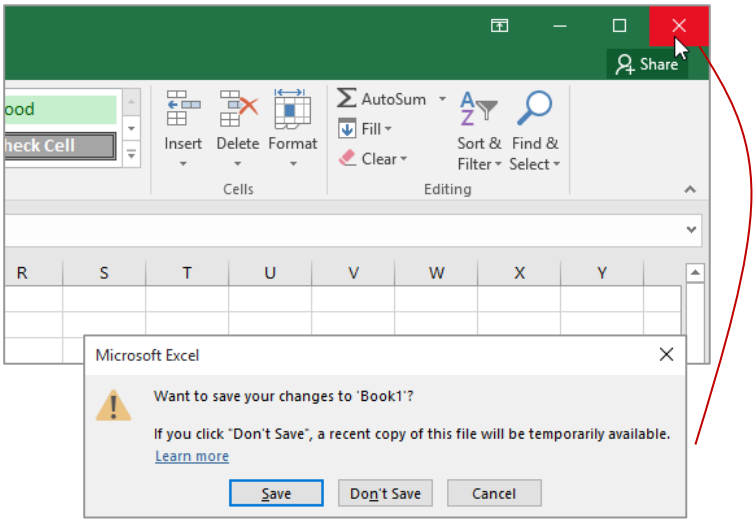



***Special Notes:***

- *If the workbook has been open for a while a temporary file copy will have been automatically saved behind the scenes. In this case your message will appear exactly as shown above. If a recent copy has not been created your message will appear without any reference to a temporary file.*
- *It is possible in Excel to have more than one workbook file open at a time. If you have multiple workbooks open you'll need to close each one using the steps in this exercise. When the last open workbook is finally closed Excel will terminate.*

## For Your Reference…

To ***safely exit*** from ***Microsoft Excel***:

1. Click on the ***File*** tab and click on ***Close***
2. If you want to keep your changes, click on **[Save]**, then specify a workbook name and location; otherwise, click on **[Don't Save]**

## Handy to Know…

- Whenever you are in doubt about whether to save or not you should err on the side of caution and save the workbook. You can delete unwanted workbooks at a later date, but you can seldom retrieve data that has not been saved.

CHAPTER 2

# CREATING A NEW WORKBOOK

INFOCUS

The data you enter and use in Microsoft Excel will be stored in a computer file that is referred to as a ***workbook***. It is into a workbook that you type data such as text, numbers, and even dates. You can also create formulas in a workbook that perform calculations using this data.

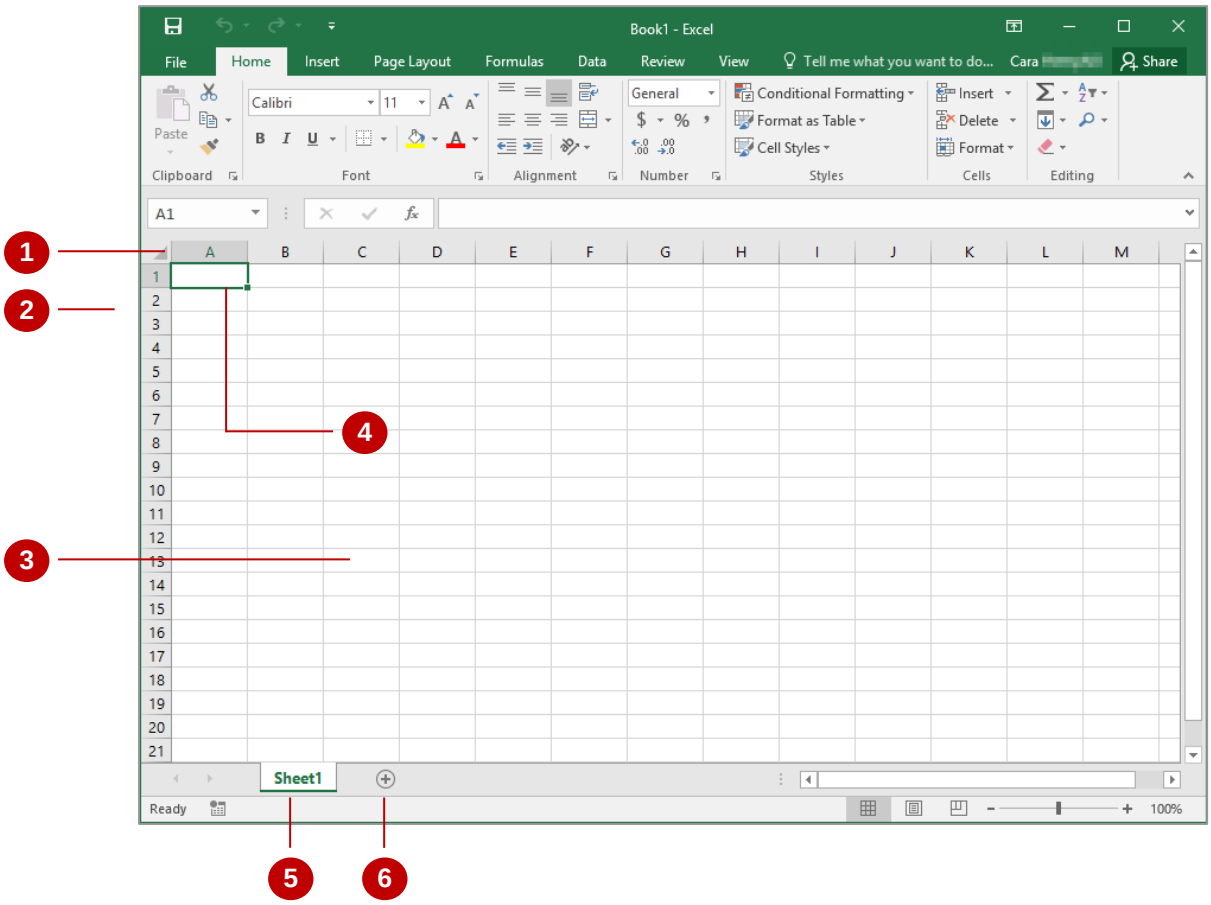
So, knowing how to create a new workbook of your own is a basic and essential skill to have in Excel.

**In this session you will:**

- ✓ gain an understanding of workbooks and their elements
- ✓ learn how to create a new blank workbook based on the default template
- ✓ learn how to type text into a worksheet
- ✓ learn how to enter numbers into a worksheet
- ✓ learn how to type dates and perform simple calculations with them
- ✓ gain an understanding of the fill handle
- ✓ learn how to type a simple formula into a worksheet
- ✓ learn how to enter formulas more quickly and easily
- ✓ learn how to save a new workbook file on your computer
- ✓ learn how to check spelling in a worksheet
- ✓ learn how to make and save changes in a workbook
- ✓ learn how print a worksheet
- ✓ learn how to safely close a workbook.

# UNDERSTANDING WORKBOOKS

In Microsoft Excel the data you enter, whether it consists of numbers, text or formulas, is stored in a file known as a ***workbook***. Workbooks are just like huge electronic books with pages (or ***sheets***) that have been ruled into columns and rows. Before using Excel it is helpful to know what the various parts and elements that make up a workbook are.




1. A worksheet (or *page*) in a workbook contains 16,384 ***columns*** that are labelled using letters of the alphabet. The first column in a worksheet is labelled column ***A***, while the last is labelled ***XFD***.

2. A worksheet (or *page*) in a workbook contains 1,048,576 ***rows*** that are labelled using numbers from 1 to 1,048,576.

3. Where a column and row intersect we get what is known as a ***cell***. You enter your data into these cells. Each cell in a worksheet can hold up to 32,767 characters – although you'd never enter this number in reality! Cells are referred to by their column and row labels. For example, in the screen above, the cell we are pointing to is ***C11*** – this reference is known as the ***cell address*** and is most important as it is frequently used in commands and formulas.

4. When you start typing something you want it to appear somewhere in the worksheet. As a consequence when the status bar shows ***Ready*** mode, at least one cell in the worksheet will be highlighted – this is known as the ***active cell***. In the screen above the active cell is cell ***A1*** – notice that the column label and the row label also appear coloured to indicate the active cell. You can have more than one active cell – when this occurs you have what is known as a ***range***.

5. A workbook is made up of pages known as ***worksheets***. You can have as many sheets in a workbook as your computer resources can accommodate. A new blank workbook has a worksheet labelled *Sheet1* and new worksheets are labelled *Sheet2*, *Sheet3*, etc. Of course these labels are just default labels and can be changed to something more relevant.

6. The ***Insert Worksheet*** button will insert another worksheet into the current workbook should you need it.

# USING THE BLANK WORKBOOK TEMPLATE

When you want to create a new spreadsheet project, you will normally first need to create a new ***workbook***. All workbooks created in Excel are based on a template which defines the basic layout of a workbook. Microsoft actually provides a number of task-specific templates for accounting, budgeting and the like. However the easiest to use is the ***Blank Workbook*** default template.

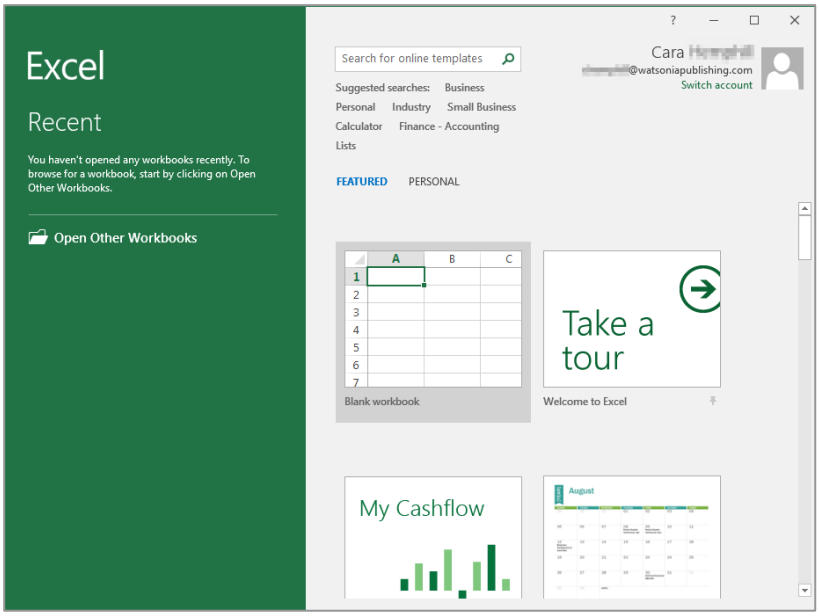
## Try This Yourself:

*Before you begin ensure Windows has started…*

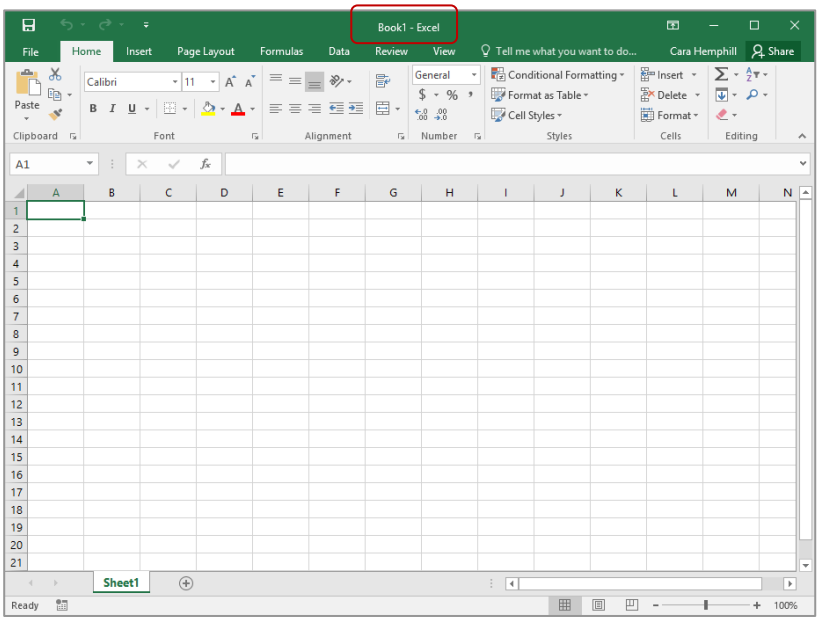
1. Start ***Excel 2016*** and wait a few moments until the Excel ***Start Screen*** appears
2. Click on ***Blank workbook***

   *Notice that the workbook is automatically assigned a sequentially numbered name commencing with the word "Book", which is displayed in the title bar*

1




2




### For Your Reference…

To ***use*** the ***Blank workbook template***:

1. Open ***Excel*** so that the ***Start*** screen is displayed
2. Click on ***Blank workbook*** in the list of templates

### Handy to Know…

- If Excel has already started and you want to create a new workbook, click on the ***FILE*** tab to open ***Backstage view***, click on ***New***, then select ***Blank workbook***.
- You can also use the keyboard shortcut Ctrl + N to instantly open a new workbook based on the ***Blank workbook*** template.

# TYPING TEXT

Generally when you start a new spreadsheet project the first task is to enter some headings into rows and columns. To ***type*** anything into a worksheet you need to make the cell that you wish to enter data into the active cell. This can be done in a number of ways but the most common is to click in the cell first before typing.

## Try This Yourself:

*Before starting this exercise you MUST open a new blank workbook...*

1. Click in cell ***A3***, type **Garden Settings**, then press Enter

   *When you press Enter the next cell down automatically becomes the active cell.*

   *Even though the text looks like it is in cells A3 and B3 it is really only in cell A3 – since there is nothing in cell B3 Excel allows the spill over to be displayed, giving the illusion it is in two cells…*

2. Type **Pool Covers** and press Enter
3. Repeat the above steps to enter the remaining text in column ***A***, as shown
4. Click in cell ***B2***, type **AUS**, then press Tab

   *When you press Tab the cell to the right then becomes the active cell…*

5. Enter the remaining text in row ***2*** as shown

1

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | Garden Settings | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |

3

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | Garden Settings | | | | | | |
| 4 | Pool Covers | | | | | | |
| 5 | Fountains | | | | | | |
| 6 | Large Tubs | | | | | | |
| 7 | Brush Fencing | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |

4

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | | | | | |
| 3 | Garden Settings | | | | | | |
| 4 | Pool Covers | | | | | | |
| 5 | Fountains | | | | | | |
| 6 | Large Tubs | | | | | | |
| 7 | Brush Fencing | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |

5

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Settings | | | | | | |
| 4 | Pool Covers | | | | | | |
| 5 | Fountains | | | | | | |
| 6 | Large Tubs | | | | | | |
| 7 | Brush Fencing | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |

### For Your Reference…

To ***enter text***:

1. Click in the desired cell and type the required information
2. Press Enter, an arrow key or Tab to confirm the data entry and to move to another cell

### Handy to Know…

- You don't have to use Enter or Tab to make adjacent cells active. You can simply use the mouse and click in the cells if you want or even press the arrow keys to move up, down, left, or right.

# TYPING NUMBERS

The method for entering numbers, letters, and formulas into a worksheet is exactly the same. Simply make a cell active by clicking in it and then type. However, numbers (or ***values*** as they are known) will align themselves to the right side of a cell by default, whereas letters will align themselves to the left side of a cell by default.

## Try This Yourself:

*Open File*

*Before starting this exercise you MUST open the file Creating A New Workbook_1.xlsx...*

1. Click in cell ***B3*** to make this the active cell
2. Type **17200**, then press Enter or ↓

   *Notice how some of the text from the left cell is not visible now. This occurs because cell B3 has data in it and this takes precedence over the text that doesn't fit in the left cell. The text in cell A3 is still there – it is just not displayed…*
3. Enter the remaining values into the other cells as shown

1

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | ttings | | | | | |
| 4 | Pool Covers | | | | | | |
| 5 | Fountains | | | | | | |
| 6 | Large Tubs | | | | | | |
| 7 | Brush Fencing | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |

2

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 17200 | | | | | |
| 4 | Pool Covers | | | | | | |
| 5 | Fountains | | | | | | |
| 6 | Large Tubs | | | | | | |
| 7 | Brush Fencing | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |

3

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 17200 | 17850 | 18100 | 63598 | | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | | |
| 6 | Large Tub: | 20722 | 29782 | 35963 | 25126 | | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | | |
| 8 | | | | | | | |
| 9 | | | | | | | |

### For Your Reference…

To ***enter values***:

1. Click in the desired cell and type the required information
2. Press Enter, an arrow key or Tab to confirm the data entry and to move the cell pointer to another cell

### Handy to Know…

- If you are unsure exactly what is in a cell, click on the cell to make it active, then look at the ***Formula Bar*** at the top of the worksheet to see the data that is contained in the active cell.

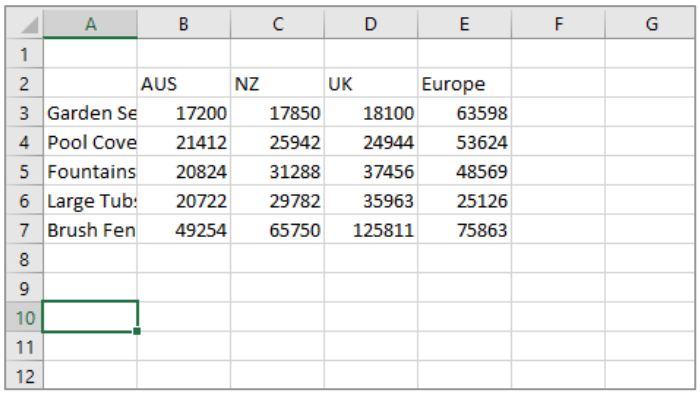
# TYPING DATES

***Dates*** are a special type of data that can be entered into a worksheet cell. When you type a date into a cell Excel converts that date to a number – you won't see this happen as the conversion takes place in the background. From then on you can use that date to perform calculations just like you can with numbers.

## Try This Yourself:

*Same File* *Continue using the previous file with this exercise, or open the file Creating A New Workbook_2.xlsx...*

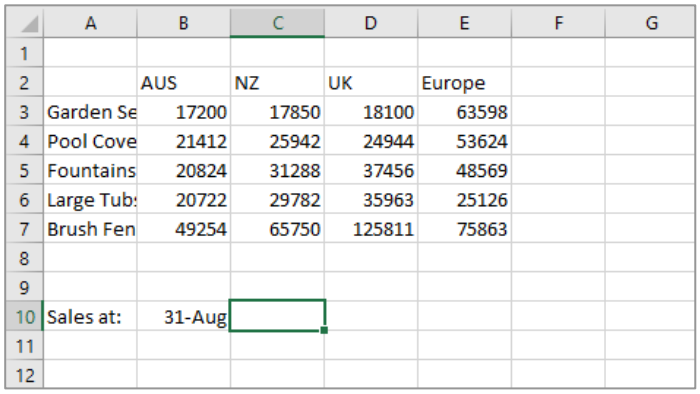
1. Click in cell ***A10*** to make this the active cell, as shown



| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 17200 | 17850 | 18100 | 63598 | | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | | |
| 6 | Large Tub | 20722 | 29782 | 35963 | 25126 | | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |

2. Type **Sales at:**, then press Tab to move to the adjacent cell
3. Type **31/8**, then press Tab

*Since 31/8 is recognised by Excel as a date it has been entered and formatted accordingly. You can change the formatted appearance of the date at a later time if you wish…*

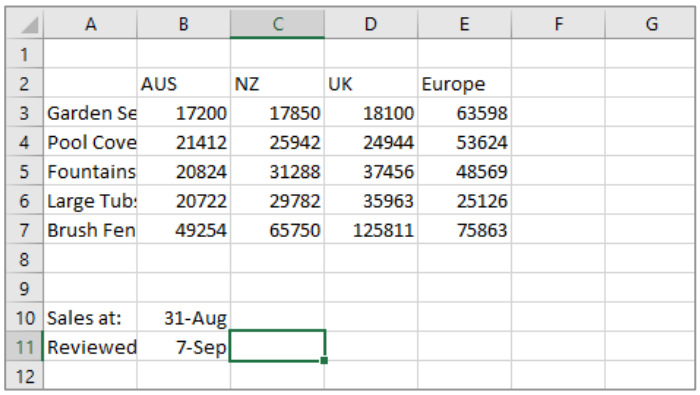


| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 17200 | 17850 | 18100 | 63598 | | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | | |
| 6 | Large Tub | 20722 | 29782 | 35963 | 25126 | | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | Sales at: | 31-Aug | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |

4. Click in cell ***A11***, type **Reviewed:**, then press Tab to move to cell ***B11***
5. Type **=B10+7**, then press Tab

*=B10+7 is a formula that references the date you typed in cell B10.*

*Formulas are used in a worksheet to perform calculations – you'll learn more about them shortly. The formula here takes the value in cell B10 and adds 7 (i.e. 7 days) to the date*



| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 17200 | 17850 | 18100 | 63598 | | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | | |
| 6 | Large Tub | 20722 | 29782 | 35963 | 25126 | | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | Sales at: | 31-Aug | | | | | |
| 11 | Reviewed | 7-Sep | | | | | |
| 12 | | | | | | | |

## For Your Reference…

To ***enter dates***:

1. Click on the desired cell and type a date
2. Press Enter, an arrow key or Tab to confirm the data entry and to move the cell pointer to another cell

## Handy to Know…

- You can type a date in a variety of ways. If Excel accepts what you type as a date it will appear aligned to the right of a cell just like a number. If the date is invalid to Excel it will be left-aligned just like text. Therefore, take note of how your dates are entered to ensure that they are correct.

# UNDERSTANDING THE FILL HANDLE

The ***fill handle*** is a small, green square in the bottom right corner of a cell. The fill handle appears in a cell when the cell contains data. It allows you to copy or add formulas, functions or data to adjacent cells. You can view the fill handle by making the cell that contains data, the active cell.

## The Fill Handle

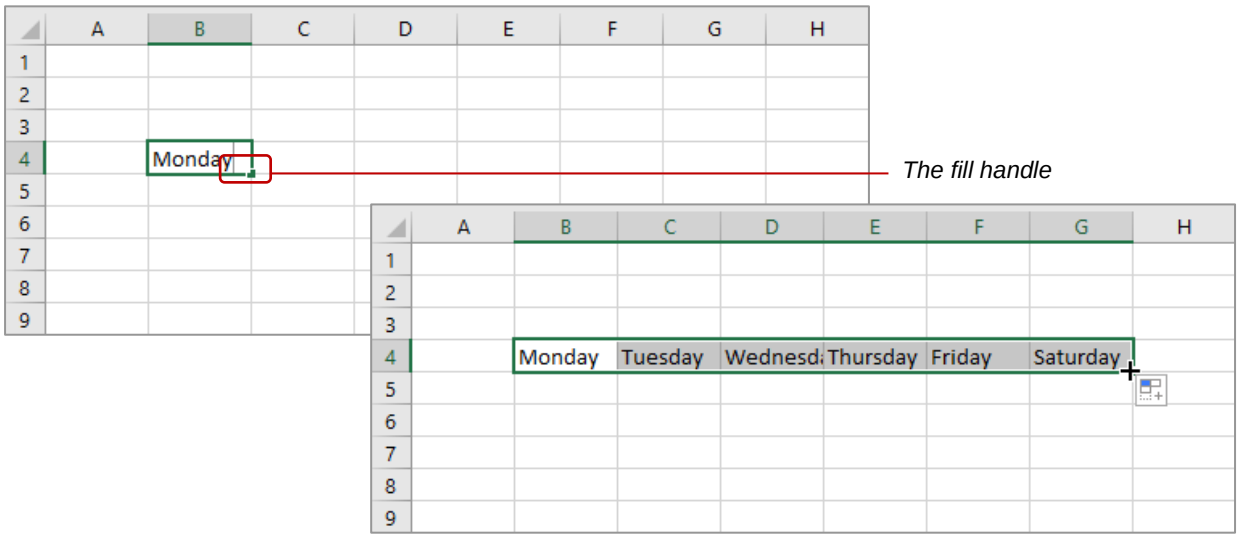
To use the fill handle (and thus copy data, formulas or functions to other cells), simply point to the fill handle (the small green square in the bottom corner of a cell) and when the pointer changes to a black cross, click and drag across, up or down to ***fill*** the adjacent cells.

## Using the Fill Handle To Create A Data Series

The fill handle can be particularly useful if you wish to create a data series. By dragging the fill handle across or down to adjacent cells, Excel fills these cells with a series of related data. As you can see in the example below, Excel recognises ***Monday*** as part of a data series so when you click and drag the fill handle across the adjacent cells, the rest of the days of the week are automatically inserted.

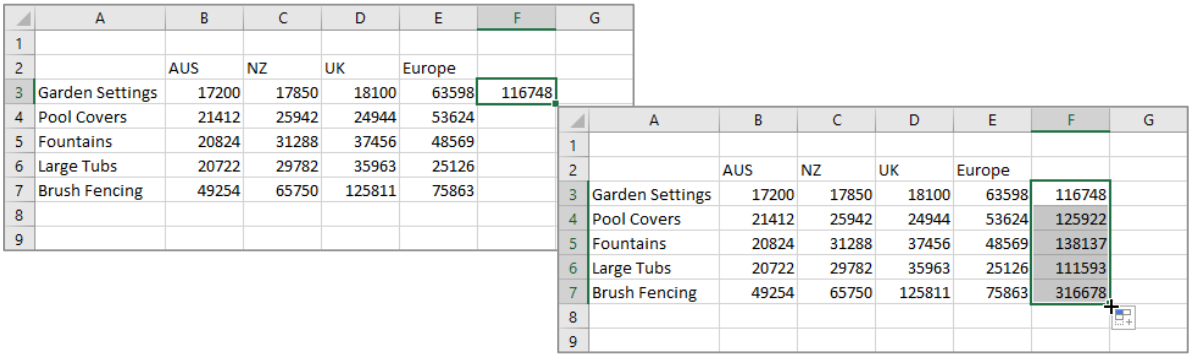
## Using The Fill Handle To Copy Data

If the data in a cell is not recognised as being part of a data series, then that data will simply be copied. For instance if you typed ***one*** in a cell and used the fill handle to fill the adjoining cells, ***one*** would be copied to those cells instead of ***two***, ***three***, ***four*** and so on.




## Using The Fill Handle to Copy Formulas

You can use the fill handle to copy a formula to adjacent cells and Excel will automatically adjust the formula accordingly. For example, in the image below on the left, the formula ***=B3+C3+D3+E3*** has been entered in cell ***F3*** to calculate the sum of the data in row ***3***. The fill handle has then been dragged down to cells ***F4***, ***F5***, ***F6*** and ***F7***. You can see in the image on the right that cell ***F4*** now contains the formula ***=B4+C4+D4+E4***. Excel has deduced that you wish to calculate the total for each row and so has adjusted the formula so that cell ***F4*** will display the sum of the data in row ***4***.



| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Settings | 17200 | 17850 | 18100 | 63598 | 116748 | |
| 4 | Pool Covers | 21412 | 25942 | 24944 | 53624 | | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | | |
| 6 | Large Tubs | 20722 | 29782 | 35963 | 25126 | | |
| 7 | Brush Fencing | 49254 | 65750 | 125811 | 75863 | | |
| 8 | | | | | | | |
| 9 | | | | | | | |

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Settings | 17200 | 17850 | 18100 | 63598 | 116748 | |
| 4 | Pool Covers | 21412 | 25942 | 24944 | 53624 | 125922 | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | 138137 | |
| 6 | Large Tubs | 20722 | 29782 | 35963 | 25126 | 111593 | |
| 7 | Brush Fencing | 49254 | 65750 | 125811 | 75863 | 316678 | |
| 8 | | | | | | | |
| 9 | | | | | | | |

# TYPING FORMULAS

The whole purpose of Excel is to perform calculations. In order for Excel to do this, you need to type ***formulas*** in the worksheet. Usually these formulas reference existing numbers or even other formulas already in the worksheet, using the cell addresses of these numbers rather than the actual value in them. Formulas must be typed beginning with an equal sign (**=**).

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Creating A New Workbook_3.xlsx...*

1. Click in cell ***B8*** to make this the active cell
2. Type **=B3+B4+B5+B6+B7**

   *Examine what happens on the screen as you type the formula…*
3. Press Tab to enter the formula and move to the next cell

   *A calculation has now been performed. We have entered a formula in cell B8 that instructs Excel to add the values in B3, B4, B5, B6, and B7 and show the result in cell B8…*
4. Ensure that cell ***C8*** is the active cell, type **=SUM(C3:C7)**, then press Tab

   *This is an alternative type of formula known as a "function". Again a calculation will appear in the cell…*
5. Click in cell ***B8***

   *Notice that the formula you typed appears in the Formula Bar (below the ribbon), while the result of the calculation appears in the worksheet…*
6. Click in cell ***C8***

   *Notice that the SUM function appears in the Formula Bar*

2

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 17200 | 17850 | 18100 | 63598 | | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | | |
| 6 | Large Tub | 20722 | 29782 | 35963 | 25126 | | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | | |
| 8 | | =B3+B4+B5+B6+B7 | | | | | |
| 9 | | | | | | | |

3

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 17200 | 17850 | 18100 | 63598 | | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | | |
| 6 | Large Tub | 20722 | 29782 | 35963 | 25126 | | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | | |
| 8 | | 129412 | | | | | |
| 9 | | | | | | | |

5

B8 =B3+B4+B5+B6+B7

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 17200 | 17850 | 18100 | 63598 | | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | | |
| 6 | Large Tub | 20722 | 29782 | 35963 | 25126 | | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | | |
| 8 | | 129412 | 170612 | | | | |
| 9 | | | | | | | |

6

C8 =SUM(C3:C7)

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 17200 | 17850 | 18100 | 63598 | | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | | |
| 6 | Large Tub | 20722 | 29782 | 35963 | 25126 | | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | | |
| 8 | | 129412 | 170612 | | | | |
| 9 | | | | | | | |

### For Your Reference…

To ***enter*** a ***formula***:

1. Click in the desired cell and type the formula commencing with **=**
2. Press Enter, an arrow key or Tab to confirm the data entry and to move the cell pointer to another cell

### Handy to Know…

- When you use a ***cell address*** in a formula (e.g. ***B3***, ***B4***, etc.), the formula will recalculate each time the actual value in ***B3*** or ***B4*** changes.

# EASY FORMULAS

Excel provides a number of ways to ***enter formulas*** into worksheets and some of these are real time savers. Once a formula has been entered, it can be copied across other columns or rows in a worksheet using an operation known as ***Filling***. In addition, there are commands on the ribbon that will automatically type a formula into the worksheet for you.

## Try This Yourself:

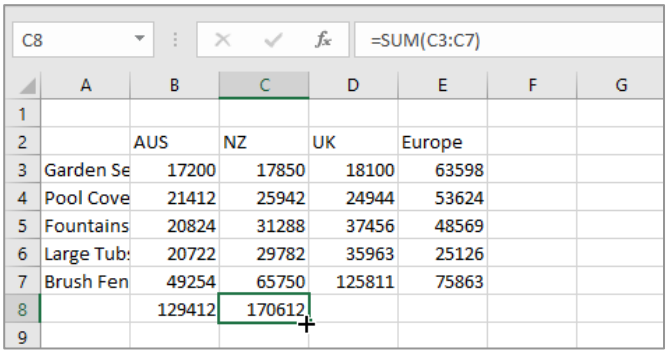
*Same File* *Continue using the previous file with this exercise, or open the file Creating A New Workbook_4.xlsx...*

1. Click in cell ***C8*** to make this the active cell
2. Point to the fill handle in cell ***C8*** until the mouse pointer changes to a cross
3. Drag the fill handle across to cell ***E8***

   *This will fill all of the intervening cells with the same formula that is in cell C8…*
4. Click in cell ***F3*** to make this the active cell
5. On the ***Home*** tab, click on ***AutoSum*** in the ***Editing*** group to insert a ***SUM*** function
6. Press Enter to complete the formula
7. Click in cell ***F8***, point to the fill handle, hold down the left mouse button and drag the fill handle across to cell ***F8***

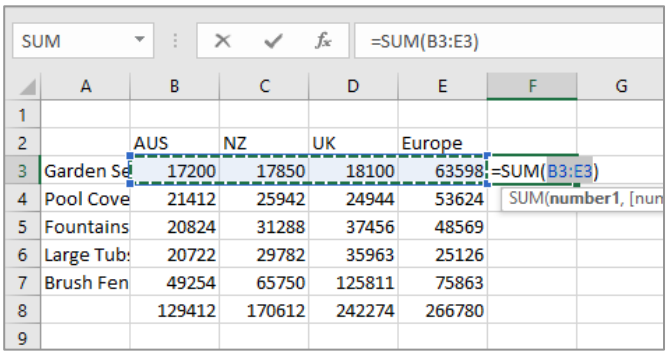
   *A function should now fill all of the highlighted cells*

2



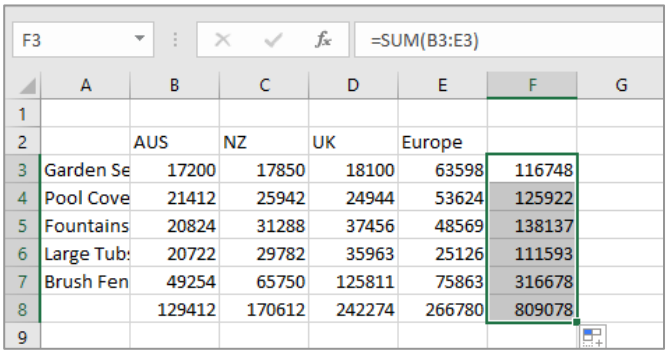

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 17200 | 17850 | 18100 | 63598 | | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | | |
| 6 | Large Tub | 20722 | 29782 | 35963 | 25126 | | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | | |
| 8 | | 129412 | 170612 | | | | |
| 9 | | | | | | | |

5




| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 17200 | 17850 | 18100 | 63598 | =SUM(B3:E3) | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | | |
| 6 | Large Tub | 20722 | 29782 | 35963 | 25126 | | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | | |
| 8 | | 129412 | 170612 | 242274 | 266780 | | |
| 9 | | | | | | | |

7




| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 17200 | 17850 | 18100 | 63598 | 116748 | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | 125922 | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | 138137 | |
| 6 | Large Tub | 20722 | 29782 | 35963 | 25126 | 111593 | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | 316678 | |
| 8 | | 129412 | 170612 | 242274 | 266780 | 809078 | |
| 9 | | | | | | | |

### For Your Reference…

To ***easily enter formulas*** into a ***worksheet***:

- Drag the fill handle of an existing formula to adjacent cells, or
- Click on ***AutoSum*** in the ***Editing*** group to insert a formula

### Handy to Know…

- Notice that a formula adjusts relative to its current position when it is dragged to adjacent cells – this is known as ***relative copying***.

# SAVING A NEW WORKBOOK ON YOUR COMPUTER

Few things are more frustrating in the world of computers than doing an hour of work and then losing it all because the computer crashes. This is one reason why it is important to save your work regularly. Saving your work moves the information from the computer's short-term memory (known as RAM), to its long-term memory (the hard disk drive) so that you can access it again later.

## Try This Yourself:

***Same File***

*Continue using the previous file with this exercise, or open the file Creating A New Workbook_5.xlsx...*

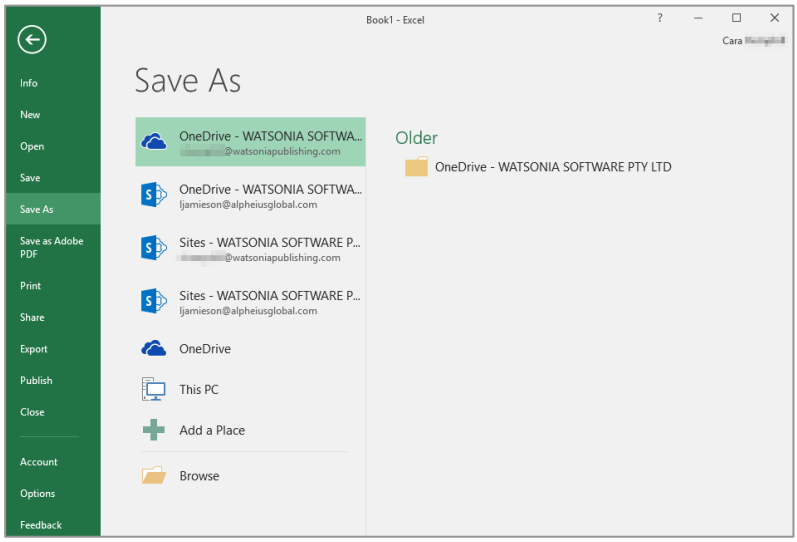
1. Click on the ***File*** tab on the ribbon to display the backstage, click on ***Save As***
2. Click on ***Browse*** to open the ***Save As*** dialog box

   *Excel will propose the default book name as the new file name...*
3. Type **Garden Department Sales** in ***File name***

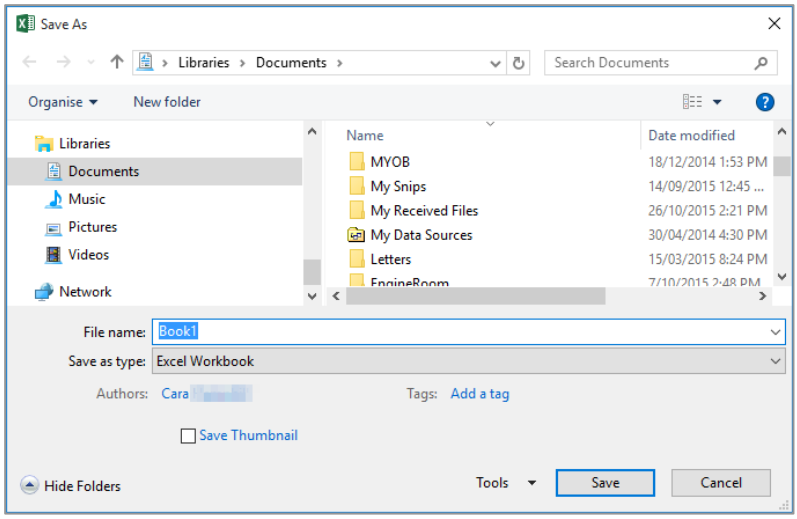
   *Now we need to choose the filing location…*
4. Click on ***Local Disk (C:)*** under ***This PC*** in the ***Navigation pane*** to display the folders on drive ***C***

   *The list of folders will appear in the pane on the right…*
5. Double-click on ***Course Files for Microsoft Excel 2016*** in the right pane
6. Click on **[Save]** to save the document

   *Notice that the new name now appears in the title bar at the top of the screen*




1




3

### For Your Reference…

To ***save*** a ***new document***:

1. Click on the ***File*** tab, then click on ***Save***
2. Locate the storage folder in the ***Navigation pane***
3. Type a ***File name*** and click on **[Save]**

### Handy to Know…

- You can press the keyboard shortcut Ctrl + S or click on ***Save*** in the ***Quick Access Toolbar*** to quickly save a document.

# CHECKING THE SPELLING

Because it is particularly unprofessional to distribute work with spelling mistakes, one of the most important tools you can use in Excel is the ***Spelling*** feature. When the Spelling command is run it highlights instances of misspelt words and often makes a suggestion that you can choose to either accept or reject.

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Creating A New Workbook_6.xlsx...*

1. Click in cell ***E3***

   *Notice that Europe has been misspelt. Let's check all of the spelling in the worksheet…*

2. Click on the ***Review*** tab, then click on ***Spelling*** in the ***Proofing*** group

   *Excel will ask if you wish to start from the beginning of the worksheet…*

3. Click on **[Yes]**

   *The spell check will commence, stopping at the first misspelt word – which will be Euroope…*

4. Click on **[Change]** to accept the spelling suggestion

   *Unless there are any other errors the checker will now have finished…*

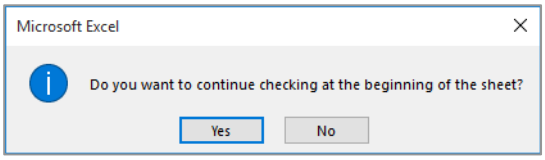
5. Click on **[OK]** to acknowledge the message and close the spelling checker

6. Click on ***Save*** to save the changes

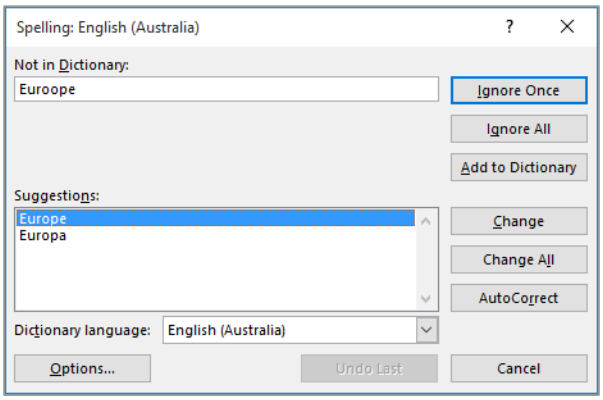
1

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 17200 | 17850 | 18100 | 63598 | 116748 | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | 125922 | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | 138137 | |
| 6 | Large Tub | 20722 | 29782 | 35963 | 25126 | 111593 | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | 316678 | |
| 8 | | 129412 | 170612 | 242274 | 266780 | 809078 | |
| 9 | | | | | | | |
| 10 | Sales at: | 31-Aug | | | | | |
| 11 | Reviewed | 7-Sep | | | | | |
| 12 | | | | | | | |

2




3




### For Your Reference…

To ***spell check*** a ***worksheet***:

1. Click on the ***Review*** tab
2. Click on ***Spelling*** in the ***Proofing*** group
3. Change words as required

### Handy to Know…

- Don't rely solely on computer spell checkers – they often include country-specific spelling (usually the country in which they were developed) and may also be culturally biased. Always manually proof your workbooks, in addition to using the ***Spelling*** feature, before distributing them to others.

# MAKING BASIC CHANGES

Changing the contents of a cell is very easy in Excel. All you have to do is click on a cell to make it active, type the new number, text or date and press Enter. The old cell contents will be immediately replaced by the new data you enter. And as well as this, any formulas that reference the cell you've changed will also be updated.

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Creating A New Workbook_7.xlsx...*

1. Click in cell ***B3*** to make this the active cell

   *Notice the totals in cells B8, F3 and F8…*

2. Type **25700** and press Enter

   *Notice that the totals in cells B8, F3 and F8 have changed…*

3. Click in cell ***B10***

   *Notice the date shown currently in cell B11…*

4. Type **3/11** and press Enter

   *Note the revised date now shown in cell B11…*

5. Click on ***Save*** to save the changes that have been made

**1**

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 17200 | 17850 | 18100 | 63598 | 116748 | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | 125922 | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | 138137 | |
| 6 | Large Tub: | 20722 | 29782 | 35963 | 25126 | 111593 | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | 316678 | |
| 8 | | 129412 | 170612 | 242274 | 266780 | 809078 | |
| 9 | | | | | | | |
| 10 | Sales at: | 31-Aug | | | | | |
| 11 | Reviewed | 7-Sep | | | | | |
| 12 | | | | | | | |

**2**

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 25700 | 17850 | 18100 | 63598 | 125248 | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | 125922 | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | 138137 | |
| 6 | Large Tub: | 20722 | 29782 | 35963 | 25126 | 111593 | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | 316678 | |
| 8 | | 137912 | 170612 | 242274 | 266780 | 817578 | |
| 9 | | | | | | | |
| 10 | Sales at: | 31-Aug | | | | | |
| 11 | Reviewed | 7-Sep | | | | | |
| 12 | | | | | | | |

**4**

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 25700 | 17850 | 18100 | 63598 | 125248 | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | 125922 | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | 138137 | |
| 6 | Large Tub: | 20722 | 29782 | 35963 | 25126 | 111593 | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | 316678 | |
| 8 | | 137912 | 170612 | 242274 | 266780 | 817578 | |
| 9 | | | | | | | |
| 10 | Sales at: | 31-Aug | | | | | |
| 11 | Reviewed | 7-Sep | | | | | |
| 12 | | | | | | | |

### For Your Reference…

To ***make changes*** to a ***cell***:

1. Click on the cell to make it active
2. Type the new contents for the cell, then press Enter, Tab or one of the arrow keys

### Handy to Know…

- If you want to keep the previous data in a worksheet, simply enter the new data then use ***Save As*** rather than ***Save*** to save the workbook under a different name.
- If you begin typing in the wrong cell press Esc to abort the editing and restore the original content to the cell.

# PRINTING A WORKSHEET

Traditionally, ***printing*** means producing your document on paper, but in today's Web and online world it might mean printing to the Web or to another file. Excel gives you a lot of control over what and how much to print as well as enabling you to select the printer to use. You can print one or multiple copies of a document, one or multiple pages and even collate copies.

## Try This Yourself:

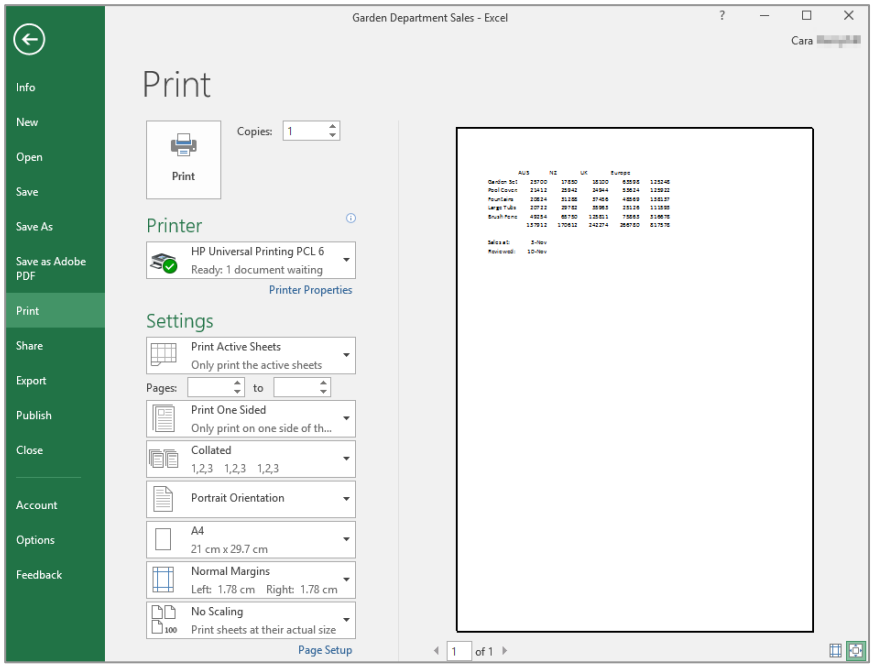
***Same File***

*Continue using the previous file with this exercise, or open the file Creating A New Workbook_8.xlsx...*

1. Click on the ***File*** tab, then click on ***Print*** to display the ***Print*** options in the ***Backstage***

   *Your window may appear a little different to the one shown, but basically you will be presented with the printing options in the left pane and a preview of the document in the right pane...*

2. Click on the drop arrow for ***Printer*** to see a list of devices
3. Select a printer from the list
4. Click on **[Print]** to print the pages or click on the ***Back*** arrow (at the top left corner of the screen) if you wish to exit the ***Backstage***




1

## For Your Reference…

To ***print*** a ***document***:

1. Click on the ***File*** tab, then click on ***Print***
2. Select a printer
3. Set any other options
4. Click on **[Print]**

## Handy to Know…

- You can use the keyboard shortcut Ctrl + P to display the ***Print*** options in the ***Backstage*** view.

# SAFELY CLOSING A WORKBOOK

When you have finished working with a workbook in Excel you should close it. Workbooks that are left open take up computer resources and your computer will work better and faster with fewer files open. Workbooks are automatically closed when you exit Excel, but sometimes you may want to remain in Excel. You can do this by ***closing*** the current workbook before opening another.

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Creating A New Workbook_9.xlsx...*

1. Click in cell ***B3***, type **30000** and press Enter

   *As soon as you make a change in Excel it is deemed to be an "unsaved change" until you save the workbook. We have done this to see what will happen when you try and close a workbook with unsaved changes in it…*

2. Click on the ***File*** tab, then click on ***Close*** to close the current document

   *If you have not saved your work, a message box will appear providing you with an option to do so. If you want to keep the changes you've made select [Save], otherwise select [Don't Save]. The [Cancel] option will cancel closing and leave the workbook open...*

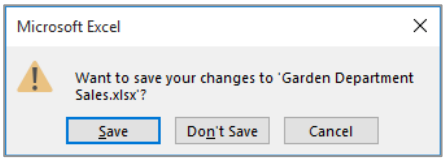
3. Click on **[Save]** to first save, then close the workbook

   *If this was the only workbook open, then the screen will now appear without a workbook*

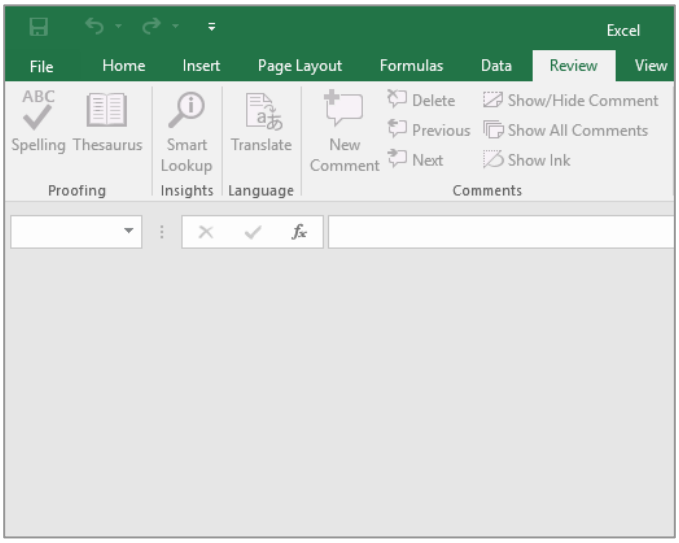
1

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | | | | | | | |
| 2 | | AUS | NZ | UK | Europe | | |
| 3 | Garden Se | 30000 | 17850 | 18100 | 63598 | 129548 | |
| 4 | Pool Cove | 21412 | 25942 | 24944 | 53624 | 125922 | |
| 5 | Fountains | 20824 | 31288 | 37456 | 48569 | 138137 | |
| 6 | Large Tub: | 20722 | 29782 | 35963 | 25126 | 111593 | |
| 7 | Brush Fen | 49254 | 65750 | 125811 | 75863 | 316678 | |
| 8 | | 142212 | 170612 | 242274 | 266780 | 821878 | |
| 9 | | | | | | | |
| 10 | Sales at: | 3-Nov | | | | | |
| 11 | Reviewed | 10-Nov | | | | | |
| 12 | | | | | | | |

2




3




### For Your Reference…

To ***close*** a ***workbook***:

1. Click on the ***File*** tab
2. Click on ***Close***, then click on **[Save]**, or **[Don't Save]**

### Handy to Know…

- If you save your workbook and select ***Close*** in the ***Backstage***, the workbook will be closed without a message prompting you to save.
- If you close a workbook when others are still open, the application will not close.

# CHAPTER 3 EDITING IN A WORKBOOK

INFOCUS

Spreadsheet applications like Excel 2016 are different to many other applications in that you'll often find yourself changing the data in the worksheets and workbooks. This is because spreadsheets lend themselves to being used as *what-if* tools – for example, when will my home mortgage end if I pay more money each week, what will total profit be if we increase sales by 50% this year?

This type of experimenting means that you'll need to know how to change, or *edit* data in a worksheet.

**In this session you will:**

- ✓ gain an understanding of editing data
- ✓ learn how to overwrite the contents of a cell
- ✓ learn how to edit longer cell entries using edit mode
- ✓ learn how to edit cell references in formulas
- ✓ learn how to clear a cell
- ✓ learn how to delete cells, columns, and rows in a worksheet
- ✓ learn how to undo and redo operations.

# UNDERSTANDING DATA EDITING

In computer jargon ***editing*** means changing – when you *edit* data, you are changing it. There are many ways in Excel that you can change your data – you can ***overwrite*** it and replace it with something entirely new; you can ***delete*** it entirely or; you can perform an Excel ***edit*** on the data where you change only a part of it.

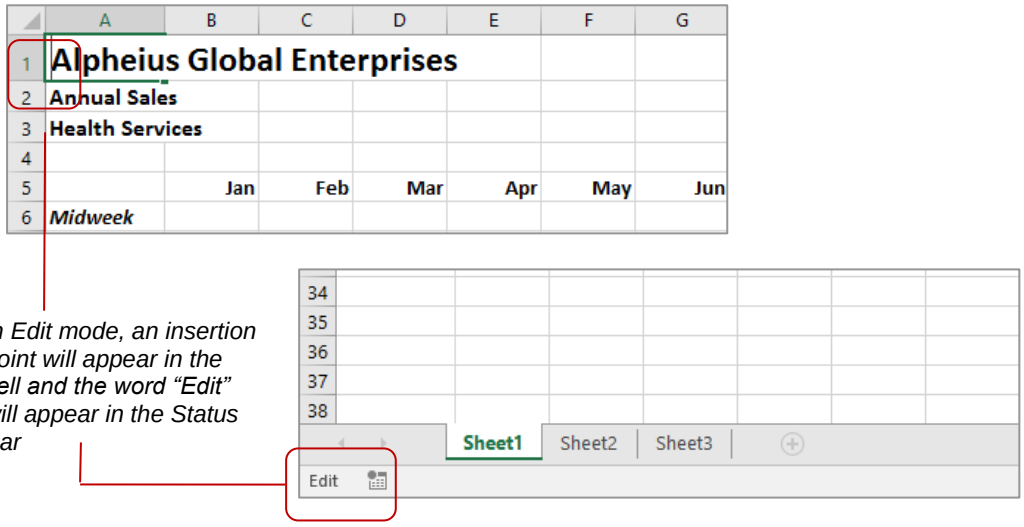
## Overwriting Data

Overwriting is by far the easiest way to change existing data. To overwrite, you simply click on the cell that you want to change, type the new values, and then press Enter – the data that was there before is completely replaced by the new data you've typed.

## Editing Data

Each cell in a worksheet can hold up to *32,767* characters. Even though it is unlikely that you'll ever use that many characters in a cell, there will be times when you have longer text entries or complex formulas that would be a pain to have to retype. In these situations, you can use Excel's editing features.

You can edit a cell either by double-clicking on it, or by pressing F2 on the keyboard. When a cell is in edit mode the status bar will show ***Edit*** rather than ***Ready***, and the insertion point will appear in the cell allowing you to choose which characters you want to change. Once the changes have been made you can press Enter to record the changes.




*In Edit mode, an insertion point will appear in the cell and the word "Edit" will appear in the Status Bar*

## Deleting Data

There are two operations for removing unwanted data from a worksheet – you can either ***clear*** data or ***delete*** it entirely.

When you ***clear*** data from a worksheet you are *emptying* the cell or cells of their contents (you can actually specify other things to clear out as well, but that will only confuse matters at this point).

When you ***delete*** data from a worksheet you are *emptying* the cell or cells of their contents, but you also have the option of changing the layout of the worksheet by *shifting* data from adjacent cells into the one or ones that have been deleted.

At first, the difference between ***clear*** and ***delete*** may not be very clear. However, consider an annual budget that is showing forecasts on a monthly basis. You'll have a column of figures for each month of the year (January, February, March, through to December). If you ***clear*** the data for March you'll end up with an empty column. However, if you ***delete*** the data for March all of the columns to the right (April, May, etc) will shift one column to the left so that April occupies the column previously occupied by March, May that of April, June that of May, and so on.

# OVERWRITING CELL CONTENTS

You can easily change the contents of a cell by retyping the contents of that cell. This process is known as ***overwriting*** and is the simplest form of editing. The overwriting process involves clicking on the cell that you wish to change and typing the new data. As soon as you press Enter or click elsewhere in the worksheet, the new data will replace the old cell entry.

## Try This Yourself:

Open File

*Before starting this exercise you MUST open the file Editing_1.xlsx…*

1. Click in cell ***B7***

   *This cell currently shows a value of 70,500 – notice that this appears in the formula bar…*

2. Type **71456**, then press Enter

   *This will place the new value in the cell, overwriting the old value and updating the formulas in the table*

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | | |
| 2 | **Annual Sales** | | | | | | | |
| 3 | **Health Services** | | | | | | | |
| 4 | | | | | | | | |
| 5 | | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** |
| 6 | ***Midweek*** | | | | | | | |
| 7 | **Tuesday** | 70,500 | 78,967 | 85,889 | 117,015 | 101,328 | 108,187 | 144,878 |
| 8 | **Wednesday** | 520,830 | 360,389 | 244,488 | 110,585 | 96,184 | 103,043 | 138,448 |
| 9 | **Thursday** | 83,296 | 520,242 | 82,467 | 112,728 | 97,899 | 104,757 | 140,592 |
| 10 | **Friday** | 520,140 | 83,333 | 87,611 | 119,158 | 103,043 | 109,901 | 147,022 |
| 11 | | | | | | | | |
| 12 | **Subtotal** | **1,194,766** | **1,042,931** | **500,455** | **459,486** | **398,454** | **425,888** | **570,940** |

1

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | | |
| 2 | **Annual Sales** | | | | | | | |
| 3 | **Health Services** | | | | | | | |
| 4 | | | | | | | | |
| 5 | | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** |
| 6 | ***Midweek*** | | | | | | | |
| 7 | **Tuesday** | 71,456 | 78,967 | 85,889 | 117,015 | 101,328 | 108,187 | 144,878 |
| 8 | **Wednesday** | 520,830 | 360,389 | 244,488 | 110,585 | 96,184 | 103,043 | 138,448 |
| 9 | **Thursday** | 83,296 | 520,242 | 82,467 | 112,728 | 97,899 | 104,757 | 140,592 |
| 10 | **Friday** | 520,140 | 83,333 | 87,611 | 119,158 | 103,043 | 109,901 | 147,022 |
| 11 | | | | | | | | |
| 12 | **Subtotal** | **1,195,722** | **1,042,931** | **500,455** | **459,486** | **398,454** | **425,888** | **570,940** |

2

### For Your Reference…

To ***overwrite cell contents***:

1. Click in a cell that contains data
2. Type the new data
3. Press Enter

### Handy to Know…

- You can abort overwriting the contents of a cell by pressing Esc instead of Enter.
- Overwriting cell contents is particularly useful when there is a relatively small amount of data in the cell.

# EDITING LONGER CELLS

Excel provides you with several ways of changing the contents of a cell without the need for retyping the entire entry. Some of the ways of editing a cell include: double-clicking in the cell, pressing F2 on the keyboard, and clicking in the ***Formula Bar***. All of these techniques place Excel in ***edit mode***. The method that you choose is one of personal preference.

## Try This Yourself:

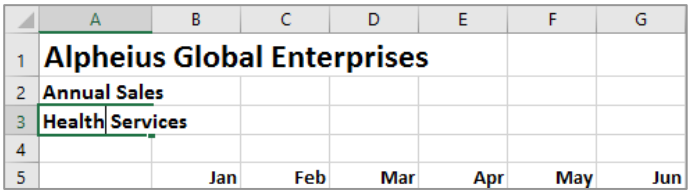
*Same File* *Continue using the previous file with this exercise, or open the file Editing_2.xlsx...*

1. Double-click in cell A3

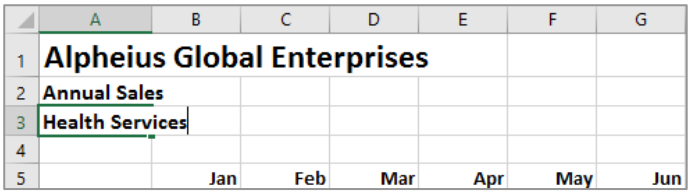
   *The cell is now in edit mode, as indicated by the flashing insertion pointer in the cell, and the Edit message in the status bar at the bottom of the screen…*

2. Press End to move the insertion pointer to the end of the text
3. Press Home to move the insertion pointer to the start of the text
4. Hold down Ctrl, then press → to move to the start of the next word
5. Type **and Related**, then press Space
6. Press Enter to complete the editing process

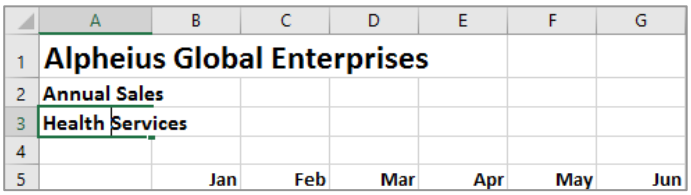
1



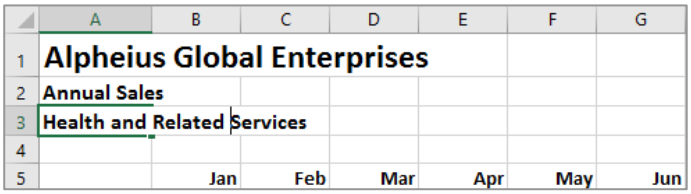

2




4




5




### For Your Reference…

To ***edit long cell entries***:

1. Double-click on the cell to be edited, or press F2, or click on the ***Formula Bar***
2. Make the changes
3. Press Enter

### Handy to Know…

- As well as the word ***Edit*** appearing in the status bar when you have placed Excel into edit mode, the ***Enter*** and ***Cancel*** icons are enabled in the ***Formula Bar***.

# EDITING FORMULAS

When editing a formula you can often click out of the formula in edit mode. This allows you to move around the worksheet in order to click on a particular cell that you wish to include in the formula. Also, when you first edit a formula Excel displays the linked cells in a different colour. This makes it easy to follow the logic of the formula that you are editing.

## Try This Yourself:

Same File

*Continue using the previous file with this exercise, or open the file Editing_3.xlsx...*

1. Double-click in cell B20

   *Notice the use of coloured cell indicators – it shows the immediate dependents of the formula. Cell B18 should be included, not cell B17…*

2. Select B17 in the ***Formula Bar*** as shown

   *The cell reference in the formula will appear selected…*

3. Click in cell B18 in the worksheet

   *B17 in the formula will change to B18…*

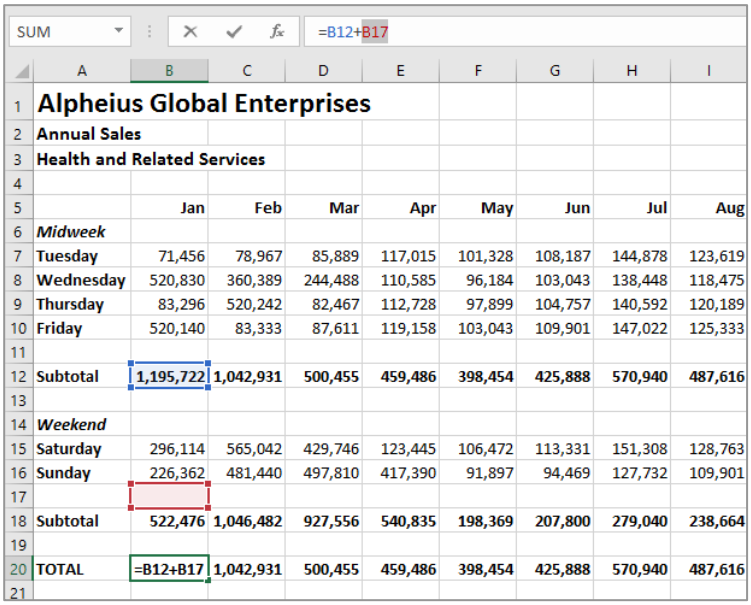
4. Press Enter to complete the formula

   *You can now fill the changes across to the other cells…*

5. Press ↑ to move the cell pointer back to cell B20

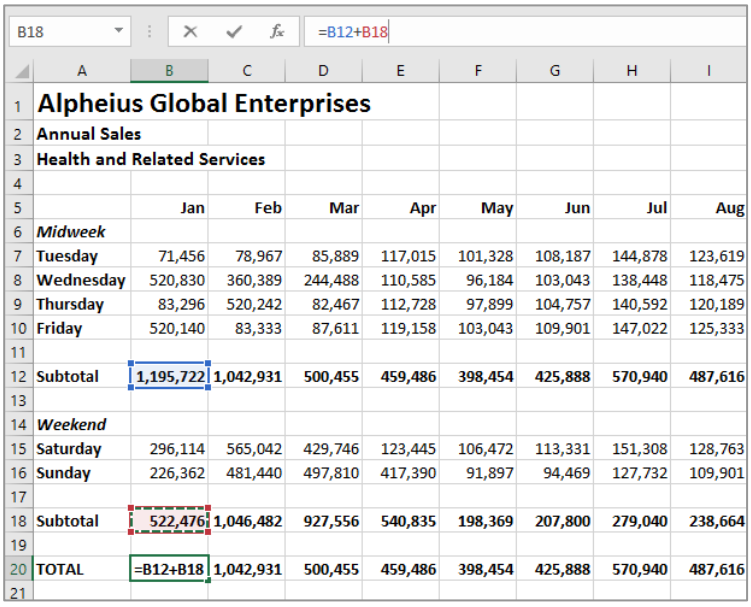
6. Click and drag the fill handle across to cell ***N20*** to fill the edited formula across these cells

2




| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | | | |
| 2 | **Annual Sales** | | | | | | | | |
| 3 | **Health and Related Services** | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** |
| 6 | ***Midweek*** | | | | | | | | |
| 7 | **Tuesday** | 71,456 | 78,967 | 85,889 | 117,015 | 101,328 | 108,187 | 144,878 | 123,619 |
| 8 | **Wednesday** | 520,830 | 360,389 | 244,488 | 110,585 | 96,184 | 103,043 | 138,448 | 118,475 |
| 9 | **Thursday** | 83,296 | 520,242 | 82,467 | 112,728 | 97,899 | 104,757 | 140,592 | 120,189 |
| 10 | **Friday** | 520,140 | 83,333 | 87,611 | 119,158 | 103,043 | 109,901 | 147,022 | 125,333 |
| 11 | | | | | | | | | |
| 12 | **Subtotal** | **1,195,722** | **1,042,931** | **500,455** | **459,486** | **398,454** | **425,888** | **570,940** | **487,616** |
| 13 | | | | | | | | | |
| 14 | ***Weekend*** | | | | | | | | |
| 15 | **Saturday** | 296,114 | 565,042 | 429,746 | 123,445 | 106,472 | 113,331 | 151,308 | 128,763 |
| 16 | **Sunday** | 226,362 | 481,440 | 497,810 | 417,390 | 91,897 | 94,469 | 127,732 | 109,901 |
| 17 | | | | | | | | | |
| 18 | **Subtotal** | **522,476** | **1,046,482** | **927,556** | **540,835** | **198,369** | **207,800** | **279,040** | **238,664** |
| 19 | | | | | | | | | |
| 20 | **TOTAL** | **=B12+B17** | **1,042,931** | **500,455** | **459,486** | **398,454** | **425,888** | **570,940** | **487,616** |
| 21 | | | | | | | | | |

3




| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | | | |
| 2 | **Annual Sales** | | | | | | | | |
| 3 | **Health and Related Services** | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** |
| 6 | ***Midweek*** | | | | | | | | |
| 7 | **Tuesday** | 71,456 | 78,967 | 85,889 | 117,015 | 101,328 | 108,187 | 144,878 | 123,619 |
| 8 | **Wednesday** | 520,830 | 360,389 | 244,488 | 110,585 | 96,184 | 103,043 | 138,448 | 118,475 |
| 9 | **Thursday** | 83,296 | 520,242 | 82,467 | 112,728 | 97,899 | 104,757 | 140,592 | 120,189 |
| 10 | **Friday** | 520,140 | 83,333 | 87,611 | 119,158 | 103,043 | 109,901 | 147,022 | 125,333 |
| 11 | | | | | | | | | |
| 12 | **Subtotal** | **1,195,722** | **1,042,931** | **500,455** | **459,486** | **398,454** | **425,888** | **570,940** | **487,616** |
| 13 | | | | | | | | | |
| 14 | ***Weekend*** | | | | | | | | |
| 15 | **Saturday** | 296,114 | 565,042 | 429,746 | 123,445 | 106,472 | 113,331 | 151,308 | 128,763 |
| 16 | **Sunday** | 226,362 | 481,440 | 497,810 | 417,390 | 91,897 | 94,469 | 127,732 | 109,901 |
| 17 | | | | | | | | | |
| 18 | **Subtotal** | **522,476** | **1,046,482** | **927,556** | **540,835** | **198,369** | **207,800** | **279,040** | **238,664** |
| 19 | | | | | | | | | |
| 20 | **TOTAL** | **=B12+B18** | **1,042,931** | **500,455** | **459,486** | **398,454** | **425,888** | **570,940** | **487,616** |
| 21 | | | | | | | | | |

### For Your Reference…

To ***edit formulas***:

1. Double-click in the cell
2. Double-click in the cell reference to be changed
3. Click on the new cell to be referenced, then press Enter

### Handy to Know…

- If you discover that you're changing the data in the wrong cells or that your correction isn't working you as you'd hoped, press Esc. The original cell contents will be redisplayed allowing you to start again.

# CLEARING CELLS

If you wish to empty a cell without impacting on the layout of your worksheet, you will need to use the ***Clear*** operation in Excel. *Clearing* a cell (or many cells) actually *empties* the cell of its contents. You can also just clear the *formats* and speciality items such as *comments* and *hyperlinks*. Clearing is done using the ***Clear*** command on the ***Home*** tab or by pressing Del on the keyboard.

## Try This Yourself:

Same File

*Continue using the previous file with this exercise, or open the file Editing_4.xlsx...*

1. Click in cell ***C7***

   *This cell contains the sales for Feb…*

2. Press Del to clear the value from the cell

   *Notice that the totals change and that the cell remains the active cell…*

3. Type **83999**, then press Enter

   *Notice that the formatting (the comma in the numbers) has remained as before…*

4. Click in cell ***C7*** again

5. Ensure the ***Home*** tab is selected, then click on ***Clear*** in the ***Editing*** group to display a menu of options

6. Select **Clear All** to clear the contents *and* the formatting from these cells

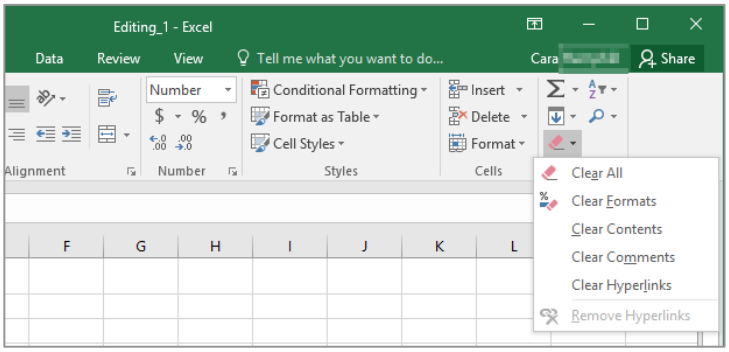
7. Type **91200**, then press Enter

   *This time the formatting doesn't appear because the cell has been completely cleared*

1

| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | | | |
| 2 | **Annual Sales** | | | | | | | | |
| 3 | **Health and Related Services** | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** |
| 6 | ***Midweek*** | | | | | | | | |
| 7 | **Tuesday** | 71,456 | 78,967 | 85,889 | 117,015 | 101,328 | 108,187 | 144,878 | 123,619 |
| 8 | **Wednesday** | 520,830 | 360,389 | 244,488 | 110,585 | 96,184 | 103,043 | 138,448 | 118,475 |
| 9 | **Thursday** | 83,296 | 520,242 | 82,467 | 112,728 | 97,899 | 104,757 | 140,592 | 120,189 |
| 10 | **Friday** | 520,140 | 83,333 | 87,611 | 119,158 | 103,043 | 109,901 | 147,022 | 125,333 |
| 11 | | | | | | | | | |
| 12 | **Subtotal** | **1,195,722** | **1,042,931** | **500,455** | **459,486** | **398,454** | **425,888** | **570,940** | **487,616** |
| 13 | | | | | | | | | |

5




7

| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | | | |
| 2 | **Annual Sales** | | | | | | | | |
| 3 | **Health and Related Services** | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** |
| 6 | ***Midweek*** | | | | | | | | |
| 7 | **Tuesday** | 71,456 | 91200 | 85,889 | 117,015 | 101,328 | 108,187 | 144,878 | 123,619 |
| 8 | **Wednesday** | 520,830 | 360,389 | 244,488 | 110,585 | 96,184 | 103,043 | 138,448 | 118,475 |
| 9 | **Thursday** | 83,296 | 520,242 | 82,467 | 112,728 | 97,899 | 104,757 | 140,592 | 120,189 |
| 10 | **Friday** | 520,140 | 83,333 | 87,611 | 119,158 | 103,043 | 109,901 | 147,022 | 125,333 |
| 11 | | | | | | | | | |
| 12 | **Subtotal** | **1,195,722** | **1,055,164** | **500,455** | **459,486** | **398,454** | **425,888** | **570,940** | **487,616** |
| 13 | | | | | | | | | |

### For Your Reference…

To ***clear a cell***:

1. Click on the cell
2. Click on the ***Home*** tab, then click on ***Clear*** in the ***Editing*** group, or
   Click on the cell, then press Del

### Handy to Know…

- The distinction between ***clearing*** a cell and ***deleting*** it is subtle but important – ***clearing*** a cell empties the cell contents while ***deleting*** a cell actually shifts other cells into its place.

# DELETING DATA

The ***Delete*** operation in Excel *removes* cells, rows and columns from a worksheet. In the process it shifts adjacent cells, rows or columns into the position previously occupied by the deleted ones. This can have some serious consequences for your worksheet's layout and you should only use the ***Delete*** command when you truly understand and know what you are doing.

## Try This Yourself:

Same File

*Continue using the previous file with this exercise, or open the file Editing_5.xlsx...*

1. Click in cell ***B5***, hold down Shift, then click in cell ***B12*** to select the range ***B5***:***B12***
2. On the ***Home*** tab click on the top half of ***Delete*** in the ***Cells*** group

   *The columns to the right will be shifted left (i.e. Feb is now where Jan used to be) and some of the formulas are now corrupted…*
3. Click in cell ***B15***, hold down Shift, then click in cell ***B20***
4. On the ***Home*** tab, click on the top half of ***Delete*** to move the columns left and correct the situation
5. Click on column heading ***C*** to select the entire column
6. On the ***Home*** tab, click on the top half of ***Delete*** to delete column ***C*** and move the columns on the right
7. Click on row heading ***6*** to select the entire row
8. On the ***Home*** tab, click on the upper part of ***Delete*** to delete the row and shift the others up

| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | | | |
| 2 | **Annual Sales** | | | | | | | | |
| 3 | **Health and Related Services** | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** |
| 6 | ***Midweek*** | | | | | | | | |
| 7 | **Tuesday** | 71,456 | 91200 | 85,889 | 117,015 | 101,328 | 108,187 | 144,878 | 123,619 |
| 8 | **Wednesday** | 520,830 | 360,389 | 244,488 | 110,585 | 96,184 | 103,043 | 138,448 | 118,475 |
| 9 | **Thursday** | 83,296 | 520,242 | 82,467 | 112,728 | 97,899 | 104,757 | 140,592 | 120,189 |
| 10 | **Friday** | 520,140 | 83,333 | 87,611 | 119,158 | 103,043 | 109,901 | 147,022 | 125,333 |
| 11 | | | | | | | | | |
| 12 | **Subtotal** | **1,195,722** | **1,055,164** | **500,455** | **459,486** | **398,454** | **425,888** | **570,940** | **487,616** |
| 13 | | | | | | | | | |

1

| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | | | |
| 2 | **Annual Sales** | | | | | | | | |
| 3 | **Health and Related Services** | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** |
| 6 | ***Midweek*** | | | | | | | | |
| 7 | **Tuesday** | 91200 | 85,889 | 117,015 | 101,328 | 108,187 | 144,878 | 123,619 | 164,168 |
| 8 | **Wednesday** | 360,389 | 244,488 | 110,585 | 96,184 | 103,043 | 138,448 | 118,475 | 157,738 |
| 9 | **Thursday** | 520,242 | 82,467 | 112,728 | 97,899 | 104,757 | 140,592 | 120,189 | 159,882 |
| 10 | **Friday** | 83,333 | 87,611 | 119,158 | 103,043 | 109,901 | 147,022 | 125,333 | 166,312 |
| 11 | | | | | | | | | |
| 12 | **Subtotal** | **1,055,164** | **500,455** | **459,486** | **398,454** | **425,888** | **570,940** | **487,616** | **648,100** |
| 13 | | | | | | | | | |

2

| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | | | |
| 2 | **Annual Sales** | | | | | | | | |
| 3 | **Health and Related Services** | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | **Feb** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** |
| 6 | **Tuesday** | 91200 | 117,015 | 101,328 | 108,187 | 144,878 | 123,619 | 164,168 | 139,051 |
| 7 | **Wednesday** | 360,389 | 110,585 | 96,184 | 103,043 | 138,448 | 118,475 | 157,738 | 133,907 |
| 8 | **Thursday** | 520,242 | 112,728 | 97,899 | 104,757 | 140,592 | 120,189 | 159,882 | 135,621 |
| 9 | **Friday** | 83,333 | 119,158 | 103,043 | 109,901 | 147,022 | 125,333 | 166,312 | 140,765 |
| 10 | | | | | | | | | |
| 11 | **Subtotal** | **1,055,164** | **459,486** | **398,454** | **425,888** | **570,940** | **487,616** | **648,100** | **549,344** |
| 12 | | | | | | | | | |
| 13 | ***Weekend*** | | | | | | | | |

8

### For Your Reference…

To ***delete cells***, ***columns***, or ***rows***:

1. Select the cells, columns, or rows to delete
2. Click on the ***Home*** tab
3. Click on ***Delete*** in the ***Cells*** group

### Handy to Know…

- The ***Undo*** tool on the ***Quick Access Toolbar*** allows you to undo previous operations including deletions.

# USING UNDO AND REDO

Excel provides you with ***Undo*** and ***Redo*** tools on the ***Quick Access Toolbar*** which allow you to undo operations such as deletions and then if necessary redo them again. Undo is handy for those times when you've accidentally deleted something you wish you hadn't. As long as you haven't saved or closed the workbook, you'll be able to undo most operations.

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Editing_6.xlsx...*

1. Click in cell ***B5***, hold down Shift, then click in cell ***B11*** to select the range of cells from cell ***B5*** to cell ***B11***
2. On the ***Home*** tab, click on the top half of ***Delete*** in the ***Cells*** group to delete this range and also move cells and corrupt formulas
3. Repeat the above steps with the two ranges ***B14:B19*** and ***D5:D19***
4. Click on ***Undo*** in the ***Quick Access Toolbar*** three times to undo each of the deletions

   *Excel stores each operation and you can undo them in the opposite sequence to which they were originally performed. This is like stepping back one step at a time through previous operations…*
5. Click on the ***Redo*** tool in the ***Quick Access Toolbar*** three times to step forward through the operations again

1

| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | | | |
| 2 | **Annual Sales** | | | | | | | | |
| 3 | **Health and Related Services** | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | **Feb** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** |
| 6 | **Tuesday** | 91200 | 117,015 | 101,328 | 108,187 | 144,878 | 123,619 | 164,168 | 139,051 |
| 7 | **Wednesday** | 360,389 | 110,585 | 96,184 | 103,043 | 138,448 | 118,475 | 157,738 | 133,907 |
| 8 | **Thursday** | 520,242 | 112,728 | 97,899 | 104,757 | 140,592 | 120,189 | 159,882 | 135,621 |
| 9 | **Friday** | 83,333 | 119,158 | 103,043 | 109,901 | 147,022 | 125,333 | 166,312 | 140,765 |
| 10 | | | | | | | | | |
| 11 | **Subtotal** | **1,055,164** | **459,486** | **398,454** | **425,888** | **570,940** | **487,616** | **648,100** | **549,344** |
| 12 | | | | | | | | | |
| 13 | ***Weekend*** | | | | | | | | |

2

| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | | | |
| 2 | **Annual Sales** | | | | | | | | |
| 3 | **Health and Related Services** | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Nov** |
| 6 | **Tuesday** | 117,015 | 101,328 | 108,187 | 144,878 | 123,619 | 164,168 | 139,051 | 183,458 |
| 7 | **Wednesday** | 110,585 | 96,184 | 103,043 | 138,448 | 118,475 | 157,738 | 133,907 | 177,028 |
| 8 | **Thursday** | 112,728 | 97,899 | 104,757 | 140,592 | 120,189 | 159,882 | 135,621 | 179,172 |
| 9 | **Friday** | 119,158 | 103,043 | 109,901 | 147,022 | 125,333 | 166,312 | 140,765 | 185,602 |
| 10 | | | | | | | | | |
| 11 | **Subtotal** | **459,486** | **398,454** | **425,888** | **570,940** | **487,616** | **648,100** | **549,344** | **725,260** |
| 12 | | | | | | | | | |
| 13 | ***Weekend*** | | | | | | | | |

4

| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | | | |
| 2 | **Annual Sales** | | | | | | | | |
| 3 | **Health and Related Services** | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | **Feb** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** |
| 6 | **Tuesday** | 91200 | 117,015 | 101,328 | 108,187 | 144,878 | 123,619 | 164,168 | 139,051 |
| 7 | **Wednesday** | 360,389 | 110,585 | 96,184 | 103,043 | 138,448 | 118,475 | 157,738 | 133,907 |
| 8 | **Thursday** | 520,242 | 112,728 | 97,899 | 104,757 | 140,592 | 120,189 | 159,882 | 135,621 |
| 9 | **Friday** | 83,333 | 119,158 | 103,043 | 109,901 | 147,022 | 125,333 | 166,312 | 140,765 |
| 10 | | | | | | | | | |
| 11 | **Subtotal** | **1,055,164** | **459,486** | **398,454** | **425,888** | **570,940** | **487,616** | **648,100** | **549,344** |
| 12 | | | | | | | | | |
| 13 | ***Weekend*** | | | | | | | | |

### For Your Reference…

To ***undo*** an ***operation***:

- Click on the ***Undo*** tool in the ***Quick Access Toolbar***

To ***redo*** an ***operation***:

- Click on the ***Redo*** tool in the ***Quick Access Toolbar***

### Handy to Know…

- Both the ***Redo*** and ***Undo*** tools have drop arrows next to them. These drop arrows show a history of previous operations. You can choose to undo or redo any operation using the history listing rather than stepping through each of the operations as we've done above.

CHAPTER 4

# FORMULAS AND FUNCTIONS

INFOCUS

Just as Microsoft Word allows you to work with words, Excel allows you to process numbers. This is done with ***formulas*** that are used to perform calculations.

Formulas can perform simple tasks such as adding up a few cells or more complex operations. In addition, Excel also contains several hundred pre-programmed formulas for performing a variety of different types of calculations – these are known as ***functions***.

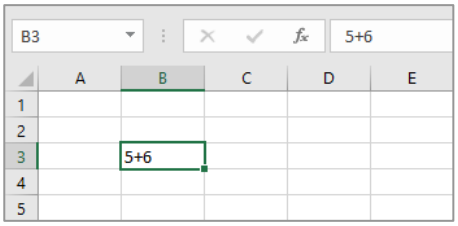
**In this session you will:**

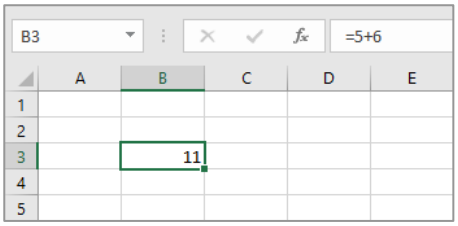
- ✓ gain an understanding of formulas
- ✓ learn how to create formulas that add using the pointing method
- ✓ learn how to create formulas that subtract
- ✓ learn how to create formulas that multiply and divide
- ✓ gain an understanding of what functions are and how they work
- ✓ learn how to use the ***SUM*** function to add values
- ✓ learn how to sum non-contiguous ranges
- ✓ learn how to calculate an average
- ✓ learn how to find a maximum value using the ***MAX*** function
- ✓ learn how to find a minimum value using the ***MIN*** function
- ✓ learn how to create more complex formulas
- ✓ learn how to perform ***What If*** testing
- ✓ gain an understanding of common error messages.

# UNDERSTANDING FORMULAS

***Formulas*** are the key to using Excel practically and efficiently. ***Formulas***, like text, numbers and dates, are entered into a cell in a worksheet. Unlike the other data, however, ***formulas*** must begin with an equal (=) sign. In addition, formulas in Excel adhere to the basic rules of arithmetic known as ***BODMAS*** – so this is one maths lesson you must understand to master Excel formulas.

## How Formulas Work



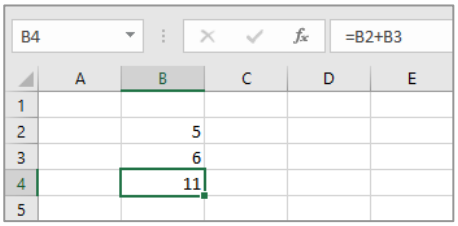

In Excel every formula that you create must start with an equal sign ( **=** ). The equal sign informs Excel that the data entered in that cell will be a formula and that Excel must therefore perform a calculation.

For instance, if you type **5+6** in a cell Excel will display ***5+6*** in that cell. Excel treats this entry as text and that is why the numbers are aligned to the left of the cell.

However, if you type **=5+6** in a cell Excel will perform the calculation and display **11** in that cell in the worksheet. When that cell is active, the formula **=5+6** will be displayed in the ***Formula Bar***. When working with formulas, it is important to look at the ***Formula Bar*** as well as the cell in the worksheet so that you know whether the cell contains a formula or normal data.

## Cell Referencing For Perfect Formulas

Though typing a formula such as ***=5+6*** into a cell is an easy way to find the solution to a simple equation, it can make things more complicated later on. For example, if the data changes or you have mistyped a number, it can be time-consuming to enter the formula again. This is why it is better to type the numbers into their own separate cells, then type the ***cell addresses*** that refer to those numbers in the formula instead of typing numbers straight into a formula. This is especially useful when working with large amounts of data.




In the example shown to the right, the value ***5*** has been typed into cell ***B2***, the value ***6*** has been typed into cell ***B3***, and the formula **=B2+B3** has been typed into cell ***B4***. This might seem like a lot more typing than you might otherwise do, but the real gain lies in the functionality of what is done here. For example, if you need to know what **6** plus **6** equals, you simply type **6** in cell ***B2***, and the formula in cell ***B4*** will instantly update to show you the answer.

This occurs because Excel interprets the formula in cell ***B4*** and calculates that cell ***B4*** must equal the data in cell ***B2*** plus the data in cell ***B3***. If the data in either of the two referenced cells is changed, this formula is immediately recalculated and provides the latest result.

## Rules For Using Formulas

There are four main arithmetic operations that can be performed in an Excel formula. Excel adheres to the ***BODMAS*** rules of arithmetic to determine the order in which calculations in any given formula are performed. The order is – *Brackets*, then *Orders* (otherwise known as *Powers*, or *Roots*, or *Exponents*, or *Indices*), then *Division*, then *Multiplication*, then *Addition*, then *Subtraction*. For example, the equation ***3 + 2 x 10*** could equal either ***50*** or ***23***. Using BODMAS the correct answer is ***23***: 2 x 10 = 20 + 3 = 23.

Computers do not have the standard arithmetic symbols that we are accustomed to. The keys on the keyboard that you will use to perform the four main arithmetic operations are shown below.

| | | | |
|---|---|---|---|
| + | *Addition* | - | *Subtraction* |
| * | *Multiplication* | / | *Division* |

# CREATING FORMULAS THAT ADD

In Excel you can create ***formulas*** by typing them directly into the cells, or by clicking on the cells. When clicking on a cell, Excel types the cell address into the formula for you. This helps to avoid typing errors in your formulas. In this exercise you will use this method to create a formula that adds the gross pays for ***Alpheius Global Enterprises***.

## Try This Yourself:

Open File

*Before starting this exercise you MUST open the file Formulas_1.xlsx...*

1. Click in cell ***E15***

   *This is where we will add up all of the gross pays…*

2. Type **=** to start the formula

3. Click in cell ***E8***, then type **+** (the *plus* sign)

   *The E8 cell reference will be added to the formula and the active cell pointer will move back to cell E15 ready for the next cell reference – the formula is actually being typed as you click on the cells…*

4. Repeat step ***3*** for each cell from cell ***E9*** to cell ***E12*** so that the formula eventually reads ***=E8+E9+E10+E11+E12+***

   *Remember to press + after you click in each cell…*

5. Click in cell ***E13*** to add this to the end of the formula

   *We don't need to type + as there are no more cells to add to the formula…*

6. Press Enter to complete the formula

**3**

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | |
| 2 | **Weekly Payroll** | | | | |
| 3 | **Department: Communications** | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | **First Name** | **Last Name** | **Hours** | **Rate** | **Gross Pay** |
| 8 | Angelo | Marcuzzo | 43 | 35.60 | 1530.8 |
| 9 | Riley | Griffin | 35 | 32.10 | 1123.5 |
| 10 | Celeste | O'Connor | 28 | 12.50 | 350 |
| 11 | Alex | Barnard | 15.5 | 32.40 | 502.2 |
| 12 | Tammy | Huber | 22.5 | 10.25 | 230.625 |
| 13 | Ishara | Tringali | 40 | 10.25 | 410 |
| 14 | | | | | |
| 15 | **Totals** | | | | =E8+ |
| 16 | | | | | |

**4**

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | |
| 2 | **Weekly Payroll** | | | | |
| 3 | **Department: Communications** | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | **First Name** | **Last Name** | **Hours** | **Rate** | **Gross Pay** |
| 8 | Angelo | Marcuzzo | 43 | 35.60 | 1530.8 |
| 9 | Riley | Griffin | 35 | 32.10 | 1123.5 |
| 10 | Celeste | O'Connor | 28 | 12.50 | 350 |
| 11 | Alex | Barnard | 15.5 | 32.40 | 502.2 |
| 12 | Tammy | Huber | 22.5 | 10.25 | 230.625 |
| 13 | Ishara | Tringali | 40 | 10.25 | 410 |
| 14 | | | | | |
| 15 | **Totals** | | | | =E8+E9+E10+E11+E12+ |
| 16 | | | | | |

**6**

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | |
| 2 | **Weekly Payroll** | | | | |
| 3 | **Department: Communications** | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | **First Name** | **Last Name** | **Hours** | **Rate** | **Gross Pay** |
| 8 | Angelo | Marcuzzo | 43 | 35.60 | 1530.8 |
| 9 | Riley | Griffin | 35 | 32.10 | 1123.5 |
| 10 | Celeste | O'Connor | 28 | 12.50 | 350 |
| 11 | Alex | Barnard | 15.5 | 32.40 | 502.2 |
| 12 | Tammy | Huber | 22.5 | 10.25 | 230.625 |
| 13 | Ishara | Tringali | 40 | 10.25 | 410 |
| 14 | | | | | |
| 15 | **Totals** | | | | 4147.125 |
| 16 | | | | | |

### For Your Reference…

To ***create a formula*** using the ***pointing method***:

1. Click in the cell which will hold the formula
2. Type **=** then click on each of the desired cells (typing + after all except for the last)
3. Press Enter

### Handy to Know…

- When creating a formula, it can be useful to allow Excel to enter the cell references as you click on various cells, as this way you can actually see the formula being built on the screen for you.

# CREATING FORMULAS THAT SUBTRACT

There are many different types of formulas that can be written in Excel. Virtually any type of mathematical operation can be performed. For instance, you can create ***formulas*** that ***subtract*** one value from another. Because it is usual to include cell references in the formula, when any values change so to do the formula results.

## Try This Yourself:

Same File

*Continue using the previous file with this exercise, or open the file Formulas_2.xlsx...*

1. Click on the Subtraction worksheet tab at the bottom of your screen to make it the active worksheet
2. Click in cell G8

   *This is where we need to calculate Angelo Marcuzzo's Net Pay…*
3. Type = to start the formula, then click on the gross pay value in cell ***E8***
4. Type **–** (the minus sign) to indicate that you wish to subtract from this value, then click on the tax value in cell ***F8***
5. Press Enter to complete the formula

   *We can now fill this formula down for the other staff…*
6. Click in cell ***G8***, then point to the small square at the bottom right of the cell until the mouse pointer changes to a small cross
7. Click and drag down to cell ***G15***, then release the mouse button
8. Click in cell ***G14*** and press Del to delete the unwanted formula

**4**

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | |
| 2 | **Weekly Payroll** | | | | | | |
| 3 | **Department: Communications** | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | **First Name** | **Last Name** | **Hours** | **Rate** | **Gross Pay** | **Tax** | **Net Pay** |
| 8 | Angelo | Marcuzzo | 43 | 35.60 | 1530.80 | 430.87 | =E8-F8 |
| 9 | Riley | Griffin | 35 | 32.10 | 1123.50 | 322.56 | |
| 10 | Celeste | O'Connor | 28 | 12.50 | 350.00 | 89.55 | |
| 11 | Alex | Barnard | 15.5 | 32.40 | 502.20 | 232.45 | |
| 12 | Tammy | Huber | 22.5 | 10.25 | 230.63 | 89.56 | |
| 13 | Ishara | Tringali | 40 | 10.25 | 410.00 | 154.50 | |
| 14 | | | | | | | |
| 15 | **Totals** | | | | **4147.13** | **1319.49** | |
| 16 | | | | | | | |

**6**

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | |
| 2 | **Weekly Payroll** | | | | | | |
| 3 | **Department: Communications** | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | **First Name** | **Last Name** | **Hours** | **Rate** | **Gross Pay** | **Tax** | **Net Pay** |
| 8 | Angelo | Marcuzzo | 43 | 35.60 | 1530.80 | 430.87 | 1099.93 |
| 9 | Riley | Griffin | 35 | 32.10 | 1123.50 | 322.56 | |
| 10 | Celeste | O'Connor | 28 | 12.50 | 350.00 | 89.55 | |
| 11 | Alex | Barnard | 15.5 | 32.40 | 502.20 | 232.45 | |
| 12 | Tammy | Huber | 22.5 | 10.25 | 230.63 | 89.56 | |
| 13 | Ishara | Tringali | 40 | 10.25 | 410.00 | 154.50 | |
| 14 | | | | | | | |
| 15 | **Totals** | | | | **4147.13** | **1319.49** | |
| 16 | | | | | | | |

**8**

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | |
| 2 | **Weekly Payroll** | | | | | | |
| 3 | **Department: Communications** | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | **First Name** | **Last Name** | **Hours** | **Rate** | **Gross Pay** | **Tax** | **Net Pay** |
| 8 | Angelo | Marcuzzo | 43 | 35.60 | 1530.80 | 430.87 | 1099.93 |
| 9 | Riley | Griffin | 35 | 32.10 | 1123.50 | 322.56 | 800.94 |
| 10 | Celeste | O'Connor | 28 | 12.50 | 350.00 | 89.55 | 260.45 |
| 11 | Alex | Barnard | 15.5 | 32.40 | 502.20 | 232.45 | 269.75 |
| 12 | Tammy | Huber | 22.5 | 10.25 | 230.63 | 89.56 | 141.07 |
| 13 | Ishara | Tringali | 40 | 10.25 | 410.00 | 154.50 | 255.50 |
| 14 | | | | | | | |
| 15 | **Totals** | | | | **4147.13** | **1319.49** | 2827.64 |
| 16 | | | | | | | |

### For Your Reference…

To ***create*** a ***subtraction formula***:

1. Click on the cell to hold the subtraction
2. Type **=** (equal sign), then click in the first cell
3. Type **–** (minus sign), then click on the cell to subtract
4. Press Enter

### Handy to Know…

- You can mix various arithmetic signs in a formula to create more complex formulas. For example, you can have a complex formula that adds specific values and subtracts others.

# FORMULAS THAT MULTIPLY AND DIVIDE

Basic formulas involve the same types of arithmetical operations within the one calculation – that is, addition, subtraction, multiplication, or division. You can mix these operations within the one formula as much and as often as you need. However, you should always keep in mind the basic rules of ***BODMAS***, especially where division is concerned.

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Formulas_3.xlsx...*

In this exercise we'll calculate the superannuation payable for employees, which is 9% of their gross pay. The logic is:

*gross x super rate*
*gross x 9 divided by 100*
*gross * (9 / 100)*

*Note that the brackets are for readability only and won't affect the calculation…*

1. Click on the ***More Complex*** worksheet tab, then click in cell ***H8***

   *This is where we will calculate Angelo's super…*

2. Type **=** to start the formula, click in cell ***E8***, then type ***(9/100)**

3. Press Enter to complete the formula

   *Let's fill down now…*

4. Click in cell ***H8***, then click and drag the fill handle down to cell ***H13***

5. Repeat steps ***4*** and ***5*** to fill across to cell ***H15*** from cell ***G15***

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 6 | | | | | | | | |
| 7 | First Name | Last Name | Hours | Rate | Gross Pay | Tax | Net Pay | Superannuation |
| 8 | Angelo | Marcuzzo | 43 | 35.60 | 1530.80 | 430.87 | 1099.93 | =E8*(9/100) |
| 9 | Riley | Griffin | 35 | 32.10 | 1123.50 | 322.56 | 800.94 | |
| 10 | Celeste | O'Connor | 28 | 12.50 | 350.00 | 89.55 | 260.45 | |
| 11 | Alex | Barnard | 15.5 | 32.40 | 502.20 | 232.45 | 269.75 | |
| 12 | Tammy | Huber | 22.5 | 10.25 | 230.63 | 89.56 | 141.07 | |
| 13 | Ishara | Tringali | 40 | 10.25 | 410.00 | 154.50 | 255.50 | |
| 14 | | | | | | | | |
| 15 | Totals | | | | 4147.13 | 1319.49 | 2827.64 | |
| 16 | | | | | | | | |

2

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 6 | | | | | | | | |
| 7 | First Name | Last Name | Hours | Rate | Gross Pay | Tax | Net Pay | Superannuation |
| 8 | Angelo | Marcuzzo | 43 | 35.60 | 1530.80 | 430.87 | 1099.93 | 137.772 |
| 9 | Riley | Griffin | 35 | 32.10 | 1123.50 | 322.56 | 800.94 | 101.115 |
| 10 | Celeste | O'Connor | 28 | 12.50 | 350.00 | 89.55 | 260.45 | 31.5 |
| 11 | Alex | Barnard | 15.5 | 32.40 | 502.20 | 232.45 | 269.75 | 45.198 |
| 12 | Tammy | Huber | 22.5 | 10.25 | 230.63 | 89.56 | 141.07 | 20.75625 |
| 13 | Ishara | Tringali | 40 | 10.25 | 410.00 | 154.50 | 255.50 | 36.9 |
| 14 | | | | | | | | |
| 15 | Totals | | | | 4147.13 | 1319.49 | 2827.64 | |
| 16 | | | | | | | | |

4

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 6 | | | | | | | | |
| 7 | First Name | Last Name | Hours | Rate | Gross Pay | Tax | Net Pay | Superannuation |
| 8 | Angelo | Marcuzzo | 43 | 35.60 | 1530.80 | 430.87 | 1099.93 | 137.772 |
| 9 | Riley | Griffin | 35 | 32.10 | 1123.50 | 322.56 | 800.94 | 101.115 |
| 10 | Celeste | O'Connor | 28 | 12.50 | 350.00 | 89.55 | 260.45 | 31.5 |
| 11 | Alex | Barnard | 15.5 | 32.40 | 502.20 | 232.45 | 269.75 | 45.198 |
| 12 | Tammy | Huber | 22.5 | 10.25 | 230.63 | 89.56 | 141.07 | 20.75625 |
| 13 | Ishara | Tringali | 40 | 10.25 | 410.00 | 154.50 | 255.50 | 36.9 |
| 14 | | | | | | | | |
| 15 | Totals | | | | 4147.13 | 1319.49 | 2827.64 | 373.24 |
| 16 | | | | | | | | |

5

### For Your Reference…

To ***create*** a ***formula*** that ***multiplies*** or ***divides***:

- For multiplication, separate the variables with an asterisk (*)
- For division, separate the variables with a forward slash (/)

### Handy to Know…

- More complex formulas can be managed using brackets. For example, if you want to multiply two numbers then divide them by the product of another two numbers, enclose both multiplication parts of the equation in brackets separated by a division sign. For example, ***(A*B)/(C*D)***.

# UNDERSTANDING FUNCTIONS

Imagine creating a formula that adds fifty different cells, or a formula that a bank would use to work out monthly payments on a home loan. Both these formulas would be very long and complex and involve lots of typing. Fortunately, these types of calculations and others can be performed in Excel using built-in ***functions***.

## Functions Overview

***Functions*** are simply pre-programmed formulas already provided for you in Excel which can perform calculations covering a wide range of categories including *statistics*, *date and time arithmetic*, *financial calculations*, *lists*, *engineering* and much more.

Just like when you create a formulas, ***functions*** must start with an ***equal sign***. The equal sign is then followed by the specific ***name*** of the function (usually a descriptive name which indicates the purpose of the function). Most functions also require additional information known as ***arguments*** which are supplied to the function in brackets after the function name. Functions are therefore written as follows:

**=*name*(*arguments*)**

The arguments are quite often cell or range references that contain values that can be used in the function. For example, the most common function is the ***SUM*** function which, as its name suggests, is used to *sum* or add values together. If you wanted to add all of the values in the cells from ***B10*** to ***B25*** you would write this function as:

**=SUM(B10:B25)**

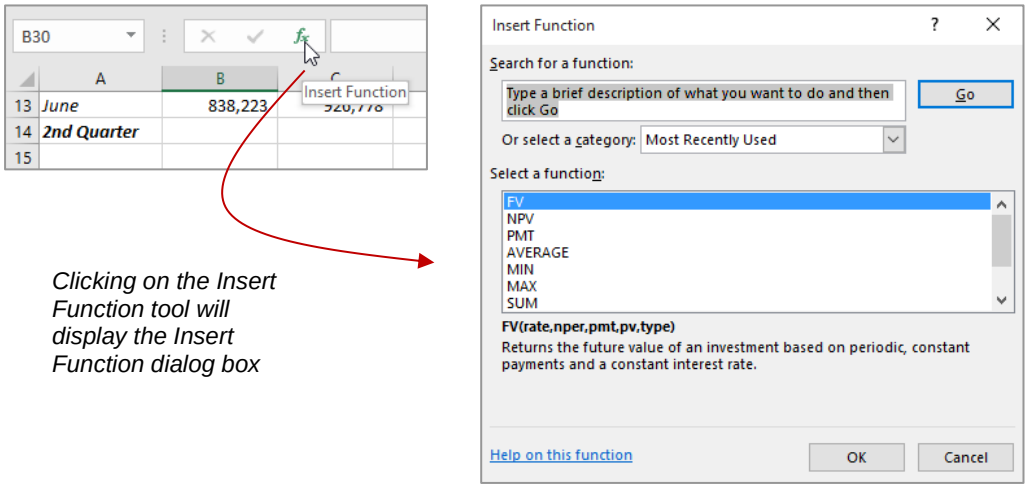
As you can see this is much simpler than writing your own referential formula which would look like:

**=B10+B11+B12+B13+B14+B15+B16+B17+B18+B19+B20+B21+B22+B23+B24+B25**

Imagine writing and proofing a formula where you had to add 200 cells!

## Typing Functions

If you are familiar with the function that you need you can type it into a cell exactly the same way you type any other formula. If you are not sure if Excel has a function or you can't quite remember how it is written you can use the ***Insert Function*** tool on the ***Formula Bar*** to assist you. When you click on this tool the ***Insert Function*** dialog box will be presented to you which lists the most recently used or common functions and also allows you to search for other functions that you might need.




*Clicking on the Insert Function tool will display the Insert Function dialog box*

The ***Insert Function*** dialog box will also type the function out for you and then provide you with a further dialog box to guide you through the process of specifying the arguments that the function needs to perform its calculation.

# USING THE SUM FUNCTION

One of the most commonly used functions is the SUM function. This function allows you to add the values in a range of cells. The function is written as =SUM(range or ranges to add). You can type the function and then use the pointing technique to fill in the arguments. Excel then paints marquees around the cells involved helping you to track your progress.

## Try This Yourself:

*Open File* *Before starting this exercise you MUST open the file Formulas_4.xlsx...*

1. Click in cell ***B9***, then type **=sum(** to start the formula
2. Click in cell ***B6***, hold down Shift, then click in cell ***B8***

   *Notice the relative addressing details, 3R x 1C, that appears in the tool tip…*
3. Type **)**, then press Enter to complete the function
4. Click in cell ***B9***, then point to the fill handle and click and drag across to cell ***E9*** to fill across the range
5. Ensure that the range ***B9:E9*** is still selected, then, on the ***Home*** tab, click on ***Copy*** in the ***Clipboard*** group
6. Click in cell ***B14***, hold down Ctrl, then click in cells ***B19*** and ***B24***
7. Release Ctrl and press Enter to paste equivalent functions into the worksheet

**1**

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | |
| 2 | **Revenue Takings Last 12 Months** | | | | | |
| 3 | | | | | | |
| 4 | | ***Auckland*** | ***Dublin*** | ***Melbourne*** | ***New York*** | |
| 5 | | | | | | |
| 6 | *January* | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | |
| 7 | *February* | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | |
| 8 | *March* | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | |
| 9 | ***1st Quarter*** | =sum( | | | | |
| 10 | | SUM(**number1**, [number2], ...) | | | | |

**2**

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | |
| 2 | **Revenue Takings Last 12 Months** | | | | | |
| 3 | | | | | | |
| 4 | | ***Auckland*** | ***Dublin*** | ***Melbourne*** | ***New York*** | |
| 5 | | | | | | |
| 6 | *January* | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | |
| 7 | *February* | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | |
| 8 | *March* | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | |
| 9 | ***1st Quarter*** | =sum(B6:B8 | 3R x 1C | | | |
| 10 | | SUM(**number1**, [number2], ...) | | | | |

**7**

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | |
| 2 | **Revenue Takings Last 12 Months** | | | | | |
| 3 | | | | | | |
| 4 | | ***Auckland*** | ***Dublin*** | ***Melbourne*** | ***New York*** | |
| 5 | | | | | | |
| 6 | *January* | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | |
| 7 | *February* | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | |
| 8 | *March* | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | |
| 9 | ***1st Quarter*** | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | |
| 10 | | | | | | |
| 11 | *April* | 2,531,225 | 2,621,889 | 2,453,999 | 2,547,441 | |
| 12 | *May* | 550,998 | 850,554 | 818,874 | 837,228 | |
| 13 | *June* | 838,223 | 926,778 | 879,114 | 983,225 | |
| 14 | ***2nd Quarter*** | 3,920,446 | 4,399,221 | 4,151,987 | 4,367,894 | |
| 15 | | | | | | |
| 16 | *July* | 1,936,882 | 1,641,554 | 1,507,774 | 1,386,448 | |
| 17 | *August* | 1,392,666 | 1,441,447 | 1,349,552 | 1,400,116 | |
| 18 | *September* | 3,332,211 | 223,323 | 322,332 | 673,322 | |
| 19 | ***3rd Quarter*** | 6,661,759 | 3,306,324 | 3,179,658 | 3,459,886 | |
| 20 | | | | | | |
| 21 | *October* | 2,311,234 | 1,298,877 | 1,299,567 | 1,342,112 | |
| 22 | *November* | 1,234,455 | 2,341,122 | 1,884,566 | 324,555 | |
| 23 | *December* | 2,590,332 | 3,213,332 | 844,355 | 12,665,444 | |
| 24 | ***4th Quarter*** | 6,136,021 | 6,853,331 | 4,028,488 | 14,332,111 | |
| 25 | | | | | | |

### For Your Reference…

To ***type*** a ***sum function*** for a ***contiguous range***:

1. Type **=sum(**
2. Select the range of cells
3. Type **)**
4. Press Enter

### Handy to Know…

- You can use the ***AutoSum*** command in the ***Editing*** group on the ***Home*** tab to automatically enter a sum function based on a range of cells.
- You can type the name of a function in upper or lowercase – it is not case sensitive.

# SUMMING NON-CONTIGUOUS RANGES

Many users simply use the SUM function to add a continuous block of data – known as a range. But with Excel you can write a SUM function that adds up data from multiple ranges within a worksheet. The ability to sum *non-contiguous* ranges of data helps you to increase the level of functionality of your worksheet.

## Try This Yourself:

Same File

*Continue using the previous file with this exercise, or open the file Formulas_5.xlsx...*

1. Click in cell ***B26***, then type **=sum(** to start the formula
2. Click in cell ***B9***, type **,** (comma), then click in cells ***B14***, ***B19*** and ***B24*** – typing **,** (comma) after each cell except the last one
3. Press Enter to complete the function, then click in cell ***B26*** again

   *You may notice that we didn't add a right bracket. Excel adds the bracket for you with functions that use only one set of brackets. You can also use multiple ranges in a function...*
4. Click in cell ***C26***, then type **=sum(**
5. Hold down Ctrl and use the mouse to select the following ranges

   **C6:C8** **C16:C18**
   **C11:C13** **C21:C23**
6. Press Enter, then click in cell ***C26***
7. Point to the fill handle, then click and drag to cell ***E26*** to copy the function across

2

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 7 | *February* | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | |
| 8 | *March* | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | |
| 9 | ***1st Quarter*** | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | |
| 10 | | | | | | |
| 11 | *April* | 2,531,225 | 2,621,889 | 2,453,999 | 2,547,441 | |
| 12 | *May* | 550,998 | 850,554 | 818,874 | 837,228 | |
| 13 | *June* | 838,223 | 926,778 | 879,114 | 983,225 | |
| 14 | ***2nd Quarter*** | 3,920,446 | 4,399,221 | 4,151,987 | 4,367,894 | |
| 15 | | | | | | |
| 16 | *July* | 1,936,882 | 1,641,554 | 1,507,774 | 1,386,448 | |
| 17 | *August* | 1,392,666 | 1,441,447 | 1,349,552 | 1,400,116 | |
| 18 | *September* | 3,332,211 | 223,323 | 322,332 | 673,322 | |
| 19 | ***3rd Quarter*** | 6,661,759 | 3,306,324 | 3,179,658 | 3,459,886 | |
| 20 | | | | | | |
| 21 | *October* | 2,311,234 | 1,298,877 | 1,299,567 | 1,342,112 | |
| 22 | *November* | 1,234,455 | 2,341,122 | 1,884,566 | 324,555 | |
| 23 | *December* | 2,590,332 | 3,213,332 | 844,355 | 12,665,444 | |
| 24 | ***4th Quarter*** | 6,136,021 | 6,853,331 | 4,028,488 | 14,332,111 | |
| 25 | | | | | | |
| 26 | ***Total*** | =sum(B9,B14,B19,B24 | | | | |
| 27 | | SUM(number1, [number2], [number3], **[number4]**, [number5], ...) | | | | |
| 28 | ***Monthly*** | | | | | |

5

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 4 | | ***Auckland*** | ***Dublin*** | ***Melbourne*** | ***New York*** | |
| 5 | | | | | | |
| 6 | *January* | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | |
| 7 | *February* | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | |
| 8 | *March* | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | |
| 9 | ***1st Quarter*** | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | |
| 10 | | | | | | |
| 11 | *April* | 2,531,225 | 2,621,889 | 2,453,999 | 2,547,441 | |
| 12 | *May* | 550,998 | 850,554 | 818,874 | 837,228 | |
| 13 | *June* | 838,223 | 926,778 | 879,114 | 983,225 | |
| 14 | ***2nd Quarter*** | 3,920,446 | 4,399,221 | 4,151,987 | 4,367,894 | |
| 15 | | | | | | |
| 16 | *July* | 1,936,882 | 1,641,554 | 1,507,774 | 1,386,448 | |
| 17 | *August* | 1,392,666 | 1,441,447 | 1,349,552 | 1,400,116 | |
| 18 | *September* | 3,332,211 | 223,323 | 322,332 | 673,322 | |
| 19 | ***3rd Quarter*** | 6,661,759 | 3,306,324 | 3,179,658 | 3,459,886 | |
| 20 | | | | | | |
| 21 | *October* | 2,311,234 | 1,298,877 | 1,299,567 | 1,342,112 | |
| 22 | *November* | 1,234,455 | 2,341,122 | 1,884,566 | 324,555 | |
| 23 | *December* | 2,590,332 | 3,213,332 | 844,355 | 12,665,444 | |
| 24 | ***4th Quarter*** | 6,136,021 | 6,853,331 | 4,028,488 | 14,332,111 | |
| 25 | | | | | | |
| 26 | ***Total*** | 22,814,261 | =sum(C6:C8,C11:C13,C16:C18,C21:C23 | | | |
| 27 | | | SUM(**number1**, [number2], ...) | | | |
| 28 | ***Monthly*** | | | | | |

### For Your Reference…

To ***type*** a ***sum function*** for a ***non-contiguous range***:

1. Type **=sum(**
2. Click on the first cell to sum
3. Type **,** and click in the next cell to sum
4. Type **)** then press Enter

### Handy to Know…

- The big problem with typing a function is that there is more chance of making a typing mistake. Excel has in-built error checking, called Formula AutoCorrect, that can correct up to 15 of the most common mistakes users make (e.g. the right bracket to finish a function).

# CALCULATING AN AVERAGE

The ***AVERAGE*** function allows you to average the values in a range of cells. It is written in much the same way as the ***SUM*** function, for example, ***=AVERAGE(range of cells to average)***. The average function can be applied using the ***Functions Wizard***, a part of Excel that takes you through the process of creating a function, or you can type it in yourself if you are comfortable with it.

## Try This Yourself:

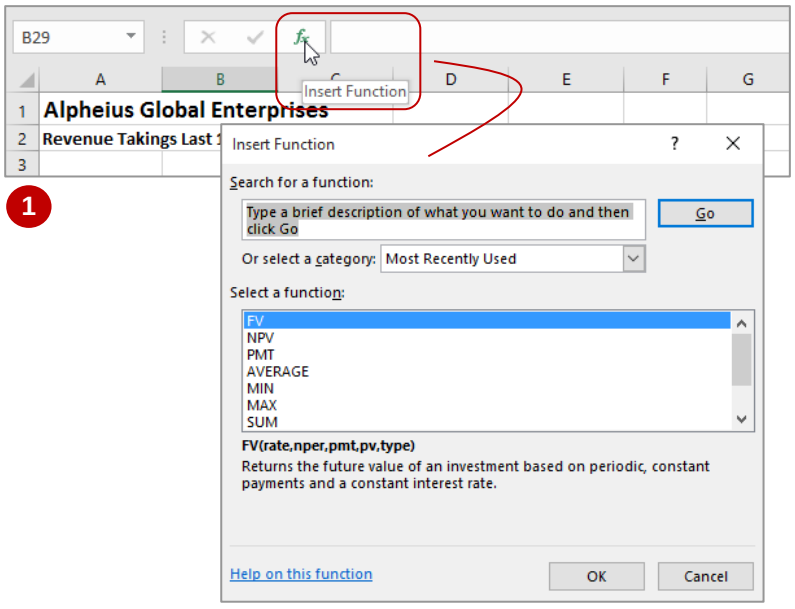
Same File

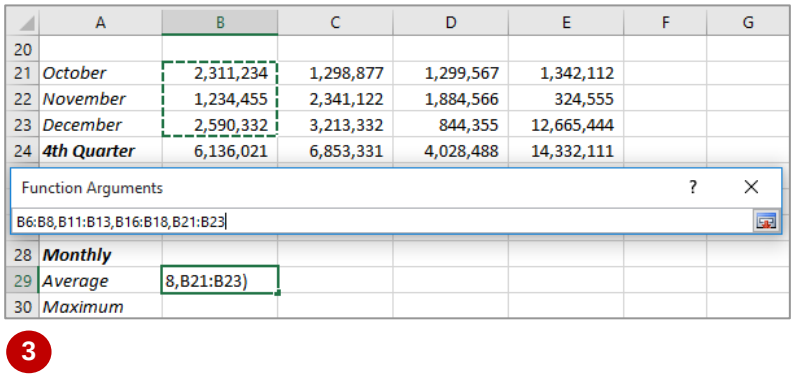
*Continue using the previous file with this exercise, or open the file Formulas_6.xlsx...*

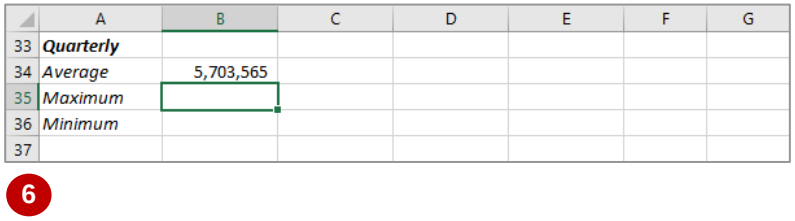
1. Click in cell ***B29***, then click on ***Insert Function***, as shown, to display the ***Insert Function*** dialog box
2. Click on ***AVERAGE*** in ***Select a function***, then click on **[OK]** to display the ***Function Arguments*** dialog box
3. Click on the ***Range Selector*** for ***Number1*** to minimise the wizard, then hold down Ctrl and select the following ranges

   **B6:B8** **B16:B18**
   **B11:B13** **B21:B23**
4. Press Enter to complete the range specifications, then click on **[OK]** to complete the process

   *Let's use the AutoSum function…*
5. Click in cell ***B34***, click on the ***Home*** tab, then click on the drop arrow for ***AutoSum*** in the ***Editing*** group and select **Average**
6. Click in cell ***B9***, hold down Ctrl, click in cells ***B14***, ***B19*** and ***B24***, then press Enter to complete the formula




### For Your Reference…

To ***insert*** an ***average function***:

1. Click in the cell then click on the ***Insert Function*** tool
2. Click on ***AVERAGE*** in ***Select a function***
3. Insert the required ranges then click on **[OK]**

### Handy to Know…

- You can type queries like "How do I work out the monthly payment for a car loan?" into the ***Search*** box in the ***Insert Function*** dialog box. Once you have selected a function from the ***Select a function*** list, the ***Function Arguments*** dialog box will help you to enter the values into the function.

# FINDING A MAXIMUM VALUE

When reviewing a long list of numbers it is sometimes difficult to see which is the largest value in the list. The MAX function allows you to extract the highest value from a range of cells. It is written in much the same way as the SUM function: =MAX(range of cells). The function can either be typed into the worksheet or entered using the ***Function Wizard***.

## Try This Yourself:

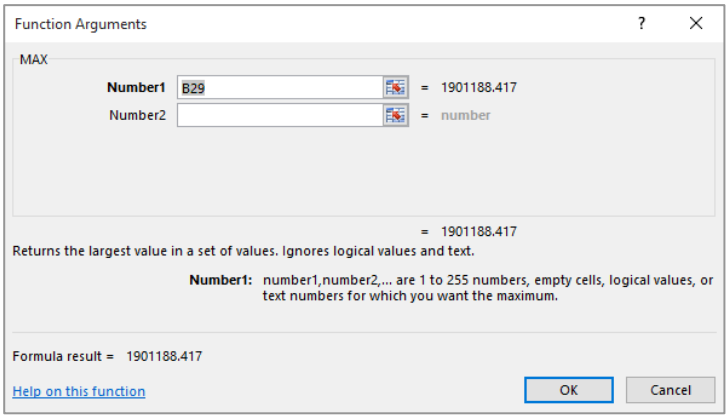
*Same File* *Continue using the previous file with this exercise, or open the file Formulas_7.xlsx...*

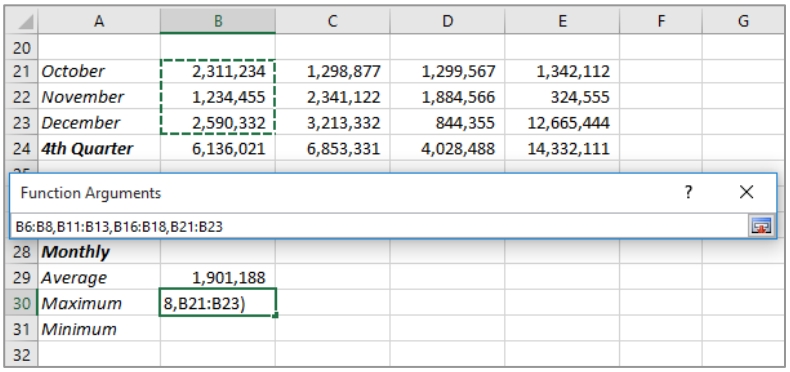
1. Click in cell ***B30***, then click on ***Insert Function*** (to the left of the ***Formula Bar***) to display the ***Insert Function*** dialog box
2. Click on the drop arrow for ***Or select a category*** and click on ***All***
3. Scroll down and click on ***MAX*** in ***Select a function***, then click on **[OK]** to display the ***Function Arguments*** dialog box
4. Click on the ***Range Selector*** tool for ***Number1***, then hold down Ctrl and select the following ranges:

   **B6:B8** **B16:B18**
   **B11:B13** **B21:B23**

5. Press Enter to complete the range specifications, then click on **[OK]** to complete the process
6. Click in cell ***B35***, click on the ***Home*** tab, click on the drop arrow for the ***AutoSum*** command in the ***Editing*** group, then select **Max**
7. Click in cell ***B9***, hold down Ctrl, click in cells ***B14***, ***B19*** and ***B24***, then press Enter to complete the formula

3

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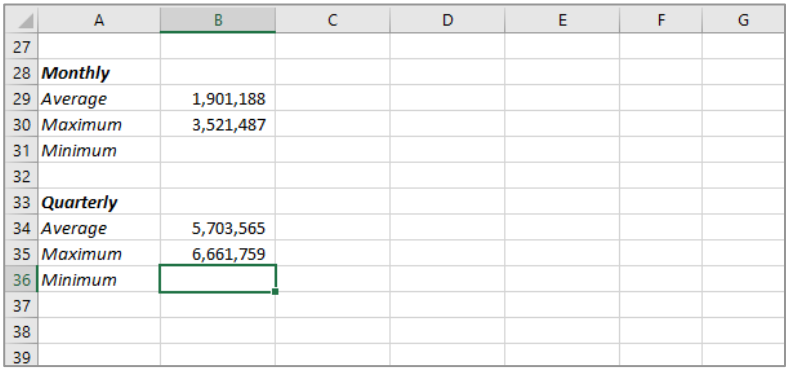



7

### For Your Reference…

To ***insert*** a ***maximum function***:

1. Click in the cell then click on the ***Insert Function*** tool
2. Click on ***MAX*** in ***Select a function***
3. Insert the required ranges then click on **[OK]**

### Handy to Know…

- The ***MAX*** function is ideal for charting high points over a seasonal period. For example, you may have monthly sales figures and use a ***MAX*** function to display the maximum each month. This series can then be charted to show the high points in the sales.

# FINDING A MINIMUM VALUE

The ***Minimum*** or MIN function allows you to extract the lowest value from a range of values. It is written in much the same way as the SUM function or ***MAX*** function: =MIN(range of cells).

The function can be applied using the ***Function Wizard***, or by typing the function in detail directly into the cell.

## Try This Yourself:

*Same File*

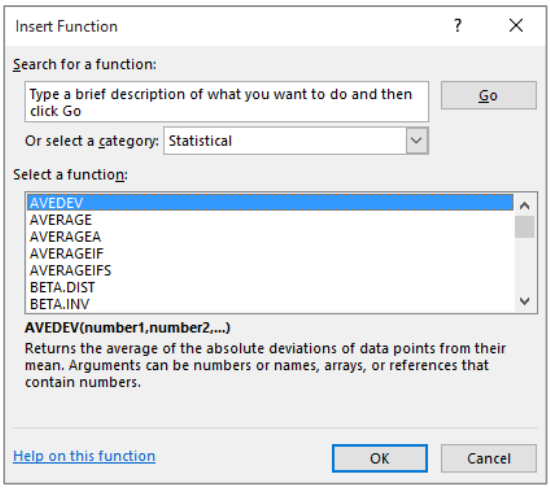
*Continue using the previous file with this exercise, or open the file Formulas_8.xlsx...*

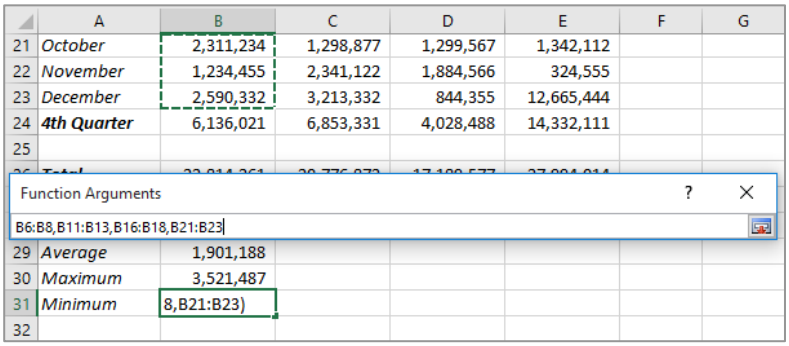
1. Click in cell ***B31***, then click on ***Insert Function*** (to the left of the ***Formula Bar***) to display the ***Insert Function*** dialog box
2. Click on the drop arrow for ***Or select a category*** and click on ***Statistical***
3. Scroll down and click on ***MIN*** in ***Select a function***, then click on **[OK]** to display the ***Function Arguments*** dialog box
4. Click on the ***Range Selector*** tool to minimise the wizard, then hold down Ctrl and select the following ranges:

   **B6:B8** **B16:B18**
   **B11:B13** **B21:B23**
5. Press Enter to complete the range specifications, then click on **[OK]** to complete the process

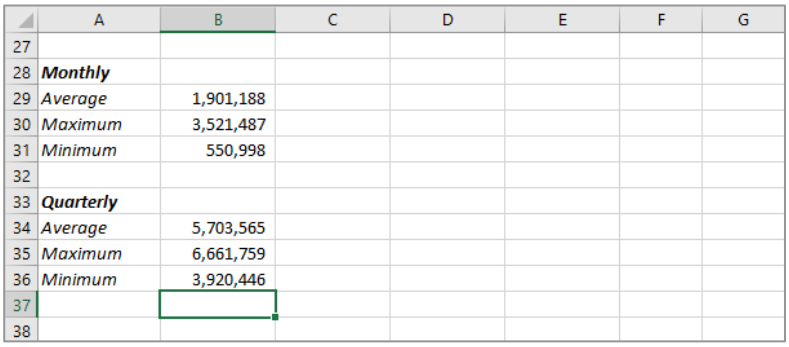
   *Let's simply type the function this time…*
6. Click in cell ***B36*** and type **=MIN(B9,B14,B19,B24)**
7. Press Enter to complete the formula

2




4




7

### For Your Reference…

To ***insert*** a ***minimum function***:

1. Click in the cell then click on the ***Insert Function*** tool
2. Click on ***MIN*** in ***Select a function***
3. Insert the required ranges then click on **[OK]**

### Handy to Know…

- You might use a ***MIN*** function in real life to find the lowest value in a large range of numbers. For example, in a large inventory it can be used to work out which product is the slowest seller.

# CREATING MORE COMPLEX FORMULAS

You will often find that you are faced with creating formulas that need to add, subtract, multiply, divide, and so on, all in the same formula. These more complex formulas need to be thoughtfully planned. Begin by breaking a complex formula down into its component parts then apply the rules of ***BODMAS*** to ensure the calculations are performed as required.

## Try This Yourself:

Open File

*Before starting this exercise you MUST open the file Formulas_9.xlsx...*

1. Click on the ***Multiplication & Addition*** worksheet tab

   *We need to create a formula that determines the average number of hours worked by each employee and then calculate how much the weekly payroll would be if all employees were paid a flat 22.50 per hour. There are two component parts here – first we need to find the average hours worked, then multiply this by the hourly rate times the number of employees…*

2. Click in cell ***E16***, then type **=(sum(C8:C13)/6)** but don't press Enter

   *This formula calculates the average hours worked by the employees (an Average function would perform the same calculation)….*

3. Type ***** (the asterisk symbol), then type **(B16*6)**

   ** instructs Excel we want to multiply this average. This part of the formula multiplies the hourly rate by the number of employees…*

4. Press Enter to complete the formula

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 7 | **First Name** | **Last Name** | **Hours** | **Rate** | **Gross Pay** | | |
| 8 | Angelo | Marcuzzo | 43 | 35.60 | 1530.8 | | |
| 9 | Riley | Griffin | 35 | 32.10 | 1123.5 | | |
| 10 | Celeste | O'Connor | 28 | 12.50 | 350 | | |
| 11 | Alex | Barnard | 15.5 | 32.40 | 502.2 | | |
| 12 | Tammy | Huber | 22.5 | 10.25 | 230.625 | | |
| 13 | Ishara | Tringali | 40 | 10.25 | 410 | | |
| 14 | | | | | | | |
| 15 | **Total Gross Pay** | | | | **4147.125** | | |
| 16 | Hourly Rate: | 22.5 | | | =(sum(C8:C13)/6) | | |
| 17 | | | | | | | |
| 18 | | | | | | | |

2

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 7 | **First Name** | **Last Name** | **Hours** | **Rate** | **Gross Pay** | | |
| 8 | Angelo | Marcuzzo | 43 | 35.60 | 1530.8 | | |
| 9 | Riley | Griffin | 35 | 32.10 | 1123.5 | | |
| 10 | Celeste | O'Connor | 28 | 12.50 | 350 | | |
| 11 | Alex | Barnard | 15.5 | 32.40 | 502.2 | | |
| 12 | Tammy | Huber | 22.5 | 10.25 | 230.625 | | |
| 13 | Ishara | Tringali | 40 | 10.25 | 410 | | |
| 14 | | | | | | | |
| 15 | **Total Gross Pay** | | | | **4147.125** | | |
| 16 | Hourly Rate: | 22.5 | | | =(sum(C8:C13)/6)*(B16*6) | | |
| 17 | | | | | | | |
| 18 | | | | | | | |

3

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 7 | **First Name** | **Last Name** | **Hours** | **Rate** | **Gross Pay** | | |
| 8 | Angelo | Marcuzzo | 43 | 35.60 | 1530.8 | | |
| 9 | Riley | Griffin | 35 | 32.10 | 1123.5 | | |
| 10 | Celeste | O'Connor | 28 | 12.50 | 350 | | |
| 11 | Alex | Barnard | 15.5 | 32.40 | 502.2 | | |
| 12 | Tammy | Huber | 22.5 | 10.25 | 230.625 | | |
| 13 | Ishara | Tringali | 40 | 10.25 | 410 | | |
| 14 | | | | | | | |
| 15 | **Total Gross Pay** | | | | **4147.125** | | |
| 16 | Hourly Rate: | 22.5 | | | 4140 | | |
| 17 | | | | | | | |
| 18 | | | | | | | |

4

### For Your Reference…

To ***create complex formulas***:

1. Plan your formula
2. Type your formula (keeping in mind the rules of ***BODMAS***)

### Handy to Know…

- You may sometimes wish to enclose two component parts of a formula in brackets. While this is not necessary from a ***BODMAS*** point of view it does make the formula easier to read.

# WHAT IF FORMULAS

When you've added formulas to your worksheet you have a ***calculation model***. Every time you change one of the dependent values that are used in a formula, that formula and any others that are dependent on it will update instantly. This allows you to perform ***what-if*** testing. For example, you can enter ***what if formulas*** that answer questions like 'what if inflation goes up by 2%?'.

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Formulas_10.xlsx...*

1. Click on the ***Summary*** worksheet tab

   *Notice the values on this worksheet…*

2. Click on the ***More Complex*** worksheet tab to display the worksheet, then click in cell ***C8*** which contains the hours for ***Angelo Marcuzzo***

3. Type **37**, then press Enter

   *Notice how the formulas update the values in row 15 as you change the dependent data…*

4. Click on the hours for the other employees and type the new values as shown

5. Click on the ***Summary*** worksheet tab to return to the ***Summary*** worksheet

   *The values will have automatically recalculated to reflect the changes*

1

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | | |
| 2 | **Weekly Payroll** | | | | | | | |
| 3 | **Department: Communications** | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | **Summary** | | | | | | | |
| 7 | | | | | | | | |
| 8 | Paid To Staff | 2827.64 | | | | | | |
| 9 | Paid To Insurance Company | 373.24 | | | | | | |
| 10 | Paid To Government | 1319.49 | | | | | | |
| 11 | | | | | | | | |

| | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | | | |
| 2 | **Weekly Payroll** | | | | | | | | |
| 3 | **Department: Communications** | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | **First Name** | **Last Name** | **Hours** | **Rate** | **Gross Pay** | **Tax** | **Net Pay** | **Superannuation** | |
| 8 | Angelo | Marcuzzo | 37 | 35.60 | 1317.20 | 430.87 | 886.33 | 118.55 | |
| 9 | Riley | Griffin | 25 | 32.10 | 802.50 | 322.56 | 479.94 | 72.23 | |
| 10 | Celeste | O'Connor | 33 | 12.50 | 412.50 | 89.55 | 322.95 | 37.13 | |
| 11 | Alex | Barnard | 16 | 32.40 | 518.40 | 232.45 | 285.95 | 46.66 | |
| 12 | Tammy | Huber | 43 | 10.25 | 440.75 | 89.56 | 351.19 | 39.67 | |
| 13 | Ishara | Tringali | 27 | 10.25 | 276.75 | 154.50 | 122.25 | 24.91 | |
| 14 | | | | | | | | | |
| 15 | **Totals** | | | | **3768.10** | **1319.49** | **2448.61** | **339.13** | |
| 16 | | | | | | | | | |

4

5

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | | |
| 2 | **Weekly Payroll** | | | | | | | |
| 3 | **Department: Communications** | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | **Summary** | | | | | | | |
| 7 | | | | | | | | |
| 8 | Paid To Staff | 2448.61 | | | | | | |
| 9 | Paid To Insurance Company | 339.13 | | | | | | |
| 10 | Paid To Government | 1319.49 | | | | | | |
| 11 | | | | | | | | |

### For Your Reference…

To ***use*** a ***formula*** for ***what-if testing***:

1. Change the value in the cell that is referenced by a formula
2. Evaluate the changed results in the formula results cell

### Handy to Know…

Excel has three different functions that can be applied for more advanced what-if testing:

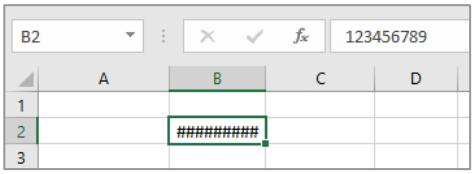
- ***SUMIF*** calculates a total amount based on a single condition.
- ***COUNTIF*** counts the number of times a value appears in a range of cells.
- ***IF*** is used for either/or scenarios.

# COMMON ERROR MESSAGES

Microsoft Excel has some in-built messages that can assist you when something goes wrong with a formula. These messages appear in the cell that contains the formula, and sometimes also other formula cells that depend upon it. The messages are always prefixed with a hash sign (#) and appear with a code. The more common error messages are listed below.

## A Line of Hash (#) Signs

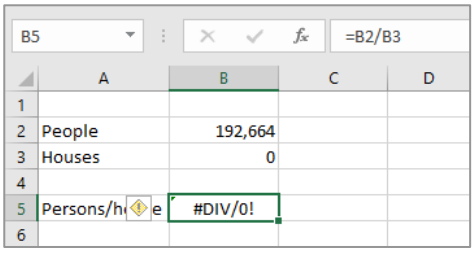
Sometimes referred to as "tramlines", a line of hash signs usually occurs because a column is not wide enough to display the numbers in the cell or formula. Widening the column will correct this problem – you can drag the column heading until the value in the cell appears as it should.




## #DIV/0!

This message means you are trying to divide a value by zero – this is mathematically impossible. In the example at the left we are trying to find the average number of persons per household. All is fine as long as there is a value greater than zero in cell B3 (Houses). As soon as we change this to a zero an error message appears in the formula cell (B5).

To prevent the error you will need to enter a value greater than zero into cell B3, the *divisor* cell.

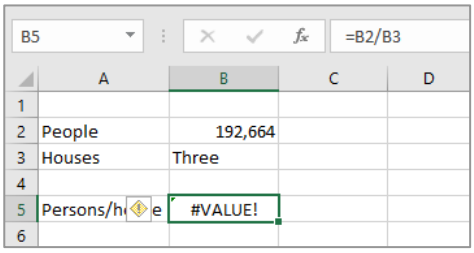



## #VALUE!

In this message Excel is advising that something in the formula is not a value and therefore a calculation can't be made.

A close examination of the example at the left shows cell B3 contains the word "three". Therefore the formula in cell B5 is trying to divide 192,664 (in cell B2) with a word, which doesn't make sense.

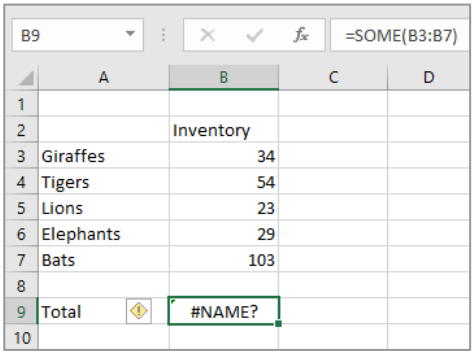
To fix the error, a value (a number) will need to be entered in cell B3.




## #NAME?

This message appears when text is found in a formula that can't be matched to either a legitimate function or range name.

In the example to the left, the formula has been entered as *=SOME(B3:B7)* – there is no such function as ***SOME***, and presumably the author should have typed *=SUM(B3:B7)*.



# CHAPTER 5 FONT FORMATTING

INFOCUS

You can greatly improve the readability of your worksheets through emphasising key data by ***formatting*** the cells in the worksheet and changing the style, colour, and size of the fonts.

In computer jargon ***formatting*** means changing the appearance of data without changing the underlying value. Excel provides a large array of tools for improving the appearance of your worksheets.

**In this session you will:**

- ✓ gain an understanding of font formatting
- ✓ learn how to use ***Live Preview*** to preview formatting
- ✓ learn how to change fonts in a workbook
- ✓ learn how to change the size of fonts in a worksheet
- ✓ learn how to increase and decrease the size of fonts
- ✓ learn how to make cells and ranges bold
- ✓ learn how to italicise text in a cell
- ✓ learn how to underline text in a cell
- ✓ learn how to change the colour of fonts in cells
- ✓ learn how to change the background colour of cells (fill colour)
- ✓ learn how to use the ***Format Painter*** tool to copy formatting
- ✓ learn how to apply a strikethrough line through text and values in a cell
- ✓ learn how to subscript text in a cell
- ✓ learn how to superscript text in a cell.

# UNDERSTANDING FONT FORMATTING

***Font formatting*** refers to the process of changing the appearance of the numbers and text in your worksheet. Font formatting can be used to make your data easier to read and comprehend, and generally more appealing to look at than just a series of numbers and words. Font formatting can also be used to draw attention to or away from key elements in your worksheet.

## Font Formatting

***Font*** is a general computer term and refers to the style, size and colour of the text and numbers in your worksheet. There are many different font styles available and they have been given all sorts of names such as *Calibri*, *Arial*, *Bodoni*, *Rockwell*, *Script*, and the like. No matter what you type into a worksheet it will need to have a font style. The default font style in Excel 2016 is *Calibri*. Font styles are installed on your computer and are available for any Office application that you should choose to use.

In addition to the style of font you can also change its size and colour. Finally, many font styles have attributes such as **bolding**, *italics* and underlining that can also be applied.

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | |
| 2 | **Revenue** | | | | | |
| 3 | | | | | | |
| 4 | | **Auckland** | **Dublin** | **Melbourne** | **New York** | **Total** |
| 5 | | | | | | |
| 6 | *January* | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | **5,608,747** |
| 7 | *February* | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | **6,599,248** |
| 8 | *March* | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | **11,769,603** |
| 9 | **1st Quarter** | **6,096,035** | **6,217,996** | **5,829,444** | **5,834,123** | **23,977,598** |
| 10 | | | | | | |

## The Tools for Formatting Fonts

Font formatting can be accomplished in a similar way to many other tasks in Excel – by selecting the cell or range to change, then making the changes. You can make font formatting changes in a variety of ways. You can change the fonts by:

- using the commands in the ***Font*** group on the ***Home*** tab of the ribbon
- using the options on the ***Font*** tab of the ***Format Cells*** dialog box
- right-clicking and using the mini-toolbar that appears with the shortcut menu.

It doesn't matter which of these methods you use to apply your formatting as they all have the same results. However, not all font formatting options can be found entirely in one of these locations.

## Simple Rules for Font Formatting

When applying font formatting, you may wish to consider the impact it will have on those who view your worksheet. There are a few general rules of formatting that apply to font formatting.

- Avoid using too many different font styles in the one worksheet. Too many font styles will draw the reader's attention away from your work.
- Use colour and bolding to accentuate your work. For example, if you need to highlight negative values you might wish to change them to red.
- Take care with using too much colour as some colours will not print well in black and white. If you are going to print your data in black and white use colour sparingly and stick with bolding as a way to accentuate your data.

# WORKING WITH LIVE PREVIEW

***Live Preview*** helps you to apply the right font formatting effect by displaying a preview of the effect before it is actually applied. This allows you to see how different fonts will change the appearance of your worksheet, without making any permanent changes. ***Live Preview*** changes the appearance of your text as you point to a font formatting option in a gallery or list.

## Try This Yourself:

*Open File*

*Before starting this exercise you MUST open the file Font Formatting_1.xlsx...*

1. Click in cell ***B4***, hold down Shift, then click in cell ***F4*** to select the headings in the worksheet

   *Let's use Live Preview to see what these headings would look like with different fonts applied to them…*

2. Click on the ***Home*** tab, then click on the drop arrow for ***Font*** in the ***Font*** group

   *A gallery of available font options will be displayed…*

3. Point to a few fonts to view how the selected range in the worksheet changes to preview that font

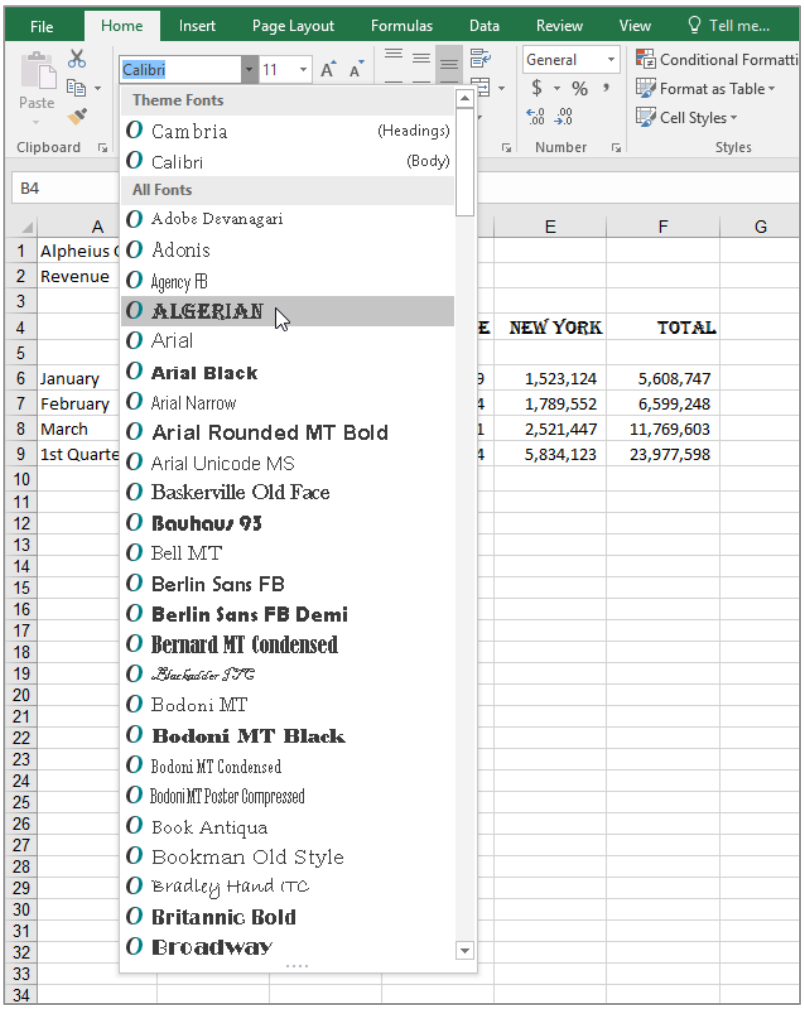
   *Make sure you 'point to' and don't click on a font in the Font gallery, as clicking on a font will apply the font to the selected text rather than simply showing a preview…*

4. Click on the drop arrow for ***Font*** in the ***Font*** group again to close the list without selecting an option at this stage

1

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Alpheius Global Enterprises | | | | | | |
| 2 | Revenue | | | | | | |
| 3 | | | | | | | |
| 4 | | Auckland | Dublin | Melbourne | New York | Total | |
| 5 | | | | | | | |
| 6 | January | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | February | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | March | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | 1st Quarter | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | 23,977,598 | |
| 10 | | | | | | | |

3




### For Your Reference…

To ***work*** with ***Live Preview***:

1. Select the text that you want to modify
2. Point to the option on the ribbon that you want to preview

### Handy to Know…

- ***Live Preview*** works with most formatting commands that display a list or gallery of options for you. It is designed to help you choose by showing you what the selected area would look like with a particular option from the list or gallery.

# CHANGING FONTS

The appearance that you choose for your text is referred to as the ***font*** or ***typeface***. Font traditionally refers to a combination of typeface, style and size in points (e.g. Arial Bold 12 pt). In Excel 2016, ***font*** just refers to the typeface or shape of the letters. Typical classic fonts include Times New Roman, Arial, Century Gothic and COPPERPLATE.

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Font Formatting_1.xlsx...*

1. Click in cell ***A1*** to make the main heading the active cell
2. Click on the ***Home*** tab, then click on the drop arrow for ***Font*** in the ***Font*** group to display a gallery of available fonts
3. Point to **Arial Narrow**, then **Book Antiqua**, **Garamond** and **Gill Sans MT**

   *If you don't have these fonts, try different ones. As you point to each font, the preview will change...*
4. Scroll down to and click on Comic Sans MS, or another font of your choice if you don't have this one

   *This time the font formatting has changed in the cell and is no longer just a preview – it won't change now unless you make another font selection*

1

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | Alpheius Global Enterprises | | | | | |
| 2 | Revenue | | | | | |
| 3 | | | | | | |
| 4 | | Auckland | Dublin | Melbourne | New York | Total |
| 5 | | | | | | |
| 6 | January | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 |
| 7 | February | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 |
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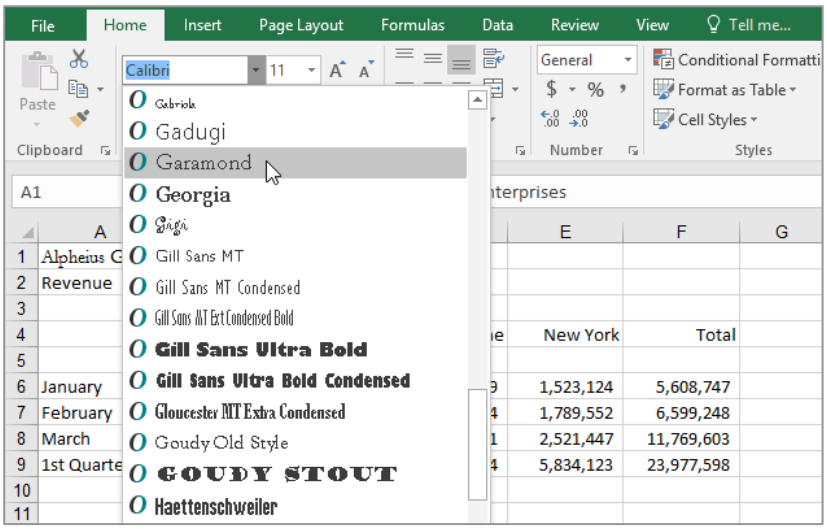
| 9 | 1st Quarter | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | 23,977,598 |
| 10 | | | | | | |

3




4

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | Alpheius Global Enterprises | | | | | |
| 2 | Revenue | | | | | |
| 3 | | | | | | |
| 4 | | Auckland | Dublin | Melbourne | New York | Total |
| 5 | | | | | | |
| 6 | January | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 |
| 7 | February | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 |
| 8 | March | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 |
| 9 | 1st Quarter | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | 23,977,598 |
| 10 | | | | | | |

### For Your Reference…

To ***apply font formatting***:

1. Select the text
2. Click on the ***Home*** tab, then click on the drop arrow for ***Font*** in the ***Font*** group
3. Point to a font to preview it
4. Click on the font to apply it

### Handy to Know…

- When displaying the font gallery in the ***Font*** group on the ***Home*** tab, you can save time by directly navigating to a font. Simply press the first letter of the name of the font you want to preview; for example, if you want to preview Garamond, click on the ***Font*** command and press G.

# CHANGING FONT SIZE

One way that text can be emphasized is by changing the ***size*** of the font. For example, if your normal text is 11 point, you may like to make the headings 13 point or larger. Font size may also be changed for small detailed items, such as comments or a caption. Main headings in a worksheet usually appear in a slightly larger font size than the rest of the data.

## Try This Yourself:

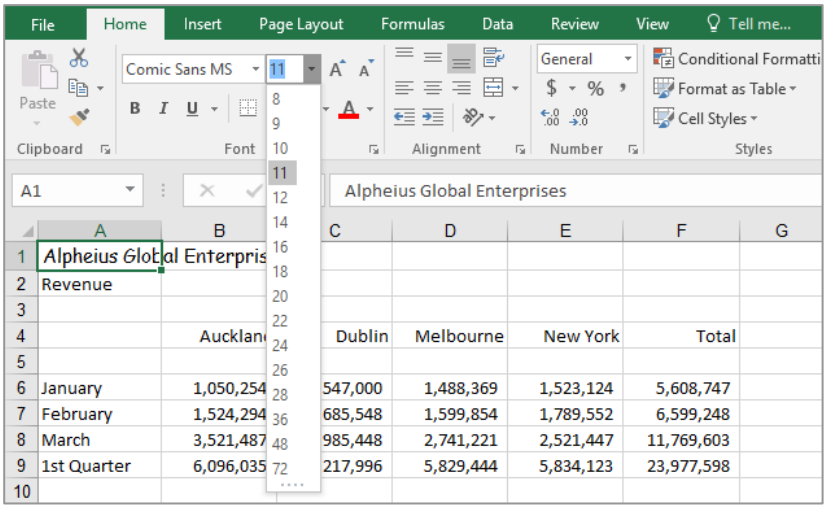
***Same File***

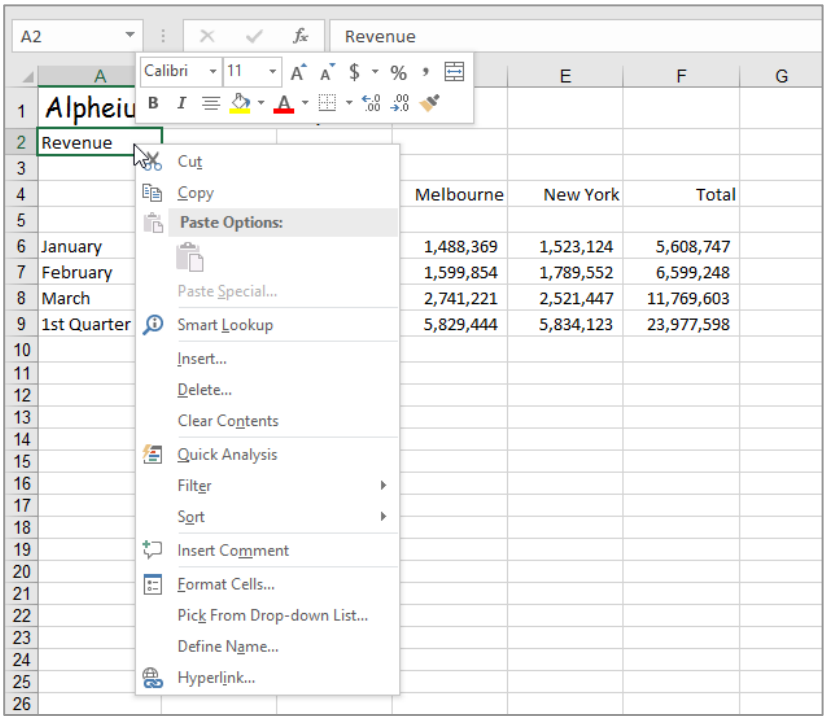
*Continue using the previous file with this exercise, or open the file Font Formatting_2.xlsx...*

1. Click in cell ***A1*** to make the main heading the active cell
2. Click on the ***Home*** tab, then click on the drop arrow for ***Font Size*** in the ***Font*** group

   *A gallery of available sizes will now be displayed…*
3. Point to various sizes and notice how Live Preview shows you a preview of the result
4. Click on ***16*** to change the heading to ***16*** points

   *You can also change the font size by using the mini toolbar...*
5. Click in cell ***A2***
6. Right-click to display the mini toolbar and shortcut menu
7. Click on the drop arrow for ***Font Size*** in the mini toolbar and click on ***14***




### For Your Reference…

To ***change font size***:

1. Select the cell or range that you want to change
2. Click on the ***Home*** tab, then click on the drop arrow for ***Font Size*** in the ***Font*** group
3. Click on the required font size

### Handy to Know…

- A ***point*** (abbreviated to *pt*) is an older style imperial unit of measure used in computers. There are 6 points to an imperial inch and 1 point is equivalent to 4.23 millimetres.

# GROWING AND SHRINKING FONTS

If you're not exactly sure what font size you want but you know that you want to make the text larger or smaller, you can ***grow*** or ***shrink*** the font. ***Increase Font Size*** and ***Decrease Font Size*** use the font sizes listed under ***Font Size***. Each time you click on either of these tools, the font size will increase or decrease by the next sizing in the gallery of sizes.

## Try This Yourself:

Same File

*Continue using the previous file with this exercise, or open the file Font Formatting_3.xlsx...*

1. Click in cell ***B4***, hold down Shift, then click in cell ***F4*** to select the range ***B4:F4***
2. Click on the ***Home*** tab, then click twice on ***Increase Font Size*** in the ***Font*** group to increase the size of the headings to ***14*** points

   *The size here increased from 11 to 14 in accordance with the steps of sizes in the font size list (i.e. 9, 10, 11, 12, 14, 16, 18…)…*
3. Click four times on ***Decrease Font Size*** in the ***Font*** group to decrease the size of the headings to ***9*** points
4. Click on ***Increase Font Size*** in the ***Font*** group until the headings increase to ***12*** points

1

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 3 | | | | | | | |
| 4 | | Auckland | Dublin | Melbourne | New York | Total | |
| 5 | | | | | | | |
| 6 | January | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | February | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | March | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | 1st Quarter | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | 23,977,598 | |
| 10 | | | | | | | |

2

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 3 | | | | | | | |
| 4 | | Auckland | Dublin | Melbourne | New York | Total | |
| 5 | | | | | | | |
| 6 | January | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | February | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | March | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | 1st Quarter | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | 23,977,598 | |
| 10 | | | | | | | |

3

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 3 | | | | | | | |
| 4 | | Auckland | Dublin | Melbourne | New York | Total | |
| 5 | | | | | | | |
| 6 | January | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | February | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | March | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | 1st Quarter | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | 23,977,598 | |
| 10 | | | | | | | |

4

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 3 | | | | | | | |
| 4 | | Auckland | Dublin | Melbourne | New York | Total | |
| 5 | | | | | | | |
| 6 | January | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | February | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | March | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | 1st Quarter | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | 23,977,598 | |
| 10 | | | | | | | |

### For Your Reference…

To ***grow*** or ***shrink*** the ***font***:

- Click on the ***Home*** tab, then select the text and click on ***Increase Font Size*** in the ***Font*** group, or
- Click on ***Decrease Font Size*** in the ***Font*** group

### Handy to Know…

If you prefer to use the keyboard, use the sequence:

- Alt, H, F, G to increase font size, and
- Alt, H, F, K to shrink font size.

# MAKING CELLS BOLD

One of the most common ways of emphasising data is to make it ***bold***. Bold data is darker in appearance because the letters are thicker, but it retains the same shape as normal data. The intensity of ***bold*** data draws the reader's eye directly to it so that they read the most important information first. Like all formatting features, cells must be selected before they can be made bold.

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Font Formatting_4.xlsx...*

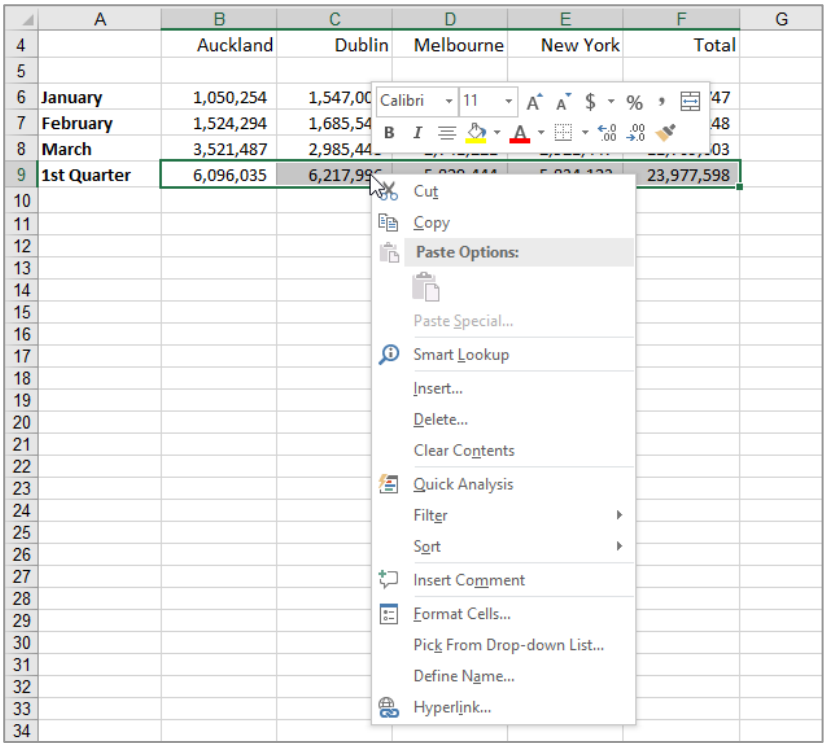
1. Click in cell ***A6***, hold down Shift, then click in cell ***A9*** to select the range ***A6:A9***
2. Click on the ***Home*** tab, then click on ***Bold*** in the ***Font*** group to make the cells appear bold
3. Click in cell ***B9***, hold down Shift, then click in cell ***F9*** to select the range ***B9:F9***
4. Right-click on the selected range to display the mini toolbar and the shortcut menu
5. Click on ***Bold*** to bold the selected cells

   *Notice that the shortcut menu disappears but the mini toolbar remains greyed out as you point to the selected range…*
6. Click in cell ***A1*** to deselect the previous range

**1**

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 4 | | Auckland | Dublin | Melbourne | New York | Total | |
| 5 | | | | | | | |
| 6 | January | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | February | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | March | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | 1st Quarter | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | 23,977,598 | |
| 10 | | | | | | | |

**4**




**5**

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 4 | | Auckland | Dublin | Melbourne | New York | Total | |
| 5 | | | | | | | |
| 6 | January | 1,050,254 | 1,547,00 | | | 47 | |
| 7 | February | 1,524,294 | 1,685,54 | | | 48 | |
| 8 | March | 3,521,487 | 2,985,44 | | | 03 | |
| 9 | 1st Quarter | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | 23,977,598 | |
| 10 | | | | | | | |

### For Your Reference…

To ***make data bold***:

1. Select the cell or range
2. Click on the ***Home*** tab, then click on ***Bold*** in the ***Font*** group

### Handy to Know…

- Bold text is created by replacing the original letters with a darker, thicker version of them. Many typefaces, such as Times New Roman, have a series of typeface variations such as normal, **bold**, *italics* and ***bold italics***. When you apply bold, Excel replaces your normal typeface with a bold version of it.

# ITALICISING TEXT

***Italic*** text is a typeface variation that slants to the right. It was originally based on calligraphy and is used to emphasise text for a variety of special reasons. For example, you can use ***italics*** for product or scientific names, place names, foreign words, quotations, etc. It is a softer form of emphasis than bold, although both can be added together for even more dramatic effect.

## Try This Yourself:

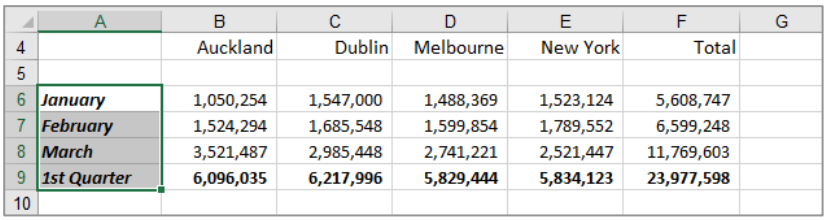
*Same File*

*Continue using the previous file with this exercise, or open the file Font Formatting_5.xlsx...*

1. Click in cell ***A6***, hold down Shift, then click in cell ***A9*** to select the range ***A6:A9***
2. Click on the ***Home*** tab, then click on ***Italics*** in the ***Font*** group to italicise the cells

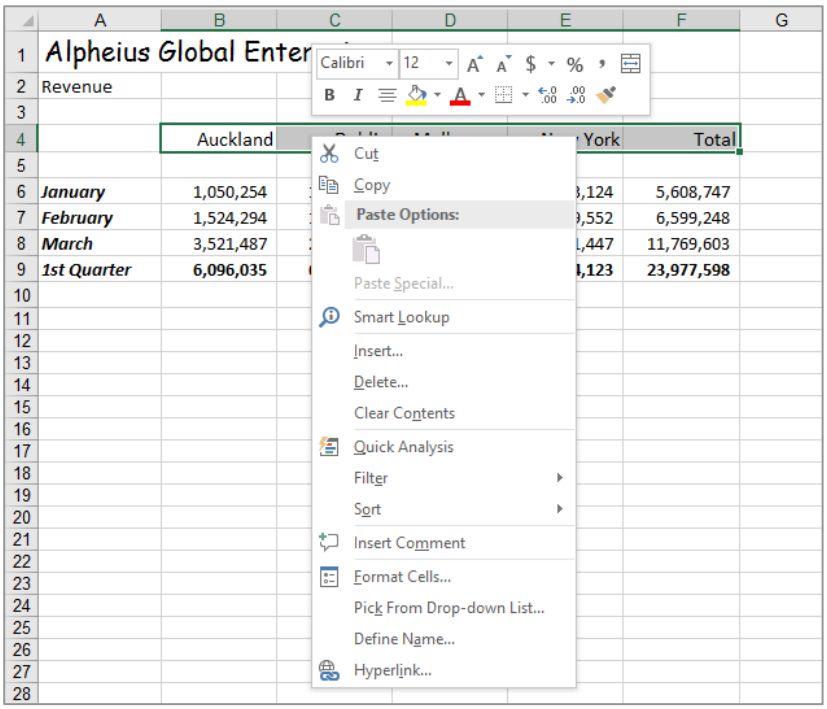
   *Notice that the previous bolding remains and that the commands for bold and italics in the ribbon appear in a different colour to indicate that both of these effects have been applied to the selected range…*
3. Click in cell ***B4***, hold down Shift, then click in cell ***F4*** to select the range ***B4:F4***
4. Right-click on the selected range to display the mini toolbar and the shortcut menu
5. Click on ***Italics*** to italicise the selected cells

   *Notice that the shortcut menu disappears but the mini toolbar remains as you point to the selected range…*
6. Click in cell ***A1*** to deselect the previous range



| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 4 | | Auckland | Dublin | Melbourne | New York | Total |
| 5 | | | | | | |
| 6 | *January* | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 |
| 7 | *February* | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 |
| 8 | *March* | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 |
| 9 | *1st Quarter* | **6,096,035** | **6,217,996** | **5,829,444** | **5,834,123** | **23,977,598** |
| 10 | | | | | | |

2




4

### For Your Reference…

To ***italicise text***:

1. Select the text
2. Click on the ***Home*** tab
3. Click on ***Italics*** in the ***Font*** group

### Handy to Know…

- You can apply multiple effects (bolding, italicising, underlining, etc.) to cells and ranges. The relevant command tools on the ribbon will change colour to indicate what effects have been applied.

# UNDERLINING TEXT

An underline is one or more lines appearing immediately below text in a cell. This may sound straightforward, but in Excel it is easy to confuse ***underlining*** with placing a ***border*** under a cell.

Underlining applies a line directly under text within a cell, whereas bordering applies a border around all or one of the edges of a cell, not the text within the cell.

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Font Formatting_6.xlsx...*

1. Click in cell ***A1*** to select the cell with the main heading
2. Click on the ***Home*** tab, then click on ***Underline*** in the ***Font*** group to underline the text in cell ***A1***

   *You can also underline just part of the text within a cell…*
3. Click on ***Underline*** in the ***Font*** group to remove the underlining from the text
4. Double-click on the word ***Global*** in the ***Formula Bar*** to select it
5. Click on ***Underline*** in the ***Font*** group to underline the word ***Global***
6. Click in cell ***A3*** to see the changes more clearly

**1**

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Alpheius Global Enterprises | | | | | | |
| 2 | Revenue | | | | | | |
| 3 | | | | | | | |
| 4 | | *Auckland* | *Dublin* | *Melbourne* | *New York* | *Total* | |
| 5 | | | | | | | |
| 6 | ***January*** | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | ***February*** | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | ***March*** | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | ***1st Quarter*** | **6,096,035** | **6,217,996** | **5,829,444** | **5,834,123** | **23,977,598** | |
| 10 | | | | | | | |

**2**

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Alpheius Global Enterprises | | | | | | |
| 2 | Revenue | | | | | | |
| 3 | | | | | | | |
| 4 | | *Auckland* | *Dublin* | *Melbourne* | *New York* | *Total* | |
| 5 | | | | | | | |
| 6 | ***January*** | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | ***February*** | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | ***March*** | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | ***1st Quarter*** | **6,096,035** | **6,217,996** | **5,829,444** | **5,834,123** | **23,977,598** | |
| 10 | | | | | | | |

**4**

A1 | Alpheius Global Enterprises

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Global Er | | | | | | |
| 2 | Revenue | | | | | | |
| 3 | | | | | | | |
| 4 | | *Auckland* | *Dublin* | *Melbourne* | *New York* | *Total* | |
| 5 | | | | | | | |
| 6 | ***January*** | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | ***February*** | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | ***March*** | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |

**6**

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Alpheius Global Enterprises | | | | | | |
| 2 | Revenue | | | | | | |
| 3 | | | | | | | |
| 4 | | *Auckland* | *Dublin* | *Melbourne* | *New York* | *Total* | |
| 5 | | | | | | | |
| 6 | ***January*** | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | ***February*** | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | ***March*** | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | ***1st Quarter*** | **6,096,035** | **6,217,996** | **5,829,444** | **5,834,123** | **23,977,598** | |
| 10 | | | | | | | |

### For Your Reference…

To ***underline text***:

1. Select the cell, range or text
2. Click on the ***Home*** tab
3. Click on ***Underline*** in the ***Font*** group

### Handy to Know…

- Underlining should be used sparingly in worksheets because it makes text more difficult to read.
- If you click on the drop arrow for ***Underline*** you will also have the options of applying a double underline.

# CHANGING FONT COLOURS

In Excel, the colour of text in cells can be changed. Colour can be used to reflect a corporate brand identity, to impart a mood, or just to make a worksheet look more interesting. With colour, as with many of the other font formatting features, less is more – if you use too many colours, you risk confusing the reader.

## Try This Yourself:

*Same File*

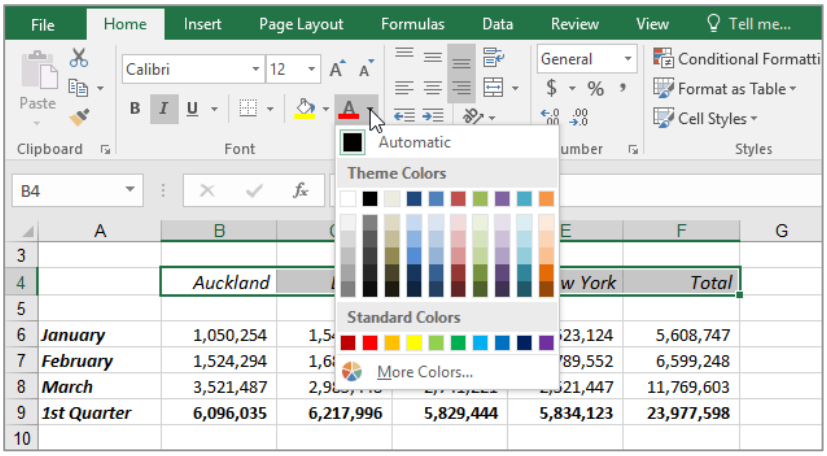
*Continue using the previous file with this exercise, or open the file Font Formatting_7.xlsx...*

1. Click in cell ***B4***, hold down Shift, then click in cell ***F4*** to select the range ***B4:F4***
2. Click on the ***Home*** tab, then click on the drop arrow for ***Font Colour*** in the ***Font*** group to display a gallery of colour options
3. Point to different colours and notice how Live Preview displays the text in the selected cells in the various colours
4. Select ***Purple*** under ***Standard Colours*** to change the colour of the text, then click in cell ***A3*** to see the change more clearly

1

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 3 | | | | | | | |
| 4 | | *Auckland* | *Dublin* | *Melbourne* | *New York* | *Total* | |
| 5 | | | | | | | |
| 6 | ***January*** | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | ***February*** | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | ***March*** | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | ***1st Quarter*** | **6,096,035** | **6,217,996** | **5,829,444** | **5,834,123** | **23,977,598** | |
| 10 | | | | | | | |

2




4

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Alpheius Global Enterprises | | | | | | |
| 2 | Revenue | | | | | | |
| 3 | | | | | | | |
| 4 | | *Auckland* | *Dublin* | *Melbourne* | *New York* | *Total* | |
| 5 | | | | | | | |
| 6 | ***January*** | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | ***February*** | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | ***March*** | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | ***1st Quarter*** | **6,096,035** | **6,217,996** | **5,829,444** | **5,834,123** | **23,977,598** | |
| 10 | | | | | | | |

### For Your Reference…

To ***change text colour***:

1. Select the cell, range or text
2. Click on the ***Home*** tab, then click on the drop arrow for ***Font Colour*** in the ***Font*** group
3. Click on the colour of your choice

### Handy to Know…

- Once you have selected a colour, it will appear in the ***Font Colour*** tool in the ribbon. You can then click on the tool rather than the drop arrow to apply the colour elsewhere.
- You can remove a font colour by selecting ***Automatic*** in the palette swatch.

# CHANGING BACKGROUND COLOURS

To make your worksheets more striking, Excel allows you to change the ***background colours*** of cells and ranges. This is particularly useful for highlighting key data or placing emphasis on headings across columns or down rows. In Excel jargon when you change the background colour of a cell you are changing its ***fill*** colour.

## Try This Yourself:

*Same File*

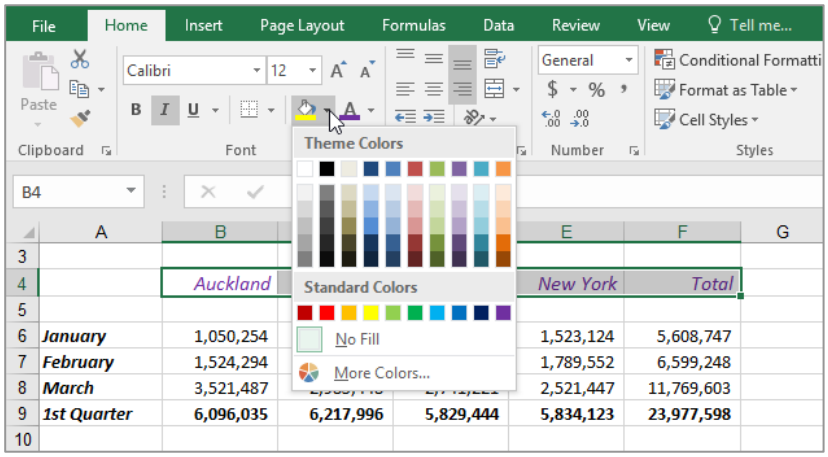
*Continue using the previous file with this exercise, or open the file Font Formatting_8.xlsx...*

1. Click in cell ***B4***, hold down Shift, then click in cell ***F4*** to select the range ***B4:F4***
2. Click on the ***Home*** tab, then click on the drop arrow for ***Fill Colour*** in the ***Font*** group to display a gallery of background colour options
3. Point to different colours and notice how Live Preview displays the background in the selected cells in the various colours
4. Select ***Red, Accent 2, Lighter 60%*** to change the colour of the background (or ***fill***) to a pink colour, then click in cell ***A3*** to see the changes more clearly

**1**

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 3 | | | | | | | |
| 4 | | *Auckland* | *Dublin* | *Melbourne* | *New York* | *Total* | |
| 5 | | | | | | | |
| 6 | ***January*** | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | ***February*** | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | ***March*** | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | ***1st Quarter*** | **6,096,035** | **6,217,996** | **5,829,444** | **5,834,123** | **23,977,598** | |
| 10 | | | | | | | |

**2**




**3**

Point to different colours and notice how Live Preview displays the background in the selected cells in the various colours

**4**

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Alpheius Global Enterprises | | | | | | |
| 2 | Revenue | | | | | | |
| 3 | | | | | | | |
| 4 | | *Auckland* | *Dublin* | *Melbourne* | *New York* | *Total* | |
| 5 | | | | | | | |
| 6 | ***January*** | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | ***February*** | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | ***March*** | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | ***1st Quarter*** | **6,096,035** | **6,217,996** | **5,829,444** | **5,834,123** | **23,977,598** | |
| 10 | | | | | | | |

### For Your Reference…

To ***change*** the ***background colour*** of ***cells***:

1. Select the cell, range or text
2. Click on the ***Home*** tab, then click on the drop arrow for ***Fill Colour*** in the ***Font*** group
3. Click on the colour of your choice

### Handy to Know…

- You can clear the background colour of a selected cell by selecting **No Fill** in the colour swatch.
- You can display additional background fill colours in the colour swatch by selecting **More Colours**.

# USING THE FORMAT PAINTER

The process of formatting text involves first selecting the cells or text to be changed and then applying the formatting. If you have a lot of changes to make, this can become quite time-consuming and difficult to reproduce exactly. Fortunately, the ***Format Painter*** tool allows you to copy the formatting from one cell or range to another.

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Font Formatting_9.xlsx...*

1. Click in cell ***B4*** to select it

   *This has a background fill, different coloured text, and a slightly larger font than standard…*

2. Click on the ***Home*** tab, then click on ***Format Painter*** in the ***Clipboard*** group

   *The mouse pointer will change to include a representation of a paint brush. A marquee will also appear around the cell or range where the formatting is being copied from…*

3. Click in cell ***A6***, then click and drag to cell ***A8*** to apply the formatting to the range ***A6:A8***

4. Click in cell ***A3*** to see the changes more clearly

   *In our example the heading text was also aligned to the right of the cell. The Format Painter also picks up any alignment options and applies them to the new area*

1

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 3 | | | | | | | |
| 4 | | Auckland | Dublin | Melbourne | New York | Total | |
| 5 | | | | | | | |
| 6 | January | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | February | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | March | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | 1st Quarter | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | 23,977,598 | |
| 10 | | | | | | | |

2

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 3 | | | | | | | |
| 4 | | Auckland | Dublin | Melbourne | New York | Total | |
| 5 | | | | | | | |
| 6 | January | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | February | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | March | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | 1st Quarter | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | 23,977,598 | |
| 10 | | | | | | | |

3

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 3 | | | | | | | |
| 4 | | Auckland | Dublin | Melbourne | New York | Total | |
| 5 | | | | | | | |
| 6 | January | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | February | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | March | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | 1st Quarter | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | 23,977,598 | |
| 10 | | | | | | | |

4

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Alpheius Global Enterprises | | | | | | |
| 2 | Revenue | | | | | | |
| 3 | | | | | | | |
| 4 | | Auckland | Dublin | Melbourne | New York | Total | |
| 5 | | | | | | | |
| 6 | January | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | February | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | March | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | 1st Quarter | 6,096,035 | 6,217,996 | 5,829,444 | 5,834,123 | 23,977,598 | |
| 10 | | | | | | | |

### For Your Reference…

To ***use*** the ***format painter***:

1. Select the cell or range to copy the formatting from
2. Click on the ***Home*** tab, then click on ***Format Painter*** in the ***Clipboard*** group
3. Select the text to be formatted

### Handy to Know…

- If you double-click on the ***Format Painter*** (on the ***Home*** tab, in the ***Clipboard*** group) you can keep pasting the format until you press Esc or click on the ***Format Painter*** again.
- When you paste a format it will replace any previous font formatting.

# APPLYING STRIKETHROUGH

***Strikethrough*** refers to the placement of a line through text, as in ~~strikethrough~~. Strikethrough allows you to cross out selected text without actually deleting it. It is particularly useful for legal documents, for making suggested changes to a colleague's or student's work, or as a means of showing that something has expired or elapsed but still needs to be displayed.

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Font Formatting_10.xlsx...*

1. Click in cell ***B6***, hold down the Shift key and click in cell ***B8*** to select the range ***B6:B8***

   *There is no ribbon command for strikethrough so we'll need to access it through a dialog box…*

2. Click on the ***Home*** tab, then click on the dialog box launcher for the ***Font*** group to display the ***Format Cells*** dialog box with the ***Font*** tab active

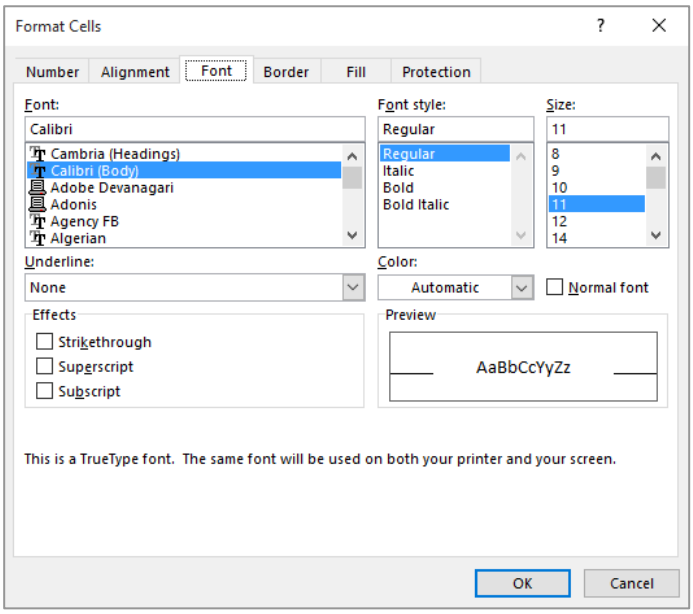
3. Click on ***Strikethrough*** in ***Effects*** so it appears ticked, then click on **[OK]**

   *The values in the selected cells will now appear with a horizontal line through them. Notice that this has not had any effect on the formulas in the worksheet – the data is still as it was before, except that it now has the strikethrough line through it*

1

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 3 | | | | | | | |
| 4 | | *Auckland* | *Dublin* | *Melbourne* | *New York* | *Total* | |
| 5 | | | | | | | |
| 6 | *January* | 1,050,254 | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | *February* | 1,524,294 | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | *March* | 3,521,487 | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | *1st Quarter* | **6,096,035** | **6,217,996** | **5,829,444** | **5,834,123** | **23,977,598** | |
| 10 | | | | | | | |

2




3

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 3 | | | | | | | |
| 4 | | *Auckland* | *Dublin* | *Melbourne* | *New York* | *Total* | |
| 5 | | | | | | | |
| 6 | *January* | ~~1,050,254~~ | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | *February* | ~~1,524,294~~ | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | *March* | ~~3,521,487~~ | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | *1st Quarter* | **6,096,035** | **6,217,996** | **5,829,444** | **5,834,123** | **23,977,598** | |
| 10 | | | | | | | |

## For Your Reference…

To ***apply strikethrough***:

1. Select the cell, range or text
2. Click on the dialog box launcher for the ***Font*** group
3. Click on ***Strikethrough*** until it appears ticked then click on **[OK]**

## Handy to Know…

- Some people prefer to apply a different fill colour in lieu of strikethrough. Choose whichever option is best for your situation.

# SUBSCRIPTING TEXT

***Subscript*** text is text that appears below the normal position of letters and is slightly smaller in size, usually around ⅔ of normal text. It is usually used in mathematical formulas, for example, $Z_{k+n,m} = Z_{k,m}$ and in chemical formulas and other scientific notation, such as ammonia, which is $NH_3$, and methylene chloride, which is $CH_2Cl_2$.

## Try This Yourself:

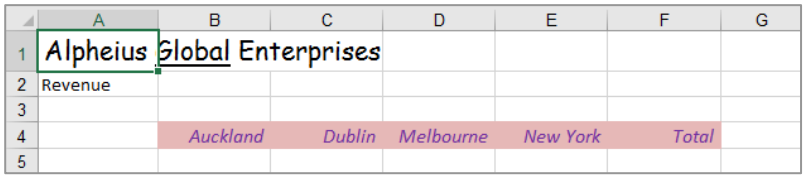
*Same File*

*Continue using the previous file with this exercise, or open the file Font Formatting_11.xlsx...*

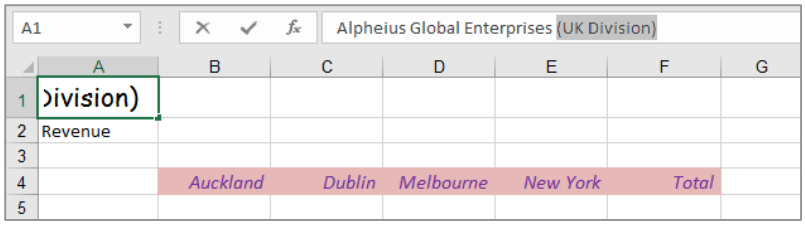
1. Click in cell ***A1*** to select the cell with the main heading
2. Click at the end of the text in the ***Formula Bar***, press Space to insert a space, then type **(UK Division)**
3. Click to the left of the new text and drag the mouse over it to select it
4. Click on the ***Home*** tab, then click on the dialog box launcher for the ***Font*** group to display the ***Format Cells*** dialog box with the ***Font*** tab active
5. Click on ***Subscript*** in ***Effects*** until it appears with a tick, then click on **[OK]**

   *You won't see much change here until you actually deselect A1…*
6. Click in cell ***A3*** to make it the active cell

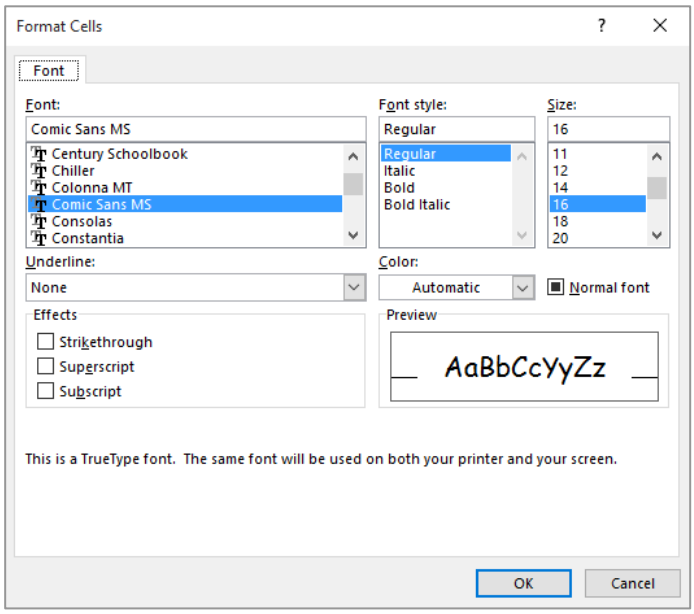
1



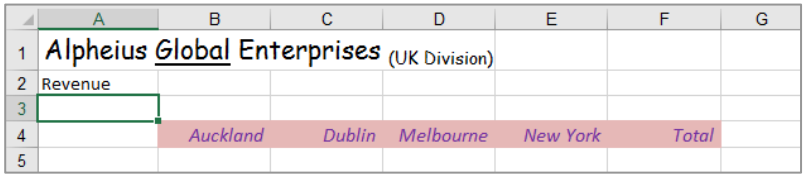

3




4




6




### For Your Reference…

To ***apply subscripting***:

1. Select the cell, range or text
2. Click on the dialog box launcher for the ***Font*** group
3. Click on ***Subscript*** in ***Effects*** until it appears with a tick, then click on **[OK]**

### Handy to Know…

- Subscripting is most useful for mathematical and scientific notations.

# SUPERSCRIPTING TEXT

***Superscript*** text is text that appears above the normal position of letters and is slightly smaller in size, usually around ⅔ of normal text. It is often used in mathematical formulas, for example when expressing the powers of a number, e.g. $2 \times 2 = 2^2$, and is also used for ordinals such as $2^{nd}$ and $25^{th}$ and in chemistry for variations in elements known as isotopes, such as $^{12}C$ and $^{13}C$ for carbon.

## Try This Yourself:

*Same File* *Continue using the previous file with this exercise, or open the file Font Formatting_12.xlsx...*

1. Click in cell ***A9*** to make it the active cell
2. Click to the left of ***st*** in the ***Formula Bar***, then drag with the mouse to select it
3. Click on the ***Home*** tab, then click on the dialog box launcher for the ***Font*** group to display the ***Format Cells*** dialog box with the ***Font*** tab active
4. Click on ***Superscript*** in ***Effect*** until it appears with a tick, then click on **[OK]**
5. Click in cell ***A3*** to see the changes more clearly

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 4 | | Auckland | Dublin | Melbourne | New York | Total | |
| 5 | | | | | | | |
| 6 | January | ~~1,050,254~~ | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | February | ~~1,524,294~~ | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | March | ~~3,521,487~~ | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | 1st Quarter | **6,096,035** | **6,217,996** | **5,829,444** | **5,834,123** | **23,977,598** | |
| 10 | | | | | | | |

1

A9 | 1st Quarter

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 4 | | Auckland | Dublin | Melbourne | New York | Total | |
| 5 | | | | | | | |
| 6 | January | ~~1,050,254~~ | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | February | ~~1,524,294~~ | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | March | ~~3,521,487~~ | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | 1st Quarter | **6,096,035** | **6,217,996** | **5,829,444** | **5,834,123** | **23,977,598** | |
| 10 | | | | | | | |

2

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Alpheius Global Enterprises (UK Division) | | | | | | |
| 2 | Revenue | | | | | | |
| 3 | | | | | | | |
| 4 | | Auckland | Dublin | Melbourne | New York | Total | |
| 5 | | | | | | | |
| 6 | January | ~~1,050,254~~ | 1,547,000 | 1,488,369 | 1,523,124 | 5,608,747 | |
| 7 | February | ~~1,524,294~~ | 1,685,548 | 1,599,854 | 1,789,552 | 6,599,248 | |
| 8 | March | ~~3,521,487~~ | 2,985,448 | 2,741,221 | 2,521,447 | 11,769,603 | |
| 9 | 1st Quarter | **6,096,035** | **6,217,996** | **5,829,444** | **5,834,123** | **23,977,598** | |
| 10 | | | | | | | |

5

### For Your Reference…

To ***apply superscripting***:

1. Select the cell, range or text
2. Click on the dialog box launcher for the ***Font*** group
3. Click on ***Superscript*** in ***Effect*** until it appears with a tick, then click on **[OK]**

### Handy to Know…

- Superscripting is most useful for mathematical and scientific notations.

# NOTES:

# CHAPTER 6 NUMBER FORMATTING

INFOCUS

In Excel, ***number formatting*** refers to making numbers appear with a specific number of decimal places, with percentage and currency signs, and even as dates and times. Number formatting is one of the key aspects of ensuring that the data in your worksheets is easy to read and comprehend.

**In this session you will:**

- ✓ gain an understanding of number formatting
- ✓ learn how to apply general number formats to cells and ranges
- ✓ learn how to format a range of cells as currency
- ✓ learn how to apply percentage formatting to cells
- ✓ learn how to format cells as fractions
- ✓ learn how to format dates
- ✓ learn how to apply the thousands separator to cells
- ✓ learn how to change the number of decimal places for values.

# UNDERSTANDING NUMBER FORMATTING

In Excel there are always two aspects to a number: how the number presents on the screen (known as ***formatting***) and the underlying value of the number. Take 2% as an example – on the screen it is formatted to appear as a number with a percentage sign, whereas the real value in the cell is .02.

## Number Formatting – The *Veil* Placed Over Numbers

All calculations in Excel are performed using numbers – this is only logical. So, when you want to perform a calculation, you type the numbers in various cells, then create formulas to reference those numbers. How do you show what those numbers represent? For example, how do you show you are working with *currency*, or *percentages*, or even *dates* (which in Excel are really *numbers*)?

Excel allows you to show these representations using ***number formatting***. With number formatting you change the way a number looks so that it makes immediate sense to the reader of your worksheet. The underlying value of number, however, remains unchanged. For example, instead of showing sales tax in a worksheet as ***.1*** you show it as ***10%***, to show ***12889.95*** as currency it would appears ***$12,889.95*** or ***€12,889.95*** (depending upon the currency you are working with), and to show ***44104*** as a date you show it as ***30-Sep-2020*** (remember, dates are actually *numbers* representing the number of days from January 1, 1900).

The following worksheet contains formatted numbers:

| | A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **Sales Earnings** | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | **Employee No** | **First Name** | **Last Name** | **Date Started** | **Height (Mtr)** | **Weight (Kg)** | **Total Sales** | **Com'n %** | **Commission** | |
| 4 | 2344 | John | Smith | 3/10/2003 | 1.85 | 69.3 | 8220266 | 0.02 | 164405.32 | |
| 5 | 3433 | Mary | Henry | 12/04/2004 | 2.1 | 75.22 | 12771833 | 0.02 | 255436.66 | |
| 6 | 3233 | Harry | Ulin | 2/03/1999 | 1.797 | 87.9 | 35324399 | 0.02 | 706487.98 | |
| 7 | 5445 | Jim | Harrison | 4/07/1992 | 2.21 | 95.66 | 17338194 | 0.02 | 346763.88 | |
| 8 | 3333 | Larry | Graham | 14/05/2005 | 1.935 | 89.44 | 9670630 | 0.02 | 193412.6 | |
| 9 | 4444 | David | Jenkins | 6/02/2007 | 1.65 | 68.3 | 6152310 | 0.03 | 184569.3 | |
| 10 | 3332 | Ian | Quinn | 26/03/1995 | 1.862 | 69.32 | 36973644 | 0.03 | 1109209.32 | |
| 11 | 9887 | Horace | Smyth | 23/12/2001 | 1.77 | 80.48 | 10755146 | 0.03 | 322654.38 | |
| 12 | 4646 | Yolanda | Victor | 5/06/1989 | 1.62 | 80.52 | 5061883 | 0.04 | 202475.32 | |
| 13 | 5555 | Quentin | Engels | 3/04/2001 | 1.9 | 78.4 | 13329586 | 0.05 | 666479.3 | |
| 14 | | | | | | | | | | |
| 15 | | | | | | | **155597891** | | **4151894.06** | |
| 16 | | | | | | | | | | |

With the formatting removed from the numbers the worksheet looks as follows:

| | A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | **Sales Earnings** | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | **Employee No** | **First Name** | **Last Name** | **Date Started** | **Height (Mtr)** | **Weight (Kg)** | **Total Sales** | **Com'n %** | **Commission** | |
| 4 | 2344 | John | Smith | 37897 | 1.85 | 69.3 | 8220266 | 0.02 | 164405.32 | |
| 5 | 3433 | Mary | Henry | 38089 | 2.1 | 75.22 | 12771833 | 0.02 | 255436.66 | |
| 6 | 3233 | Harry | Ulin | 36221 | 1.797 | 87.9 | 35324399 | 0.02 | 706487.98 | |
| 7 | 5445 | Jim | Harrison | 33789 | 2.21 | 95.66 | 17338194 | 0.02 | 346763.88 | |
| 8 | 3333 | Larry | Graham | 38486 | 1.935 | 89.44 | 9670630 | 0.02 | 193412.6 | |
| 9 | 4444 | David | Jenkins | 39119 | 1.65 | 68.3 | 6152310 | 0.03 | 184569.3 | |
| 10 | 3332 | Ian | Quinn | 34784 | 1.862 | 69.32 | 36973644 | 0.03 | 1109209.32 | |
| 11 | 9887 | Horace | Smyth | 37248 | 1.77 | 80.48 | 10755146 | 0.03 | 322654.38 | |
| 12 | 4646 | Yolanda | Victor | 32664 | 1.62 | 80.52 | 5061883 | 0.04 | 202475.32 | |
| 13 | 5555 | Quentin | Engels | 36984 | 1.9 | 78.4 | 13329586 | 0.05 | 666479.3 | |
| 14 | | | | | | | | | | |
| 15 | | | | | | | **155597891** | | **4151894.06** | |
| 16 | | | | | | | | | | |

Formatting can also be applied as you type. For example, if you type ***30/9/2020*** Excel will place the number ***44104*** in the cell but will format this number as a date and show it as you typed it. There are also a range of number formatting options on the ribbon that allow you to apply formatting to numbers after they have been entered into a worksheet.

# APPLYING GENERAL FORMATTING

The ***Number Format*** command in the ***Number*** group on the ***Home*** tab contains a drop arrow that provides a gallery of the more commonly used number formats. You can apply these formats easily and quickly to a selected cell or range of cells in the worksheet.

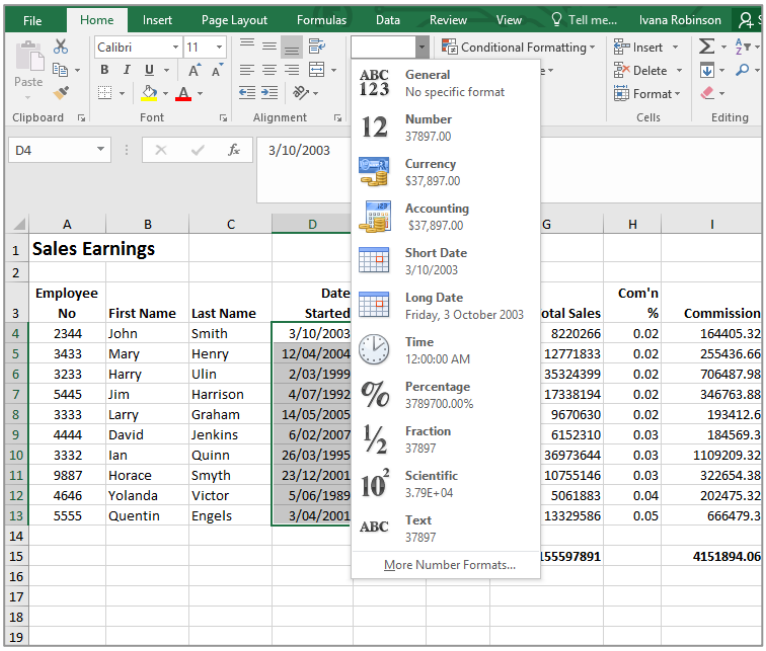
## Try This Yourself:

Open File

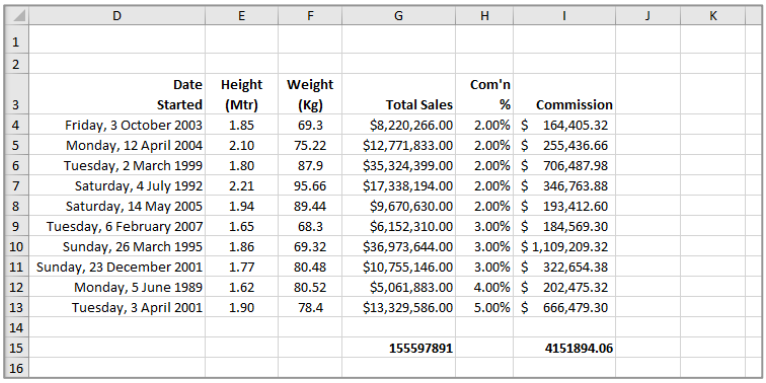
*Before starting this exercise you MUST open the file Number Formatting_1.xlsx…*

1. Click in cell ***D4***, hold down Shift, then click in cell ***D13*** to select the range containing dates
2. Click on the ***Home*** tab, then click on the drop arrow for ***Number Format*** in the ***Number*** group to see a gallery of number formats
3. Click on ***Long Date*** to make the short dates in the selected range appear as long dates
4. Click in cell ***E4***, hold down Shift, then click in cell ***E13*** to select the range containing units of measure
5. Click on the drop arrow for ***Number Format***, then select **Number** to display these as numbers with ***2*** decimal places
6. Repeat the above steps to change ***G4:G13*** to **Currency**
7. Repeat the above steps and change the following ranges as shown:

   **H4:H14 Percentage**
   **I4:I4 Accounting**




2



| | Date Started | Height (Mtr) | Weight (Kg) | Total Sales | Com'n % | Commission |
|---|---|---|---|---|---|---|
| 4 | Friday, 3 October 2003 | 1.85 | 69.3 | $8,220,266.00 | 2.00% | $ 164,405.32 |
| 5 | Monday, 12 April 2004 | 2.10 | 75.22 | $12,771,833.00 | 2.00% | $ 255,436.66 |
| 6 | Tuesday, 2 March 1999 | 1.80 | 87.9 | $35,324,399.00 | 2.00% | $ 706,487.98 |
| 7 | Saturday, 4 July 1992 | 2.21 | 95.66 | $17,338,194.00 | 2.00% | $ 346,763.88 |
| 8 | Saturday, 14 May 2005 | 1.94 | 89.44 | $9,670,630.00 | 2.00% | $ 193,412.60 |
| 9 | Tuesday, 6 February 2007 | 1.65 | 68.3 | $6,152,310.00 | 3.00% | $ 184,569.30 |
| 10 | Sunday, 26 March 1995 | 1.86 | 69.32 | $36,973,644.00 | 3.00% | $ 1,109,209.32 |
| 11 | Sunday, 23 December 2001 | 1.77 | 80.48 | $10,755,146.00 | 3.00% | $ 322,654.38 |
| 12 | Monday, 5 June 1989 | 1.62 | 80.52 | $5,061,883.00 | 4.00% | $ 202,475.32 |
| 13 | Tuesday, 3 April 2001 | 1.90 | 78.4 | $13,329,586.00 | 5.00% | $ 666,479.30 |
| 15 | | | | 155597891 | | 4151894.06 |

7

### For Your Reference…

To ***apply general formatting*** to ***numbers***:

1. Select the range to format
2. Click on the ***Home*** tab, then click on the drop arrow for ***Number Format*** in the ***Number*** group
3. Click on the desired number format

### Handy to Know…

- Excel may appear to round values up or down as necessary – however, the value in the cell does not change. Sometimes you'll see minor rounding discrepancies.
- The ***Currency*** format shows the currency format and symbol appropriate to the country your computer is configured for.

# FORMATTING FOR MONEY

When you select ***Currency*** or ***Accounting*** from the ***Number Format*** gallery, Excel will format the selected range using the using the default currency format for your computer. For example, in Australia numbers are formatted with $ signs, while in the UK they are formatted with £ signs. The ***Accounting Number Format*** icon provides you with access to other currencies.

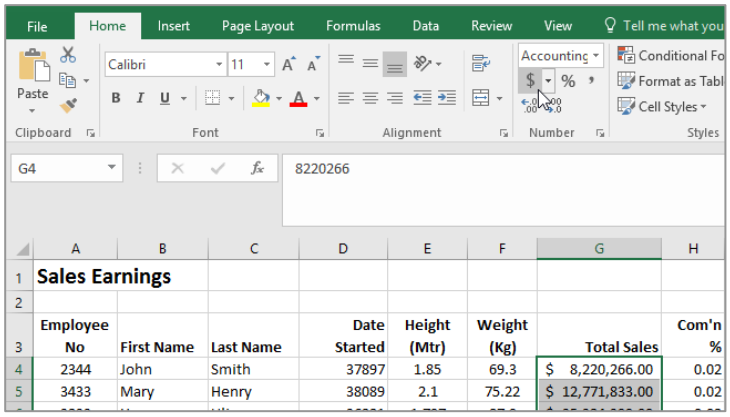
## Try This Yourself:

***Same File***

*Continue using the previous file with this exercise, or open the file Number Formatting_2.xlsx...*

1. Click in cell ***G4***, hold down Shift, then click in cell ***G13*** to select the values in the ***Total Sales*** column
2. On the ***Home*** tab, click on ***Accounting Number Format*** in the ***Number*** group to display the selected cells in an accounting number format
3. Click on the drop arrow for ***Accounting Number Format***, then select ***£ English (United Kingdom)*** to show the range in UK pounds
4. Click on the drop arrow for ***Accounting Number Format***, then select ***€ Euro (€ 123)*** to show the range in euros
5. Click on the drop arrow for ***Number Format***, then select ***Currency*** to display the range in the local currency as determined by your computer

**2**

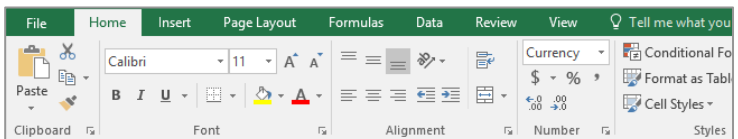



| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Sales Earnings** | | | | | | | |
| 2 | | | | | | | | |
| 3 | **Employee No** | **First Name** | **Last Name** | **Date Started** | **Height (Mtr)** | **Weight (Kg)** | **Total Sales** | **Com'n %** |
| 4 | 2344 | John | Smith | 37897 | 1.85 | 69.3 | $ 8,220,266.00 | 0.02 |
| 5 | 3433 | Mary | Henry | 38089 | 2.1 | 75.22 | $ 12,771,833.00 | 0.02 |

**3**

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Sales Earnings** | | | | | | | |
| 2 | | | | | | | | |
| 3 | **Employee No** | **First Name** | **Last Name** | **Date Started** | **Height (Mtr)** | **Weight (Kg)** | **Total Sales** | **Com'n %** |
| 4 | 2344 | John | Smith | 37897 | 1.85 | 69.3 | £ 8,220,266.00 | 0.02 |
| 5 | 3433 | Mary | Henry | 38089 | 2.1 | 75.22 | £ 12,771,833.00 | 0.02 |
| 6 | 3233 | Harry | Ulin | 36221 | 1.797 | 87.9 | £ 35,324,399.00 | 0.02 |
| 7 | 5445 | Jim | Harrison | 33789 | 2.21 | 95.66 | £ 17,338,194.00 | 0.02 |
| 8 | 3333 | Larry | Graham | 38486 | 1.935 | 89.44 | £ 9,670,630.00 | 0.02 |
| 9 | 4444 | David | Jenkins | 39119 | 1.65 | 68.3 | £ 6,152,310.00 | 0.03 |
| 10 | 3332 | Ian | Quinn | 34784 | 1.862 | 69.32 | £ 36,973,644.00 | 0.03 |
| 11 | 9887 | Horace | Smyth | 37248 | 1.77 | 80.48 | £ 10,755,146.00 | 0.03 |
| 12 | 4646 | Yolanda | Victor | 32664 | 1.62 | 80.52 | £ 5,061,883.00 | 0.04 |
| 13 | 5555 | Quentin | Engels | 36984 | 1.9 | 78.4 | £ 13,329,586.00 | 0.05 |
| 14 | | | | | | | | |
| 15 | | | | | | | **155597891** | |
| 16 | | | | | | | | |

**5**




| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Sales Earnings** | | | | | | | |
| 2 | | | | | | | | |
| 3 | **Employee No** | **First Name** | **Last Name** | **Date Started** | **Height (Mtr)** | **Weight (Kg)** | **Total Sales** | **Com'n %** |
| 4 | 2344 | John | Smith | 37897 | 1.85 | 69.3 | $8,220,266.00 | 0.02 |
| 5 | 3433 | Mary | Henry | 38089 | 2.1 | 75.22 | $12,771,833.00 | 0.02 |
| 6 | 3233 | Harry | Ulin | 36221 | 1.797 | 87.9 | $35,324,399.00 | 0.02 |

### For Your Reference…

To ***format*** a ***range*** as ***Currency***:

1. Select the range to format
2. Click on the ***Home*** tab, then click on the drop arrow for ***Accounting Number Format*** in the ***Number*** group
3. Click on the desired currency format

### Handy to Know…

- There is no numeric difference between the ***Accounting*** and the ***Currency*** formats, only visual. With the ***Accounting*** format the currency symbol appears at the left of the cell and there is a space between the value and the right side of the cell.

# FORMATTING PERCENTAGES

Formatting percentages can appear to be a little tricky at first. The ***percentage formats*** in Excel multiply a value by 100 and add on a ***%*** sign to the cell value. However, no underlying value is changed. The percentage format simply shows the number as a percentage of 100. Therefore if you want Excel to show a value as ***20%*** you will need to have ***.2*** in the cell.

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Number Formatting_3.xlsx...*

1. Click in cell ***H4***, hold down Shift and click in cell ***H13*** to select the values in the ***Com'n %*** column
2. On the ***Home*** tab, click on ***Percent Style*** in the ***Number*** group to display the selected cells as percentages

   *Spend a few moments looking at how Excel displays the percentages*

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Sales Earnings** | | | | | | | |
| 2 | | | | | | | | |
| 3 | **Employee No** | **First Name** | **Last Name** | **Date Started** | **Height (Mtr)** | **Weight (Kg)** | **Total Sales** | **Com'n %** |
| 4 | 2344 | John | Smith | 37897 | 1.85 | 69.3 | $8,220,266.00 | 0.02 |
| 5 | 3433 | Mary | Henry | 38089 | 2.1 | 75.22 | $12,771,833.00 | 0.02 |
| 6 | 3233 | Harry | Ulin | 36221 | 1.797 | 87.9 | $35,324,399.00 | 0.02 |
| 7 | 5445 | Jim | Harrison | 33789 | 2.21 | 95.66 | $17,338,194.00 | 0.02 |
| 8 | 3333 | Larry | Graham | 38486 | 1.935 | 89.44 | $9,670,630.00 | 0.02 |
| 9 | 4444 | David | Jenkins | 39119 | 1.65 | 68.3 | $6,152,310.00 | 0.03 |
| 10 | 3332 | Ian | Quinn | 34784 | 1.862 | 69.32 | $36,973,644.00 | 0.03 |
| 11 | 9887 | Horace | Smyth | 37248 | 1.77 | 80.48 | $10,755,146.00 | 0.03 |
| 12 | 4646 | Yolanda | Victor | 32664 | 1.62 | 80.52 | $5,061,883.00 | 0.04 |
| 13 | 5555 | Quentin | Engels | 36984 | 1.9 | 78.4 | $13,329,586.00 | 0.05 |
| 14 | | | | | | | | |
| 15 | | | | | | | **155597891** | |
| 16 | | | | | | | | |

1

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Sales Earnings** | | | | | | | |
| 2 | | | | | | | | |
| 3 | **Employee No** | **First Name** | **Last Name** | **Date Started** | **Height (Mtr)** | **Weight (Kg)** | **Total Sales** | **Com'n %** |
| 4 | 2344 | John | Smith | 37897 | 1.85 | 69.3 | $8,220,266.00 | 2% |
| 5 | 3433 | Mary | Henry | 38089 | 2.1 | 75.22 | $12,771,833.00 | 2% |
| 6 | 3233 | Harry | Ulin | 36221 | 1.797 | 87.9 | $35,324,399.00 | 2% |
| 7 | 5445 | Jim | Harrison | 33789 | 2.21 | 95.66 | $17,338,194.00 | 2% |
| 8 | 3333 | Larry | Graham | 38486 | 1.935 | 89.44 | $9,670,630.00 | 2% |
| 9 | 4444 | David | Jenkins | 39119 | 1.65 | 68.3 | $6,152,310.00 | 3% |
| 10 | 3332 | Ian | Quinn | 34784 | 1.862 | 69.32 | $36,973,644.00 | 3% |
| 11 | 9887 | Horace | Smyth | 37248 | 1.77 | 80.48 | $10,755,146.00 | 3% |
| 12 | 4646 | Yolanda | Victor | 32664 | 1.62 | 80.52 | $5,061,883.00 | 4% |
| 13 | 5555 | Quentin | Engels | 36984 | 1.9 | 78.4 | $13,329,586.00 | 5% |
| 14 | | | | | | | | |
| 15 | | | | | | | **155597891** | |
| 16 | | | | | | | | |

2

### For Your Reference…

To ***format cells*** as ***Percentages***:

1. Select the range to format
2. Click on the ***Home*** tab, then click on ***Percent Style*** in the ***Number*** group

### Handy to Know…

- You can actually type a formatted percentage directly into a new cell. For example, if you type ***15%*** into cell ***D20*** the value in ***D20*** will actually be entered as ***.15*** but will display as typed.

# FORMATTING AS FRACTIONS

Excel allows you to format numbers with decimal places as ***fractions***. This can be useful, however the way the fractions are displayed can make them difficult to read. For example, when ***3.5*** is formatted as a fraction, it would ideally be displayed as ***3 ½***; however, Excel displays it as ***3 1/2***, which is less clear and significantly harder to read.

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Number Formatting_4.xlsx...*

1. Click in cell ***E4***, hold down Shift, then click in cell ***E13*** to select the values in the ***Height*** column
2. On the ***Home*** tab, click on the drop arrow for ***Number Format*** in the ***Number*** group and select **Fraction** to display the range with fractions where relevant

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Sales Earnings** | | | | | | | |
| 2 | | | | | | | | |
| 3 | **Employee No** | **First Name** | **Last Name** | **Date Started** | **Height (Mtr)** | **Weight (Kg)** | **Total Sales** | **Com'n %** |
| 4 | 2344 | John | Smith | 37897 | 1.85 | 69.3 | $8,220,266.00 | 2% |
| 5 | 3433 | Mary | Henry | 38089 | 2.1 | 75.22 | $12,771,833.00 | 2% |
| 6 | 3233 | Harry | Ulin | 36221 | 1.797 | 87.9 | $35,324,399.00 | 2% |
| 7 | 5445 | Jim | Harrison | 33789 | 2.21 | 95.66 | $17,338,194.00 | 2% |
| 8 | 3333 | Larry | Graham | 38486 | 1.935 | 89.44 | $9,670,630.00 | 2% |
| 9 | 4444 | David | Jenkins | 39119 | 1.65 | 68.3 | $6,152,310.00 | 3% |
| 10 | 3332 | Ian | Quinn | 34784 | 1.862 | 69.32 | $36,973,644.00 | 3% |
| 11 | 9887 | Horace | Smyth | 37248 | 1.77 | 80.48 | $10,755,146.00 | 3% |
| 12 | 4646 | Yolanda | Victor | 32664 | 1.62 | 80.52 | $5,061,883.00 | 4% |
| 13 | 5555 | Quentin | Engels | 36984 | 1.9 | 78.4 | $13,329,586.00 | 5% |
| 14 | | | | | | | | |
| 15 | | | | | | | **155597891** | |
| 16 | | | | | | | | |

1

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Sales Earnings** | | | | | | | |
| 2 | | | | | | | | |
| 3 | **Employee No** | **First Name** | **Last Name** | **Date Started** | **Height (Mtr)** | **Weight (Kg)** | **Total Sales** | **Com'n %** |
| 4 | 2344 | John | Smith | 37897 | 1 6/7 | 69.3 | $8,220,266.00 | 2% |
| 5 | 3433 | Mary | Henry | 38089 | 2 1/9 | 75.22 | $12,771,833.00 | 2% |
| 6 | 3233 | Harry | Ulin | 36221 | 1 4/5 | 87.9 | $35,324,399.00 | 2% |
| 7 | 5445 | Jim | Harrison | 33789 | 2 1/5 | 95.66 | $17,338,194.00 | 2% |
| 8 | 3333 | Larry | Graham | 38486 | 2 | 89.44 | $9,670,630.00 | 2% |
| 9 | 4444 | David | Jenkins | 39119 | 1 2/3 | 68.3 | $6,152,310.00 | 3% |
| 10 | 3332 | Ian | Quinn | 34784 | 1 6/7 | 69.32 | $36,973,644.00 | 3% |
| 11 | 9887 | Horace | Smyth | 37248 | 1 7/9 | 80.48 | $10,755,146.00 | 3% |
| 12 | 4646 | Yolanda | Victor | 32664 | 1 5/8 | 80.52 | $5,061,883.00 | 4% |
| 13 | 5555 | Quentin | Engels | 36984 | 1 8/9 | 78.4 | $13,329,586.00 | 5% |
| 14 | | | | | | | | |
| 15 | | | | | | | **155597891** | |
| 16 | | | | | | | | |

2

### For Your Reference…

To ***format decimals*** as ***fractions***:

1. Select the range to format
2. Click on the ***Home*** tab, then click on the drop arrow for ***Number Format*** in the ***Number*** group
3. Click on ***Fractions***

### Handy to Know…

- Most countries in the world now use the decimal system, so there should be very little need to format values as fractions.

# FORMATTING AS DATES

***Dates*** in Excel are really sequential numbers beginning from ***Jan 1, 1900*** which is day number ***1***. So when you type a date in Excel it is converted to the number that corresponds to the number of days from Jan 1, 1900. Excel features several different date formats for you to work with.

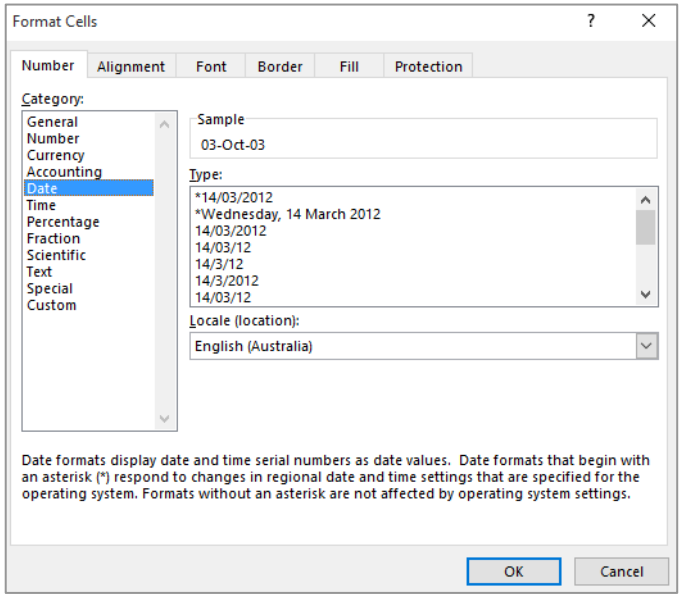
## Try This Yourself:

***Same File***

*Continue using the previous file with this exercise, or open the file Number Formatting_5.xlsx...*

1. Click in cell ***D4***, hold down Shift, then click in cell ***D13*** to select the dates shown in the ***Date Started*** column
2. On the ***Home*** tab, click on the dialog box launcher in the ***Number*** group

   *This will display the Format Cells dialog box with the Number tab active…*
3. Select **Date**
4. Scroll through the list under ***Type***, click on ***14-Mar-12***, then click on **[OK]** to see the dates in the range in this particular date format




| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | **Sales Earnings** | | | | | | | |
| 2 | | | | | | | | |
| 3 | **Employee No** | **First Name** | **Last Name** | **Date Started** | **Height (Mtr)** | **Weight (Kg)** | **Total Sales** | **Com'n %** |
| 4 | 2344 | John | Smith | 03-Oct-03 | 1 6/7 | 69.3 | $8,220,266.00 | 2% |
| 5 | 3433 | Mary | Henry | 12-Apr-04 | 2 1/9 | 75.22 | $12,771,833.00 | 2% |
| 6 | 3233 | Harry | Ulin | 02-Mar-99 | 1 4/5 | 87.9 | $35,324,399.00 | 2% |
| 7 | 5445 | Jim | Harrison | 04-Jul-92 | 2 1/5 | 95.66 | $17,338,194.00 | 2% |
| 8 | 3333 | Larry | Graham | 14-May-05 | 2 | 89.44 | $9,670,630.00 | 2% |
| 9 | 4444 | David | Jenkins | 06-Feb-07 | 1 2/3 | 68.3 | $6,152,310.00 | 3% |
| 10 | 3332 | Ian | Quinn | 26-Mar-95 | 1 6/7 | 69.32 | $36,973,644.00 | 3% |
| 11 | 9887 | Horace | Smyth | 23-Dec-01 | 1 7/9 | 80.48 | $10,755,146.00 | 3% |
| 12 | 4646 | Yolanda | Victor | 05-Jun-89 | 1 5/8 | 80.52 | $5,061,883.00 | 4% |
| 13 | 5555 | Quentin | Engels | 03-Apr-01 | 1 8/9 | 78.4 | $13,329,586.00 | 5% |
| 14 | | | | | | | | |
| 15 | | | | | | | **155597891** | |
| 16 | | | | | | | | |

4

## For Your Reference…

To ***change*** a ***date format***:

1. Select the range to change
2. Click on the ***Home*** tab, then click on the dialog box launcher in the ***Number*** group
3. Select the desired format and click **[OK]**

## Handy to Know…

- As well as date formats, Excel has time formats as well. These are useful for time arithmetic.

# USING THE THOUSANDS SEPARATOR

Larger numbers can sometimes be difficult to read. For example, when you see a number such as ***1324633***, it is not easy to immediately tell how many digits there are and therefore how big the number is. Using the ***Comma Style*** tool this number can easily be formatted to appear as ***1,324,633*** which is instantly much easier to read.

## Try This Yourself:

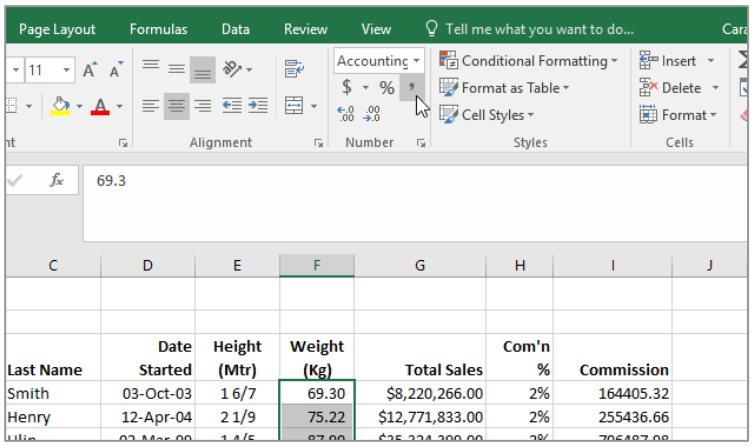
*Same File*

*Continue using the previous file with this exercise, or open the file Number Formatting_6.xlsx...*

1. Click in cell ***F4***, hold down Shift, then click in cell ***F13*** to select the values in the ***Weight*** column
2. On the ***Home*** tab, click on ***Comma Style*** in the ***Number*** group to format the numbers

   *Nothing appears to have changed; the numbers aren't large enough for the comma to be applied. Excel, however, has formatted the numbers to two decimal places and right-aligned the values…*
3. Click in cell ***I4***, hold down Shift, then click in cell ***I13*** to select values in the ***Commission*** column
4. Click on ***Comma Style*** in the ***Number*** group to format the numbers to show commas after thousands and millions

2




| Last Name | Date Started | Height (Mtr) | Weight (Kg) | Total Sales | Com'n % | Commission |
|---|---|---|---|---|---|---|
| Smith | 03-Oct-03 | 1 6/7 | 69.30 | $8,220,266.00 | 2% | 164405.32 |
| Henry | 12-Apr-04 | 2 1/9 | 75.22 | $12,771,833.00 | 2% | 255436.66 |

4

| Last Name | Date Started | Height (Mtr) | Weight (Kg) | Total Sales | Com'n % | Commission |
|---|---|---|---|---|---|---|
| Smith | 03-Oct-03 | 1 6/7 | 69.30 | $8,220,266.00 | 2% | 164,405.32 |
| Henry | 12-Apr-04 | 2 1/9 | 75.22 | $12,771,833.00 | 2% | 255,436.66 |
| Ulin | 02-Mar-99 | 1 4/5 | 87.90 | $35,324,399.00 | 2% | 706,487.98 |
| Harrison | 04-Jul-92 | 2 1/5 | 95.66 | $17,338,194.00 | 2% | 346,763.88 |
| Graham | 14-May-05 | 2 | 89.44 | $9,670,630.00 | 2% | 193,412.60 |
| Jenkins | 06-Feb-07 | 1 2/3 | 68.30 | $6,152,310.00 | 3% | 184,569.30 |
| Quinn | 26-Mar-95 | 1 6/7 | 69.32 | $36,973,644.00 | 3% | 1,109,209.32 |
| Smyth | 23-Dec-01 | 1 7/9 | 80.48 | $10,755,146.00 | 3% | 322,654.38 |
| Victor | 05-Jun-89 | 1 5/8 | 80.52 | $5,061,883.00 | 4% | 202,475.32 |
| Engels | 03-Apr-01 | 1 8/9 | 78.40 | $13,329,586.00 | 5% | 666,479.30 |
| | | | | 155597891 | | 4151894.06 |

### For Your Reference…

To ***show numbers*** with ***commas***:

1. Select the range to format
2. Click on the ***Home*** tab
3. Click on ***Comma Style*** in the ***Number*** group

### Handy to Know…

- By default, ***Comma Style*** alters the format of numbers to show two decimal places. You can adjust this later to either increase or decrease the decimal places if required.

# INCREASING AND DECREASING DECIMALS

A range of numbers with variable decimal places can look untidy. Fortunately, Excel provides a number of ways to format decimal places. ***Increase Decimals*** and ***Decrease Decimals*** in the ***Number*** group allow you to experiment with the number of decimal places and to see exactly how numbers will be presented.

## Try This Yourself:

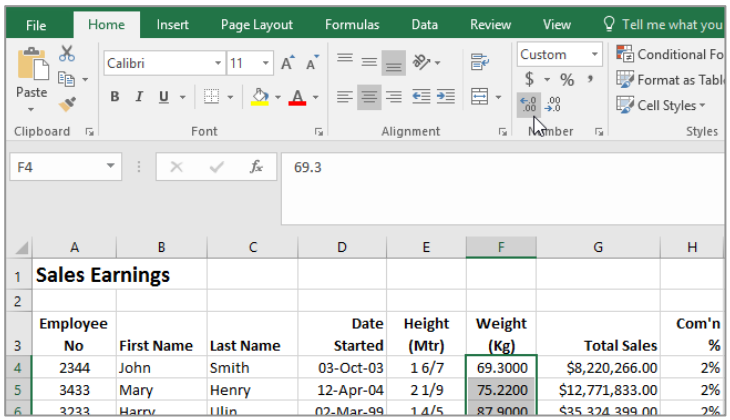
***Same File***

*Continue using the previous file with this exercise, or open the file Number Formatting_7.xlsx...*

1. Click in cell ***F4***, hold down Shift, then click in cell ***F13*** to select the values in the ***Weight*** column
2. On the ***Home*** tab, click twice on ***Increase Decimals*** in the ***Number*** group to increase the number of decimals
3. Click on ***Decrease Decimals*** in the ***Number*** group until there are no more decimal places
4. Use the above steps to change the decimals for the following ranges:

| | |
|---|---|
| **G4:G13** | **No decimals** |
| **H4:H13** | **1 decimal place** |
| **I4:I13** | **No decimals** |

2




| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | Sales Earnings | | | | | | | |
| 2 | | | | | | | | |
| 3 | Employee No | First Name | Last Name | Date Started | Height (Mtr) | Weight (Kg) | Total Sales | Com'n % |
| 4 | 2344 | John | Smith | 03-Oct-03 | 1 6/7 | 69.3000 | $8,220,266.00 | 2% |
| 5 | 3433 | Mary | Henry | 12-Apr-04 | 2 1/9 | 75.2200 | $12,771,833.00 | 2% |
| 6 | 3233 | Harry | Ulin | 02-Mar-99 | 1 4/5 | 87.9000 | $35,324,399.00 | 2% |

3

| | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| 1 | Sales Earnings | | | | | | | |
| 2 | | | | | | | | |
| 3 | Employee No | First Name | Last Name | Date Started | Height (Mtr) | Weight (Kg) | Total Sales | Com'n % |
| 4 | 2344 | John | Smith | 03-Oct-03 | 1 6/7 | 69 | $8,220,266.00 | 2% |
| 5 | 3433 | Mary | Henry | 12-Apr-04 | 2 1/9 | 75 | $12,771,833.00 | 2% |
| 6 | 3233 | Harry | Ulin | 02-Mar-99 | 1 4/5 | 88 | $35,324,399.00 | 2% |
| 7 | 5445 | Jim | Harrison | 04-Jul-92 | 2 1/5 | 96 | $17,338,194.00 | 2% |
| 8 | 3333 | Larry | Graham | 14-May-05 | 2 | 89 | $9,670,630.00 | 2% |
| 9 | 4444 | David | Jenkins | 06-Feb-07 | 1 2/3 | 68 | $6,152,310.00 | 3% |
| 10 | 3332 | Ian | Quinn | 26-Mar-95 | 1 6/7 | 69 | $36,973,644.00 | 3% |
| 11 | 9887 | Horace | Smyth | 23-Dec-01 | 1 7/9 | 80 | $10,755,146.00 | 3% |
| 12 | 4646 | Yolanda | Victor | 05-Jun-89 | 1 5/8 | 81 | $5,061,883.00 | 4% |
| 13 | 5555 | Quentin | Engels | 03-Apr-01 | 1 8/9 | 78 | $13,329,586.00 | 5% |
| 14 | | | | | | | | |
| 15 | | | | | | | 155597891 | |
| 16 | | | | | | | | |

4

| | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|
| | Last Name | Date Started | Height (Mtr) | Weight (Kg) | Total Sales | Com'n % | Commission | |
| | Smith | 03-Oct-03 | 1 6/7 | 69 | $8,220,266 | 2.0% | 164,405 | |
| | Henry | 12-Apr-04 | 2 1/9 | 75 | $12,771,833 | 2.0% | 255,437 | |
| | Ulin | 02-Mar-99 | 1 4/5 | 88 | $35,324,399 | 2.0% | 706,488 | |
| | Harrison | 04-Jul-92 | 2 1/5 | 96 | $17,338,194 | 2.0% | 346,764 | |
| | Graham | 14-May-05 | 2 | 89 | $9,670,630 | 2.0% | 193,413 | |
| | Jenkins | 06-Feb-07 | 1 2/3 | 68 | $6,152,310 | 3.0% | 184,569 | |
| | Quinn | 26-Mar-95 | 1 6/7 | 69 | $36,973,644 | 3.0% | 1,109,209 | |
| | Smyth | 23-Dec-01 | 1 7/9 | 80 | $10,755,146 | 3.0% | 322,654 | |
| | Victor | 05-Jun-89 | 1 5/8 | 81 | $5,061,883 | 4.0% | 202,475 | |
| | Engels | 03-Apr-01 | 1 8/9 | 78 | $13,329,586 | 5.0% | 666,479 | |
| | | | | | | | | |
| | | | | | 155597891 | | 4151894.06 | |

### For Your Reference…

To ***change*** the ***number*** of ***decimal places***:

1. Select the range to change
2. Click on the ***Home*** tab
3. Click on either ***Increase Decimals*** or ***Decrease Decimals*** in the ***Number*** group

### Handy to Know…

- The ***Increase Decimals*** and ***Decrease Decimals*** commands can be used to change the number of decimals in cells that have already been formatted as percentage, currency, number, comma or accounting.

# NOTES:

# CHAPTER 7 PRINTING

INFOCUS

Despite the so-called paperless office there is still a great deal of printing going on from computer applications such as Microsoft Excel. The skill to be able to convert what you have on your screen into a format and presentation that is suitable for paper is an important one to have and is the main focus of this session.

**In this session you will:**

- ✓ gain an understanding of printing in ***Excel***
- ✓ learn how to preview print jobs before actually printing them
- ✓ learn how to select a printer for printing
- ✓ learn how to print a range in a workbook
- ✓ learn how to print an entire workbook
- ✓ learn how to specify the number of copies to print
- ✓ gain an overview of the ***Print*** options.

# UNDERSTANDING PRINTING

***Printing***, in its simplest form, means producing a paper copy of what you have created on the computer screen. Early forms of printing required typesetting, printing presses and ink. These days printing only requires a printer which converts the electronic version into letters and other graphics on a page. Before you commit to printing to paper, there are a few things to consider.

## Resisting The Urge To Print

These days printers are very cheap, easy to install and easy to use. While computers were supposed to reduce the amount of paper and introduce a paperless age, in reality they have made it easy to go through pages and pages of paper while we review and modify the data. If you take some time to think the following things through, you may well reduce the volume of paper that you go through.

## Draft Versus Final

The first thing to consider is ***why*** you are printing. If you just want to review the layout and proof the numbers, there is a good case for printing only a ***draft*** copy of the data. This uses less ink and in some cases prints more quickly than a best-quality copy. If you have a colour printer, then you can often choose to print in greyscale, saving the more expensive colour ink for later. If it's the ***final*** copy that you want to print, then you should make sure you've previewed the output so that you don't waste precious ink, time, paper and patience.

## When Printing Isn't Printing

Traditionally, printing referred to creating a ***hard copy*** of the data, meaning a copy of the data on paper. These days, printing can also be used to create an electronic version of the data, known as a ***soft copy***. For example, you can print to the *Microsoft XPS Document Writer* and create an ***XPS*** version of the file, or use the ***Export*** features to create a ***PDF*** (*portable document file*) version of the workbook.

## Knowing What To Print

Before attempting to print from Excel you need to be aware and understand exactly what you are printing. Do you want to print only a part (a ***range***) of the worksheet, perhaps the entire worksheet, or maybe all of the worksheets in a workbook? As a default Excel assumes that you wish to print everything in the current (known as ***active***) worksheet and that's what you'll get if you choose the simplest and easiest way to print in Excel.

## Knowing Where To Print

Even though it may appear like it, printing is not handled by Excel, but rather through the operating system of your computer. With the operating system you *install* printers on your computer – these printers may be sitting on the table next to your computer, or may even be a fair distance away in another room or on another floor and connected via your network. Once a printer has been installed on your computer it will become available for printing your Excel data. One of the installed printers on your computer will be set up as the ***default printer***. The ***default*** printer is the printer that appears in the ***Print*** dialog box when you access the printing operation. It's the printer that will be used unless you select another one.

## Knowing When To Print

When you tell Excel to print it must somehow convert what appears on a screen in columns and rows into a logical, legible equivalent on paper. Naturally, if your data spans across dozens of columns it won't print easily on one sheet of A4 paper. As a consequence there will be breaks in the printing as it spans across several pieces of paper – and these breaks may not necessarily occur where you want them. So before you print anything on paper it is a good idea to use ***Print Preview*** to see on the screen exactly how the data will print before you send it to the printer. ***Print Preview*** provides a way of seeing how the data will look when it's printed without actually printing it. You should always check ***Print Preview*** before sending any data to a printer.

# PREVIEWING BEFORE YOU PRINT

You would hope that what you see on your screen is what you get when you print out on paper – and generally this is the case. But what happens if you have a large number of rows, or many columns, or wide columns? How will Excel render this to paper? If you are not sure how your worksheet data will print it is a good idea to ***preview*** the print data on the screen first.

## Try This Yourself:

*Open File* *Before starting this exercise you MUST open the file Printing_1.xlsx...*

1. Click on the ***File*** tab to display the ***Backstage*** view, then click on ***Print***

   *The Print options are displayed on the left and Print Preview on the right. Print Preview shows you how the worksheet data will appear when printed on paper…*

2. Click on the ***Zoom to Page*** tool at the bottom-right to zoom in

   *You can use the scroll bars if necessary to move around the page when zoomed in. Clicking on the Zoom to Page tool will zoom in and out…*

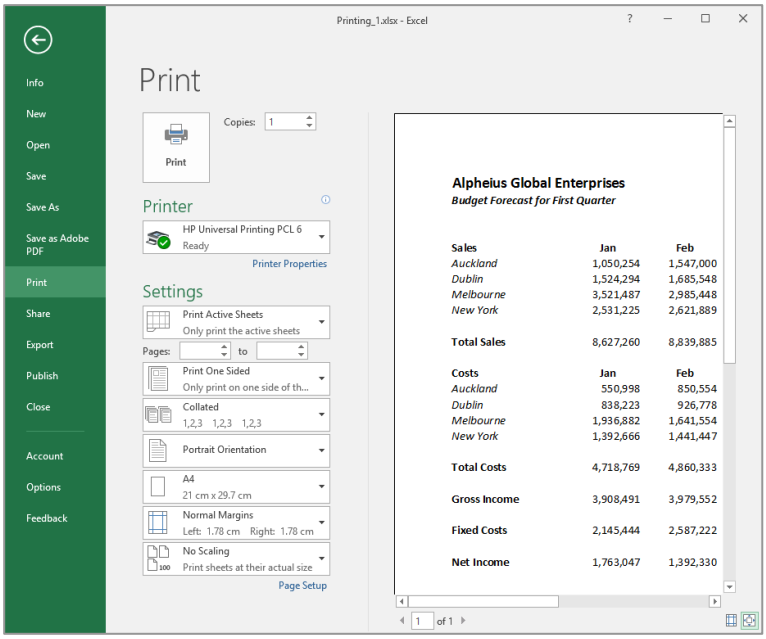
3. Click on the ***Zoom to Page*** tool to zoom out

4. Click on the ***Show Margins*** tool next to the ***Zoom to Page*** tool to see grey lines representing the page margins

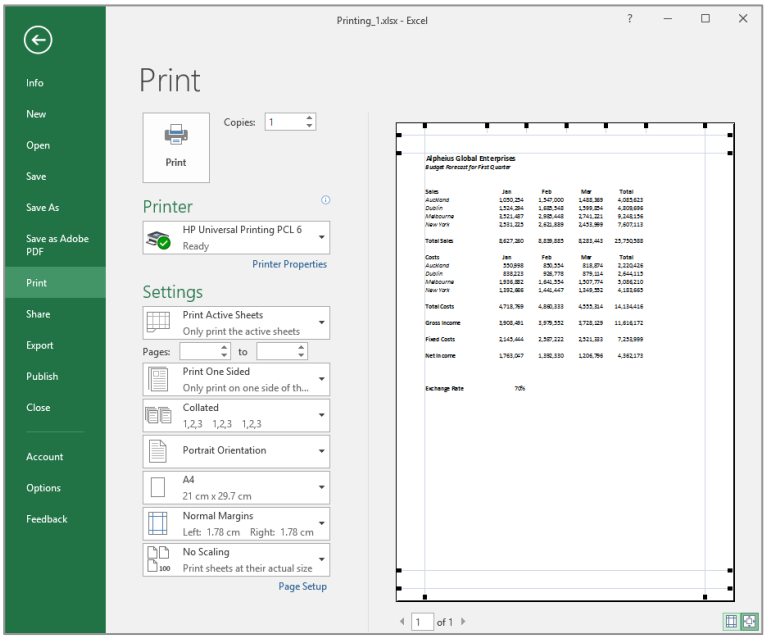
   *We won't actually print at this point so let's exit out…*

5. Click on the ***Back*** arrow to close the preview and return to the worksheet

2




4




### For Your Reference…

To ***preview*** before ***printing***:

1. Click on the ***File*** tab
2. Click on ***Print*** to see a preview of your worksheet

### Handy to Know…

- After you have previewed or printed you may notice dotted lines in your worksheet – these lines are page boundaries that indicate where pages will break.

# SELECTING A PRINTER

When you perform any printing operation Excel must be told which printer to use. Unless you specify otherwise Excel will use the Windows ***default printer*** or the last printer you specified while working in the current session of Excel. Should you wish to use a different printer you can do so using the ***Printer*** drop list which allows you to choose from any printer installed in Windows.

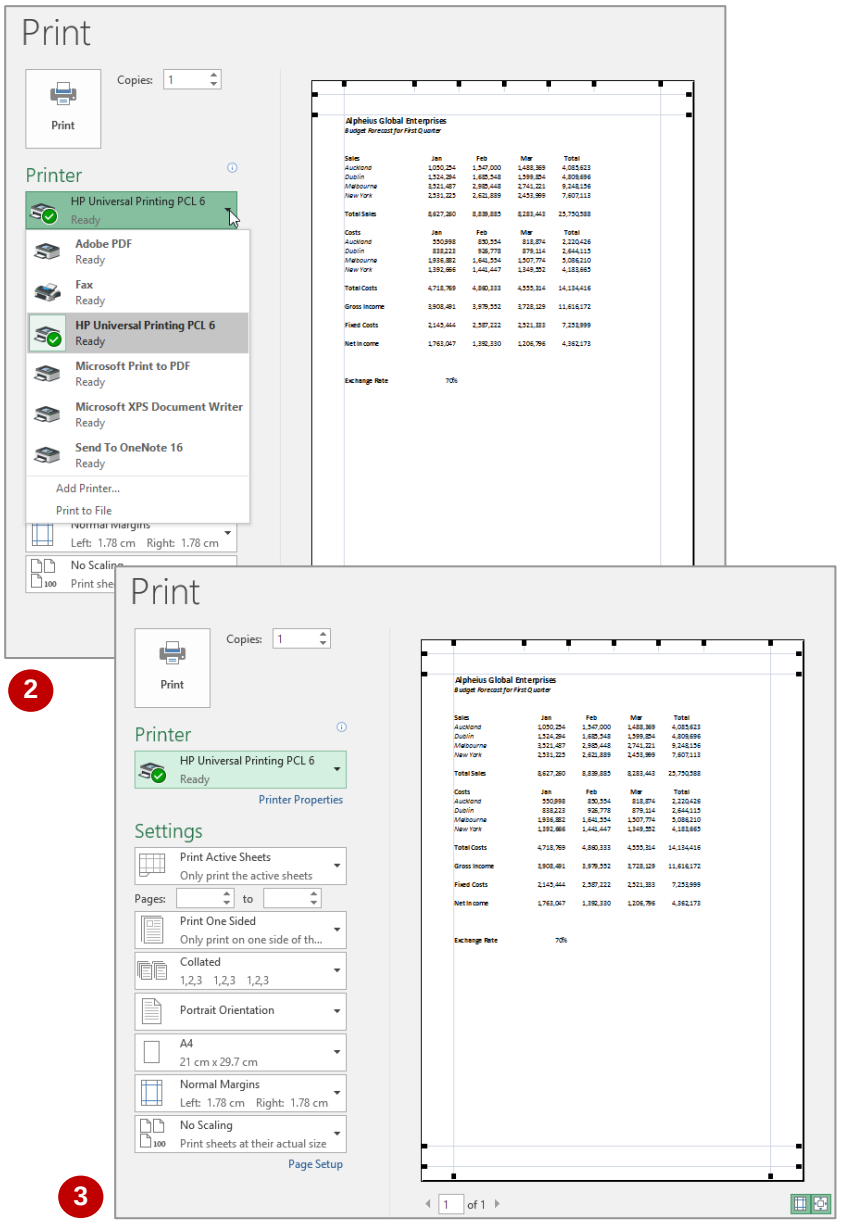
## Try This Yourself:

***Same File*** *Continue using the previous file with this exercise, or open the file Printing_1.xlsx...*

1. Click on the ***File*** tab to open the ***Backstage*** view, then click on ***Print***
2. Click on the drop arrow under ***Printer*** to see a list of available printers
3. Select the name of the printer that you wish to use, or click on the drop arrow under ***Printer*** again to close the list

   *Ensure that the printer you have chosen is turned on, connected and ready to use – it will say Ready underneath the printer when this is the case.*

   *You could print at this point, or return to your workbook, but we will continue the next exercise from here…*
4. Click on the ***Back*** arrow to close the preview and return to the worksheet




### For Your Reference…

To ***select*** a ***specific printer***:

1. Click on the ***File*** tab, then click on ***Print***
2. Click on the drop arrow under ***Printer*** and select the desired printer

### Handy to Know…

- The list of printers on your computer will differ from the one shown above. The list of printers will show all printers *installed* for use on your computer and could include the printer on your desk as well as the one connected via the network two floors below where you currently are.

# PRINTING A RANGE

Unless you specify otherwise, Excel assumes that you wish to print everything that is currently in the active worksheet when you choose one of the print commands. You can elect to print only a ***specified range*** in the worksheet by selecting the range prior to accessing the print commands and then working through the options in the ***Print*** tab of the ***Backstage*** view.

## Try This Yourself:

Same File

*Continue using the previous file with this exercise, or open the file Printing_1.xlsx...*

1. Click on the ***Medium*** worksheet tab to see a slightly larger worksheet
2. Click in cell ***A1***, hold down Shift, then click in cell ***D24*** to select the range ***A1:D24***
3. Click on the ***File*** tab to display the ***Backstage*** view, then click on ***Print***

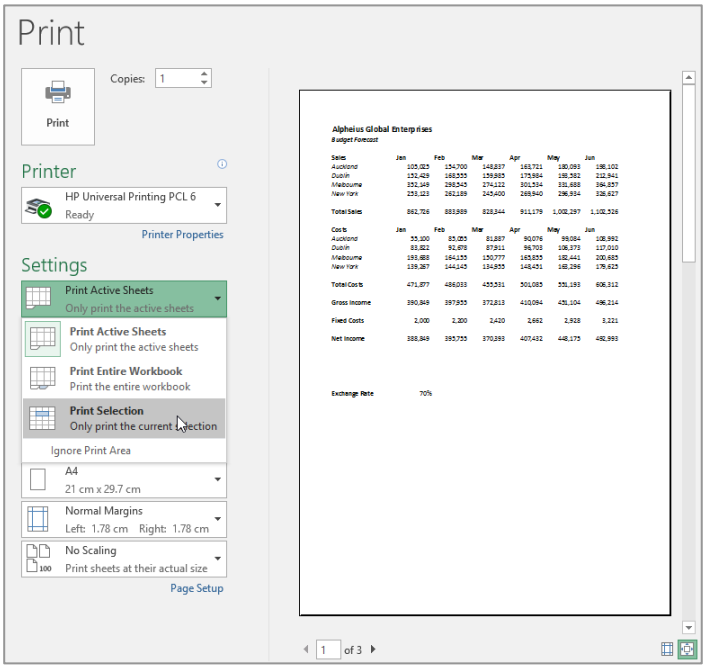
   *All of the worksheet cells appear in the preview, indicating that all of the data on the worksheet will print…*
4. Click on ***Print Active Sheets*** in ***Settings***, then select **Print Selection**

   *Now the preview shows only the selected range of cells. You will need to ensure that the printer is online and ready to use…*
5. Click on **[Print]** to print the range

2

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | | |
| 2 | ***Budget Forecast*** | | | | | | |
| 3 | | | | | | | |
| 4 | **Sales** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** |
| 5 | *Auckland* | 105,025 | 154,700 | 148,837 | 163,721 | 180,093 | 198,102 |
| 6 | *Dublin* | 152,429 | 168,555 | 159,985 | 175,984 | 193,582 | 212,941 |
| 7 | *Melbourne* | 352,149 | 298,545 | 274,122 | 301,534 | 331,688 | 364,857 |
| 8 | *New York* | 253,123 | 262,189 | 245,400 | 269,940 | 296,934 | 326,627 |
| 9 | | | | | | | |
| 10 | **Total Sales** | 862,726 | 883,989 | 828,344 | 911,179 | 1,002,297 | 1,102,526 |
| 11 | | | | | | | |
| 12 | **Costs** | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** |
| 13 | *Auckland* | 55,100 | 85,055 | 81,887 | 90,076 | 99,084 | 108,992 |
| 14 | *Dublin* | 83,822 | 92,678 | 87,911 | 96,703 | 106,373 | 117,010 |
| 15 | *Melbourne* | 193,688 | 164,155 | 150,777 | 165,855 | 182,441 | 200,685 |
| 16 | *New York* | 139,267 | 144,145 | 134,955 | 148,451 | 163,296 | 179,625 |
| 17 | | | | | | | |
| 18 | **Total Costs** | 471,877 | 486,033 | 455,531 | 501,085 | 551,193 | 606,312 |
| 19 | | | | | | | |
| 20 | **Gross Income** | 390,849 | 397,955 | 372,813 | 410,094 | 451,104 | 496,214 |
| 21 | | | | | | | |
| 22 | **Fixed Costs** | 2,000 | 2,200 | 2,420 | 2,662 | 2,928 | 3,221 |
| 23 | | | | | | | |
| 24 | **Net Income** | 388,849 | 395,755 | 370,393 | 407,432 | 448,175 | 492,993 |
| 25 | | | | | | | |

4




### For Your Reference…

To ***print*** a ***specific range***:

1. Select the range to print
2. Click on the ***File*** tab, then click on ***Print***
3. Ensure that **Print Selection** is selected in ***Settings***
4. Click on **[Print]**

### Handy to Know…

- When you use the **Print Selection** option in ***Print***, anything currently selected in the workbook will be printed. You can therefore select multiple ranges and have them printed to produce more complex print jobs.

# PRINTING AN ENTIRE WORKBOOK

Unless you specify otherwise, Excel assumes that you want to print all of the data in the current or active worksheet. You can also elect to print all of the worksheets in the workbook. This is handy particularly if your workbook is made up of a multiple number of smaller worksheets. ***Printing an entire workbook*** is controlled from the ***Print*** tab in the ***Backstage*** view.

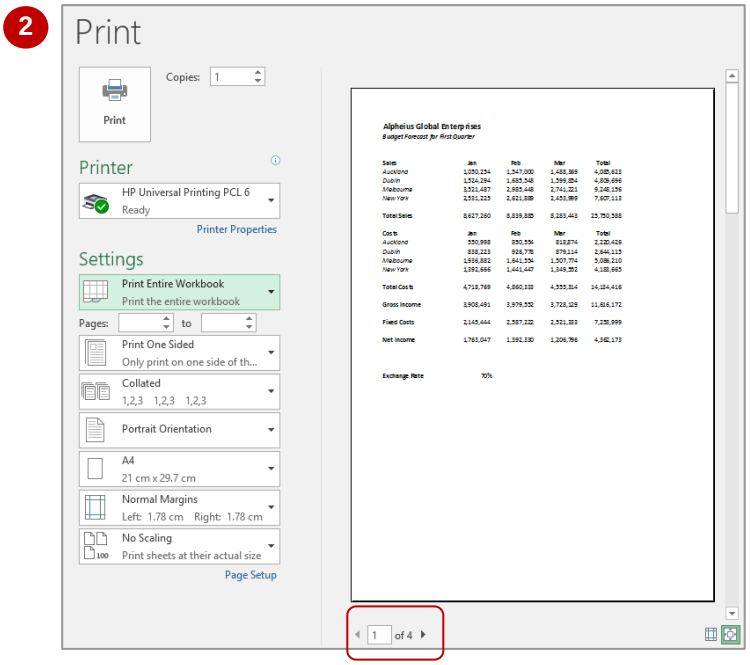
## Try This Yourself:

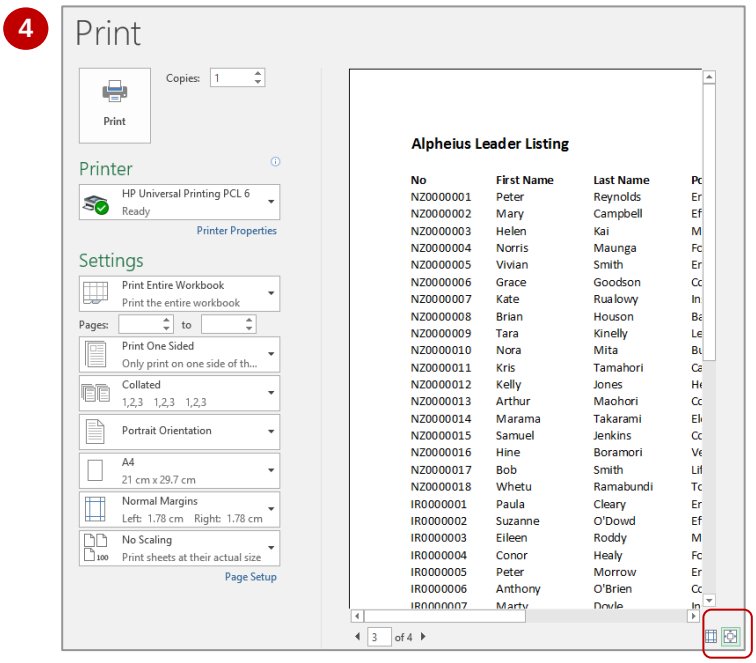
*Open File* *Before starting this exercise you MUST open the file Printing_2.xlsx…*

1. Click on the ***File*** tab to display the ***Backstage*** view, then select **Print**
2. Click on the first option below ***Settings***, then select **Print Entire Workbook**

   *This can be a paper-wasting activity so it is a good idea to preview the pages first. Notice that the status bar shows page 1 of 4…*
3. Click several times on ***Next Page*** in the ***Preview*** to see the other pages
4. Click on the ***Zoom to Page*** tool on the bottom-right several times to zoom in and out

   *You could print now if you were satisfied with the preview of the data, but we'll conserve paper…*
5. Click on the ***Back*** arrow to return to the worksheet




### For Your Reference…

To ***print*** the ***entire workbook***:

1. Click on the ***File*** tab, then select ***Print***
2. In the first option below ***Settings***, select **Print Entire Workbook**
3. Click on **[Print]**

### Handy to Know…

- When you choose to print the entire workbook, all of the worksheets that contain data will be printed. If there is an empty worksheet in the workbook it will not be printed.

# SPECIFYING THE NUMBER OF COPIES

If you need multiple copies of a report (for example), there is no need to print a copy from Excel and then rush down to the photocopier to make five more copies. Whenever you print from Excel, the **Print** screen provides you with the opportunity of specifying how many copies you want to print.

## Try This Yourself:

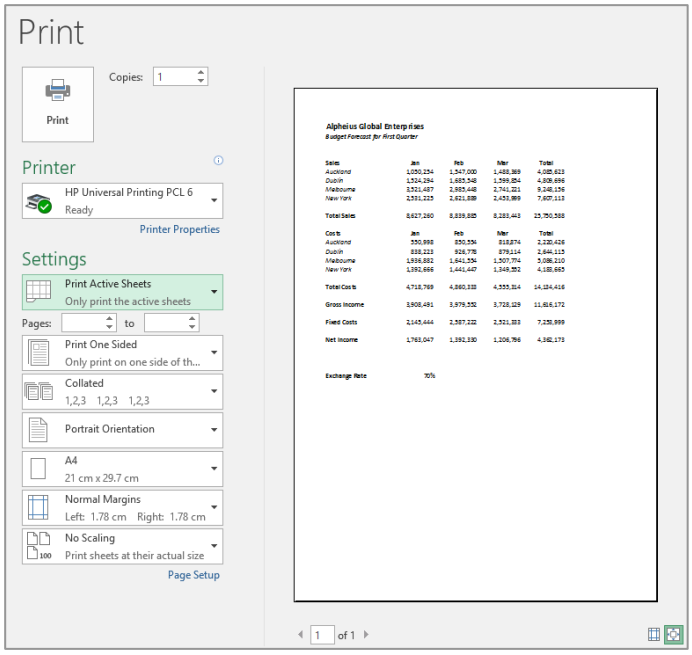
*Same File*

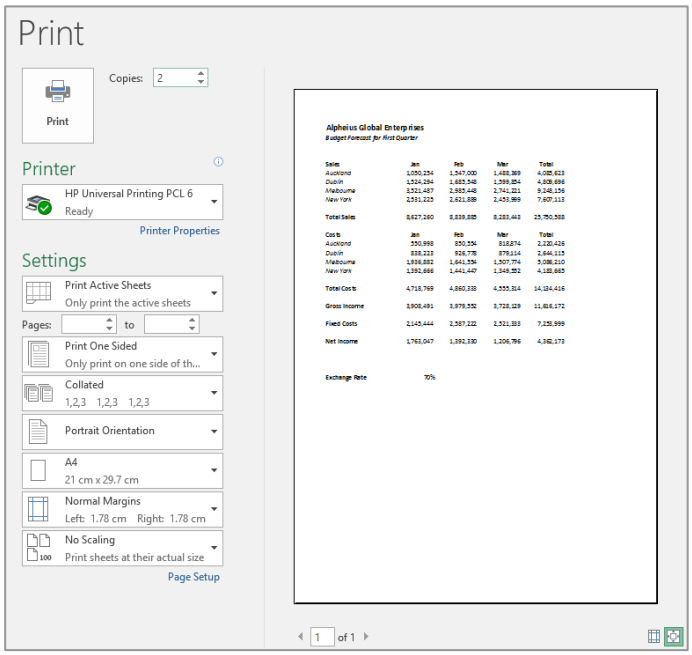
*Continue using the previous file with this exercise, or open the file Printing_2.xlsx...*

1. Click on the ***File*** tab to display the ***Backstage*** view, then select **Print**

   *Ensure that your printer is online and ready to print…*

2. Click on the first option under ***Settings***, then select **Print Active Sheets**
3. Click in ***Copies*** in ***Print*** to select the value, then type **2**
4. Click on **[Print]** to print two copies of the worksheet




### For Your Reference…

To ***print multiple copies***:

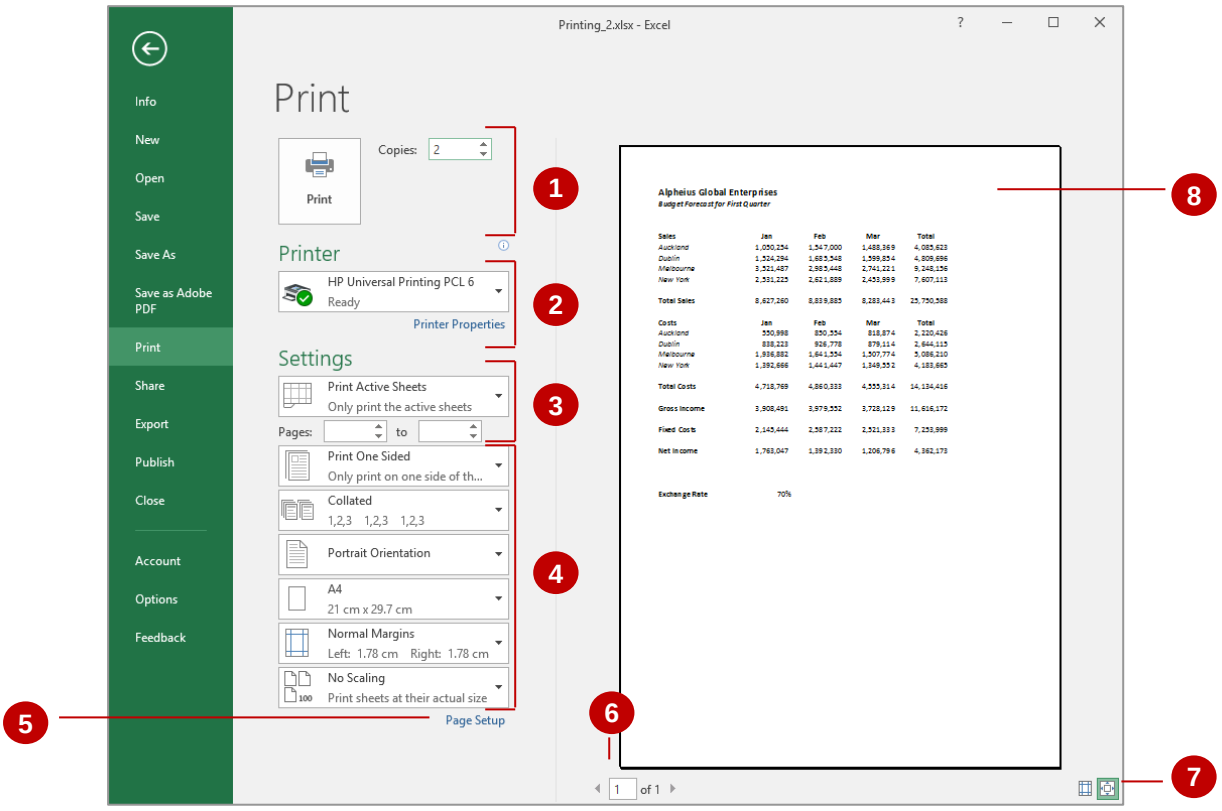
1. Click on the ***File*** tab, then select **Print**
2. Type how many copies you want in ***Copies*** and click on **[Print]**

### Handy to Know…

- The up and down arrows in the ***Copies*** option are known as ***spinners***. Each time you click on them Excel enters the next sequential number into the box for you.

# THE PRINT OPTIONS

There are many settings that you can use when printing to get the exact output that you need. You can print the worksheet or special features of the worksheet. You can print to a printer or to a file. You can print multiple pages per sheet or scale a page to fit a particular paper size. This page examines the controls in the **Print** area of the ***Backstage*** view.




| | | |
|---|---|---|
| 1 | **Copies & Print button** | Allows you to specify how many copies of the data you want printed. Once you have set all the options (below), click on the ***Print*** button to print. |
| 2 | **Printer & Printer Properties** | Allows you to select from a list of installed printers and provides information about the current printer. ***Printer Properties*** gives access to the printer-specific properties, usually including printing quality, paper type selection (e.g. matt versus glossy) and maintenance. |
| 3 | **Print what & Page range** | Enables you to specify what part of the workbook to print. The default is the active worksheet, however, you can change this to be a range from the workbook, or the entire workbook. ***Pages*** allows you to specify exactly which pages of the report to print. Excel converts your column and row layout to fit on pages of paper – this feature allows you to specify which of those pages to print. |
| 4 | **Other print Settings** | ***Collated*** specifies the order in which the pages of a multi-page printout are printed (i.e. all of the page 1's, then the page 2's and so on, or print all of the pages for the first copy, then all of the pages again for the second copy, and so on). ***Orientation*** selects the direction the page will be printed on. ***Page Size*** enables you to select the page dimensions. ***Margins*** enables you to set the non-printable area. ***Scaling*** enables you to shrink the data to fit in a specified area (e.g. Fit Sheet on One Page). |
| 5 | **Page Setup** | Displays the ***Page Setup*** dialog box, enabling you to refine the options for the page even further. |
| 6 | **Page Navigation tools** | Use the arrows to navigate through the pages in a multi-page printout, thereby previewing each page before printing. You can also type a specific page number to display that page directly. |
| 7 | **Margins & Zoom tools** | Enables you to display margins in the preview and to zoom in and out of the page. |
| 8 | **Print Preview** | ***Print Preview*** allows you to preview your data on the screen, based on the settings specified. |

# CHAPTER 8 PAGE SETUP

INFOCUS

***Page setup*** is a term that refers to the way visual elements of the spreadsheet are arranged in order to control the way the document will appear when printed. It includes elements of page layout such as margins, page scaling, page sizing, repeating header rows and the like.

**In this session you will:**

- ✓ gain an understanding of strategies you can use for printing larger worksheets
- ✓ gain an understanding of page layout concepts
- ✓ learn how to use built in margins
- ✓ learn how to set custom margins
- ✓ learn how to change margins by dragging
- ✓ learn how to centre data on a page when printed
- ✓ learn how to change orientation
- ✓ learn how to change the paper size
- ✓ learn how to set the print area
- ✓ learn how to clear the print area
- ✓ learn how to insert page breaks
- ✓ learn how to use page break preview
- ✓ learn how to remove page breaks
- ✓ learn how to set a background for a worksheet
- ✓ learn how to clear the worksheet background
- ✓ learn how to set rows as repeating print titles
- ✓ learn how to clear print titles
- ✓ learn how to print gridlines
- ✓ learn how to print headings
- ✓ learn how to scale to a specific percentage
- ✓ learn how to fit a printed worksheet into a specific number of pages.

# STRATEGIES FOR PRINTING WORKSHEETS

Unfortunately not all spreadsheets fit neatly into A4 segments. Given that they may extend down the page a long way because of thousands of records, or far across the page because of the number of columns you have used, you will probably need to tweak the settings a little to print larger worksheets. Here's a list of the techniques that you can use to make the job easier.

## Adjusting Columns Widths

The first method you may use to reduce the width of a worksheet is to adjust the ***column widths***. While other methods might be quicker, adjusting the column widths has the added advantage of allowing you to match the width of the columns to the data in the columns. You can auto-size them by selecting all of the column headers and double-clicking on the right border of one of the column headers. Alternatively you can select the column headers and drag one border to the required width to resize all, or resize each one manually.

## Margins

If you only need a small amount of extra width or length to fit your data on a page, you can adjust the margins. This is the amount of white space between the edge of the paper and the printed part of your spreadsheet. ***Page Layout*** view is best for making this type of adjustment because you can drag margins to new widths and see the result immediately. Alternatively you can select the pre-set ***Narrow*** margin settings under ***Margins*** in the ***Page Setup*** group on the ***Page Layout*** tab.

## Orientation

If you have a reasonably small number of rows but lots of columns, changing the page orientation to ***Landscape*** might fix your sizing problems and allow you to fit the data on one page. The same applies when you have lots of rows and columns – generally it makes more sense to have more columns for each row than it does to have lots of rows. Experiment a bit and decide on what works best with your particular worksheet.

## Scaling

Another option for printing larger worksheets is to scale the worksheet down so that it fits exactly into the required number of pages. The only disadvantage with this is that it's possible scale it down too far and make it illegible. You can also scale to a specific percentage.

## Page Breaks

Excel automatically creates page breaks according to the printer, paper size and margins. You can override automatic page breaks by creating your own and placing them in more logical positions such as at the end of a department or section.

## Paper Size

If you have printers with the capacity, you can change the paper size to A3 or larger so that you can fit more data on the page without losing readability.

## Print Areas

You can print parts of a larger worksheet by setting a print area. A print area is delineated by a dashed line and the range name ***Print_Area*** is assigned so that you can select and locate it easily.

## Readability

You can improve the readability of larger worksheets using several methods. You can repeat rows and/or columns on each page using ***Print Titles***, print the worksheet using ***Gridlines*** so that you can read an entire row and/or add ***Headers and Footers***. Adding page numbering will also allow you to you organise the pages more easily.

## Page Layout vs. Print Preview

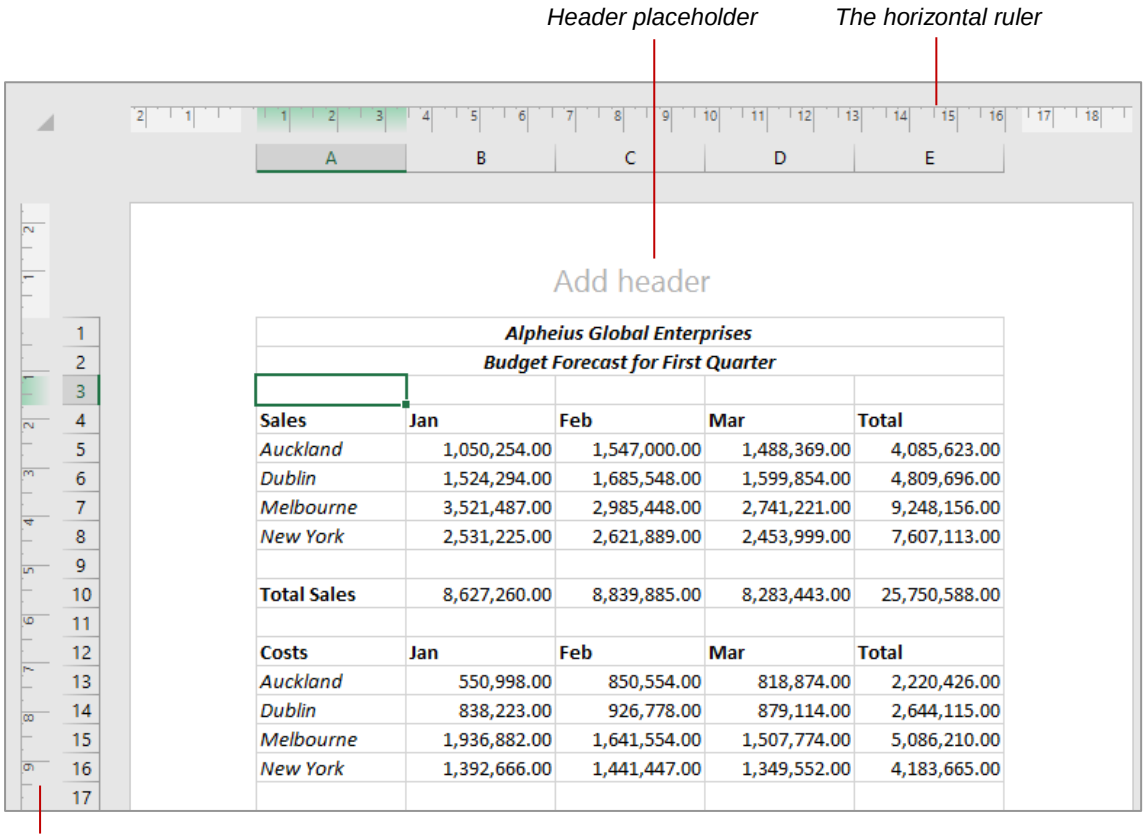
***Page Layout*** view is useful for visualising the margins and general layout, but be sure to make a final check using the preview available in the ***Print*** area of the ***Backstage***.

# UNDERSTANDING PAGE LAYOUT

In Microsoft Excel, there are several ways you can alter and edit the layout of your worksheet. To begin, it is advisable to view your worksheet in ***Page Layout*** view as this shows the margins and ruler as well as how the worksheet will appear when printed. You can then use the ***Page Layout*** tab to alter the layout of your pages.

## Page Layout View

In ***Page Layout*** view the horizontal and vertical rulers are displayed making it easy to measure the width and height of the data. It is also easier to see the difference between the individual margin settings and page scaling options than when the document is in other views. It is the ideal view to use when you want to see what your document will look like when printed, while still being able to edit the document.

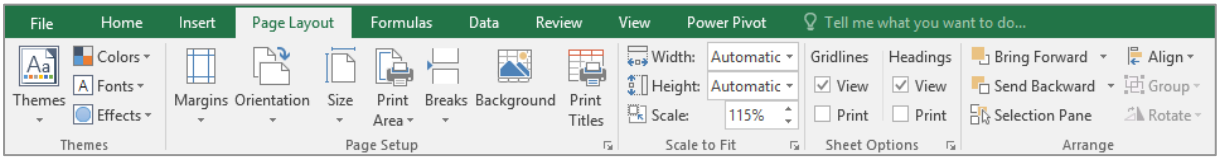



| Sales | Jan | Feb | Mar | Total |
|---|---|---|---|---|
| *Auckland* | 1,050,254.00 | 1,547,000.00 | 1,488,369.00 | 4,085,623.00 |
| *Dublin* | 1,524,294.00 | 1,685,548.00 | 1,599,854.00 | 4,809,696.00 |
| *Melbourne* | 3,521,487.00 | 2,985,448.00 | 2,741,221.00 | 9,248,156.00 |
| *New York* | 2,531,225.00 | 2,621,889.00 | 2,453,999.00 | 7,607,113.00 |
| **Total Sales** | 8,627,260.00 | 8,839,885.00 | 8,283,443.00 | 25,750,588.00 |

| Costs | Jan | Feb | Mar | Total |
|---|---|---|---|---|
| *Auckland* | 550,998.00 | 850,554.00 | 818,874.00 | 2,220,426.00 |
| *Dublin* | 838,223.00 | 926,778.00 | 879,114.00 | 2,644,115.00 |
| *Melbourne* | 1,936,882.00 | 1,641,554.00 | 1,507,774.00 | 5,086,210.00 |
| *New York* | 1,392,666.00 | 1,441,447.00 | 1,349,552.00 | 4,183,665.00 |

## The Page Layout Tab

Using the ***Page Layout*** tab, you can alter the way your worksheet appears when printed. You can specify options such as which area is to be printed, whether you want the gridlines or headings to print and what size paper you would like to print the worksheet on and much more.



# USING BUILT-IN MARGINS

All spreadsheets come with the default settings of 1.78cm for left and right margins and 1.91cm for top and bottom margins. These settings are known as ***Normal*** and, while they are suitable for most spreadsheets, there may be some situations where you want more or less space in the margins. To make it easier for you, Excel provides alternative pre-set margins of ***Narrow*** and ***Wide***.

## Try This Yourself:

*Open File*

*Before starting this exercise you MUST open the file Page Setup_1.xlsx...*

1. Ensure the ***Small*** worksheet tab is selected, click on the ***View*** tab, then click on ***Page Layout*** in the ***Workbook Views*** group

   *This shows you the size of the margins. …*

2. Click on the ***Page Layout*** tab, then click on ***Margins*** in the ***Page Setup*** group to display a menu of options

   *If a custom setting has recently been created it will also be listed here...*

3. Select **Wide**

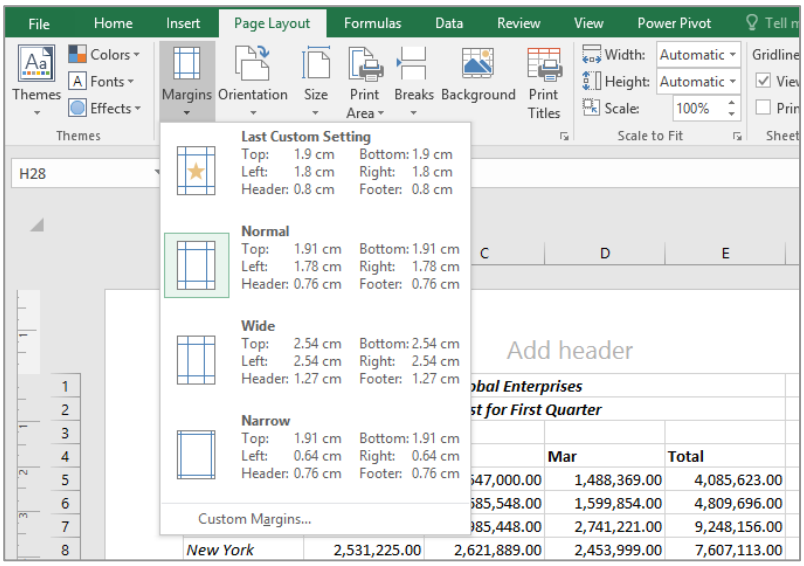
   *This increases the size of the margins, providing more white space around the data...*

4. Repeat step ***2*** to select **Narrow**

   *This setting reduces the margins to a minimum so you can fit more on one page…*

5. Repeat step ***2*** to select **Normal** to restore the original settings

2

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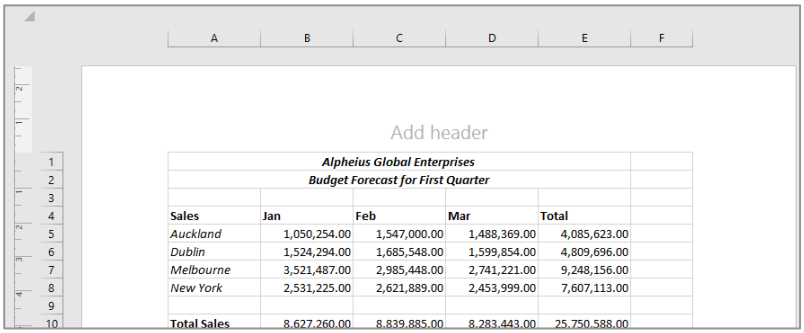


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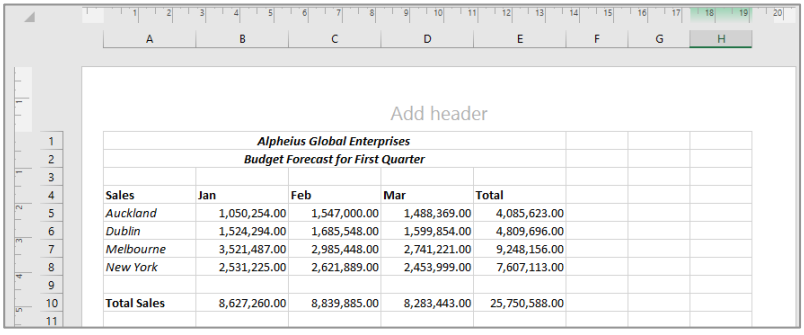



### For Your Reference…

To ***use built-in margins***:

1. Click on the ***Page Layout*** tab
2. Click on ***Margins*** in the ***Page Setup*** group
3. Select an option

### Handy to Know…

- You can activate ***Page Layout*** view by clicking on the ***Page Layout*** icon in the status bar.
- The ***Narrow*** margin option reduces the width of the left and right margins but sets the top and bottom margins to the same width as ***Normal*** to allow for headers and footers.

# SETTING CUSTOM MARGINS

You can change the left, right, top and bottom margins to any size you like. This is especially helpful if you need to meet corporate specifications or if you simply want more room on the left margin to allow for things such as holes to be punched in the printed page. You can change one or two margin settings or modify all of them.

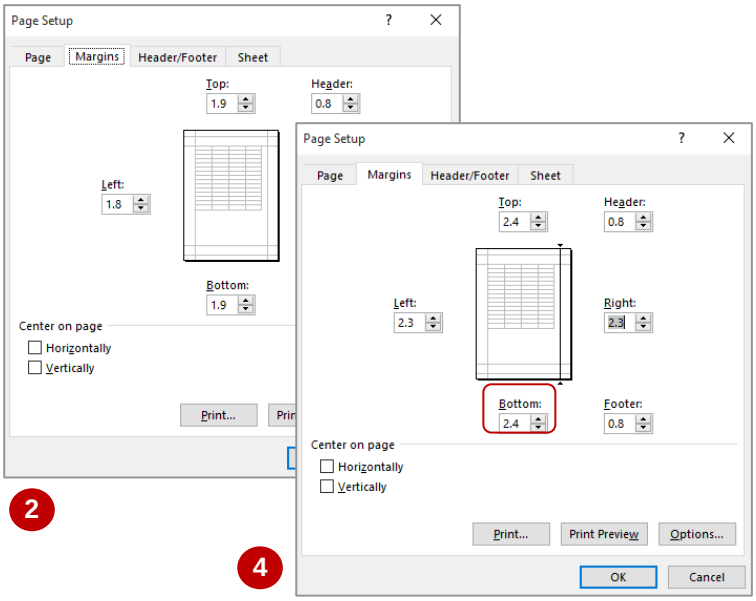
## Try This Yourself:

Same File — *Continue using the previous file with this exercise, or open the file Page Setup_2.xlsx...*

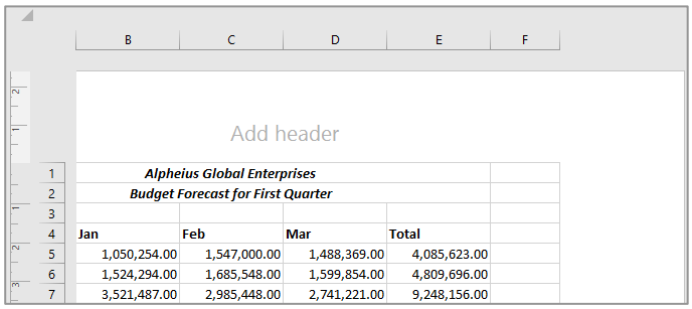
1. Ensure the ***Small*** worksheet tab is selected and ***Page Layout*** view is active
2. On the ***Page Layout*** tab, click on ***Margins*** in the ***Page Setup*** group, then select **Custom Margins** to display the ***Page Setup*** dialog box
3. On the ***Margins*** tab of the dialog box, click once on the up spinner arrows for ***Top*** and ***Bottom*** so they read ***2.4***

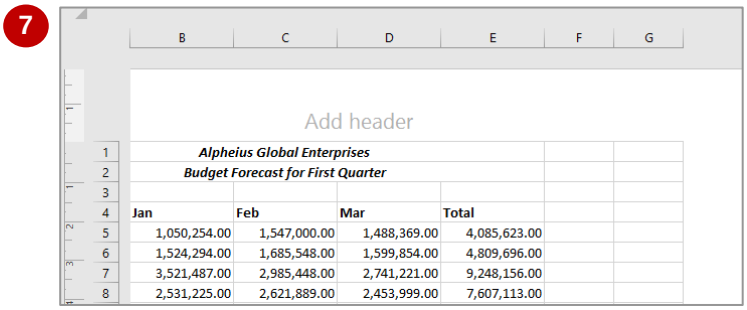
   *As you click, the corresponding rule in the preview will be highlighted...*
4. Click once on the up spinner arrows for ***Left*** and ***Right*** so they read ***2.3***
5. Click on **[OK]** to apply the settings and make the margins wider
6. On the ***Page Layout*** tab, click on ***Margins***

   *The custom settings you created will be displayed at the top of the list so you can apply these settings to other spreadsheets…*
7. Select **Normal** to return the margins to the default size




2 4




### For Your Reference…

To ***set custom margins***:

1. Click on the ***Page Layout*** tab, click on ***Margins*** in the ***Page Setup*** group, then select **Custom Margins**
2. Change the settings as required
3. Click on **[OK]**

### Handy to Know…

- The margin size spinner arrows in the ***Page Setup*** dialog box increase or decrease the margins in units of 0.1cm. If you wish to increase or decrease the size of the margins by a different unit, you can select the existing settings and type a measurement with up to two decimal places.

# CHANGING MARGINS BY DRAGGING

Margins can be adjusted by clicking and dragging on the ruler in ***Page Layout*** view. This saves you having to use the ***Page Setup*** dialog box. If you aren't sure exactly what size you want the margins to be, but you want to fit more content on a page, you can drag the margins out until the extra data fits. Alternatively, you can drag with lots of care to create a margin of a specific width.

## Try This Yourself:

Same File

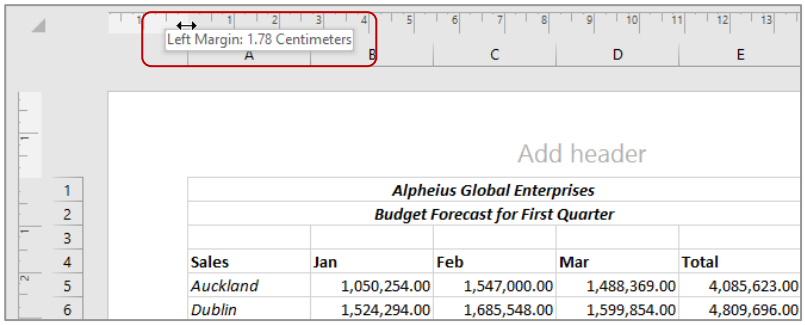
*Continue using the previous file with this exercise, or open the file Page Setup_3.xlsx...*

1. Ensure the ***Small*** worksheet tab is selected and that ***Page Layout*** view is active
2. Point to the left margin in the horizontal ruler to display the tool tip, as shown

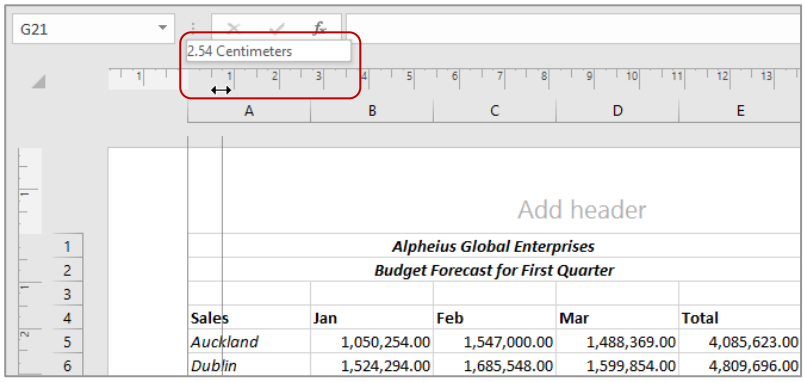
   *This tells you that the margin is currently 1.78 cm...*
3. Drag the margin to the right until the tool tip reads ***2.54 Centimetres***, as shown

   *A vertical line will appear down the page showing you exactly where the margin will align...*
4. Release the mouse to adjust the margin

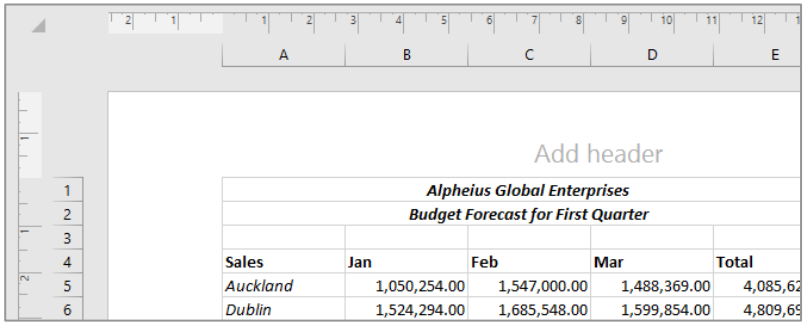
   *The text now aligns where the vertical line appeared...*
5. Point to the right margin to display the current margin size
6. Drag the right margin to the left until it reads ***2.54 centimetres***
7. Release the mouse to adjust the margin
8. On the ***Page Layout*** tab, click on ***Margins*** in the ***Page Setup*** group and select **Last Custom Setting**




2




3




4

### For Your Reference…

To ***change margins*** by ***dragging***:

1. Click on the ***View*** tab
2. Click on ***Page Layout*** in the ***Workbook Views*** group
3. Drag the margin either in or out as required

### Handy to Know…

- When you drag margins into a new position you can't use ***Undo*** to restore them. If you're concerned about ruining the layout, save the spreadsheet before adjusting the margins and then close without saving if you're not satisfied with the result. Otherwise, you can just drag them to another position.

# CENTRING ON A PAGE

Unless you specify otherwise, the data in your spreadsheet will be printed at the top left-hand corner of the page, commencing immediately below the header section of the page and immediately to the right of the left margin. Sometimes it enhances the appearance of a page if you centre the data on the page. You can centre data horizontally, vertically, or both.

## Try This Yourself:

Same File

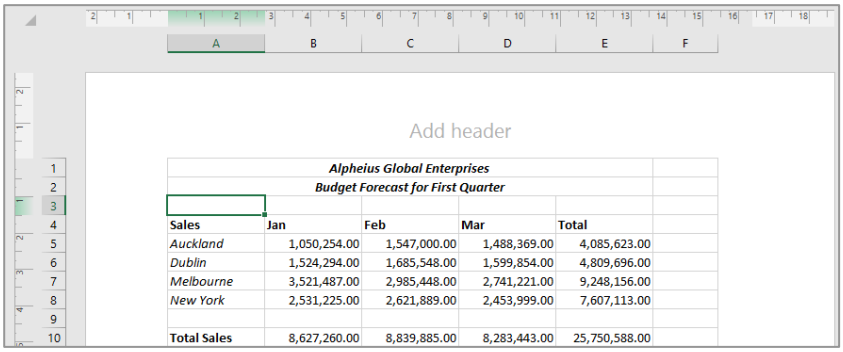
*Continue using the previous file with this exercise, or open the file Page Setup_4.xlsx...*

1. Ensure the ***Small*** worksheet tab is selected and ***Page Layout*** view is active
2. Click on the ***Page Layout*** tab, click on ***Margins***, then select **Custom Margins** to display the ***Page Setup*** dialog box

   *Note the Centre on page settings, in the bottom half of the dialog box...*
3. Under ***Centre on page***, click on the checkboxes for ***Horizontally*** and ***Vertically*** so they appear ticked
4. Click on **[OK]**

   *You may notice the spreadsheet has moved further in from the left margin but it appears to still starts at the top of the page...*
5. Click on the ***File*** tab, then click on ***Print***

   *From the preview it is clear that the adjustments will be made when the spreadsheet is printed...*
6. Click on the ***Back*** arrow to return to the worksheet

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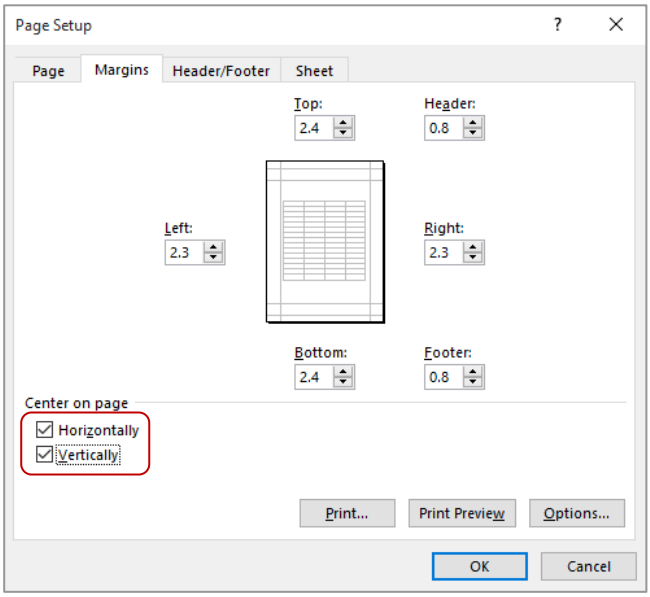
3




### For Your Reference…

To ***centre data*** on a ***page***:

1. Click on the ***Page Layout*** tab, click on ***Margins*** in the ***Page Setup*** group, then select **Custom Margins**
2. Click on the checkboxes for ***Horizontally*** and ***Vertically*** in ***Centre on page*** until they both appear ticked, then click on **[OK]**

### Handy to Know…

- The horizontal centring occurs between the left and right margins, and the vertical centring between the top and bottom margins. To ensure that the data is centred perfectly on the page, the left and right margins must be equal, and the top and bottom margins must be equal.

# CHANGING ORIENTATION

There may be times when you want a large print job to appear on one page. Excel has a number of features to help you do this. The first method is to change the ***page orientation***. The normal page orientation is ***portrait*** where the page is taller than it is wide. To fit a wide spreadsheet on a page you can turn the paper around so that it is sideways – this is called ***landscape***.

## Try This Yourself:

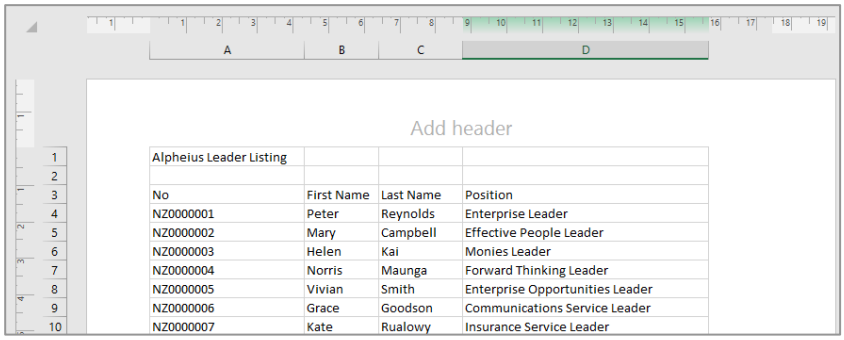
Same File

*Continue using the previous file with this exercise, or open the file Page Setup_5.xlsx...*

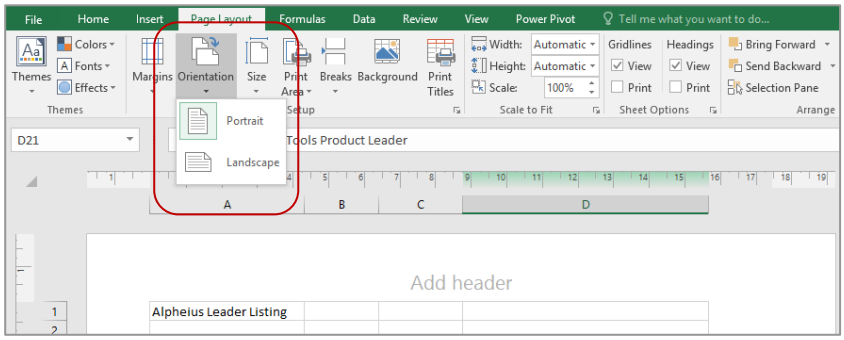
1. Click on the ***Large*** worksheet tab to display this worksheet
2. Click on the ***View*** tab, then click on ***Page Layout*** in the ***Workbook Views*** group
3. Click on the ***Page Layout*** tab, then click on ***Orientation*** in the ***Page Setup*** group

   *The two options for orientation are Portrait and Landscape. At the moment, the Portrait orientation is selected...*
4. Select **Landscape**

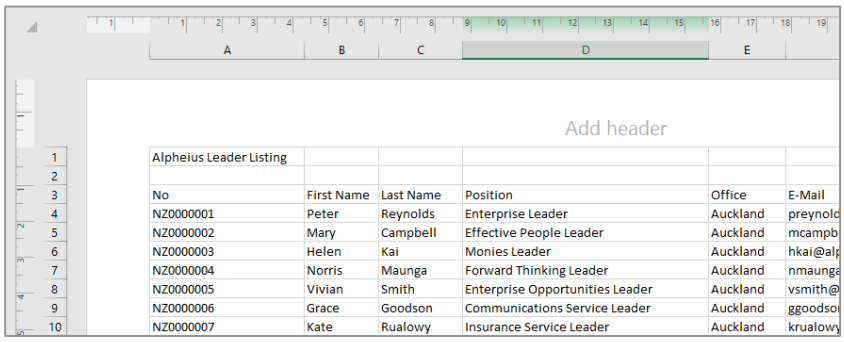
   *The page now fits more columns of data*




2




3

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### For Your Reference…

To ***change*** the ***page orientation***:

1. Click on the ***Page Layout*** tab
2. Click on ***Orientation*** in the ***Page Setup*** group
3. Select **Portrait** or **Landscape**

### Handy to Know…

- You can access the page orientation settings by clicking on the ***File*** tab, clicking on ***Print***, then clicking on ***Page Setup***.

# SPECIFYING THE PAPER SIZE

While the majority of the work you'll print will be on A4 paper, there may be times when you want to print on larger or smaller sheets of paper. For instance you may want to print a poster at A3 size (as long as your printer is capable) while you may prefer to print a menu or flyer at A5 size. Excel allows you to specify the paper size to print on so that you can see the layout and prepare the data.

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Page Setup_6.xlsx...*

1. Ensure the ***Large*** worksheet tab is selected and ***Page Layout*** view is active, then click on the ***Page Layout*** tab

2. Click on ***Size*** in the ***Page Setup*** group to display a menu of options, as shown

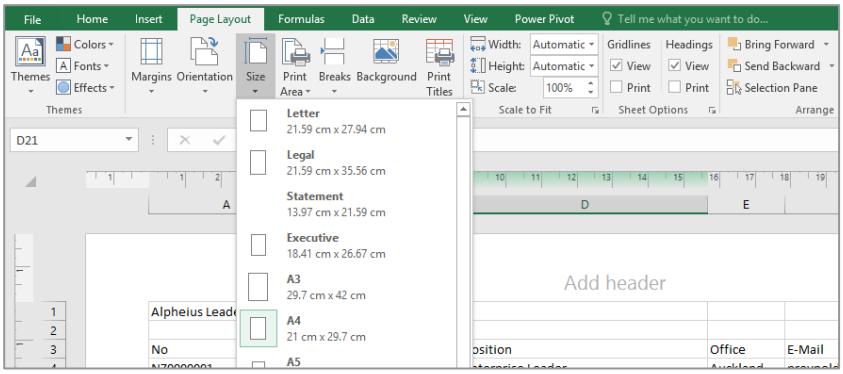
   *Notice A4 is currently highlighted in green, indicating that the current paper size is A4.*

   *The paper sizes available are controlled in part by which printer you have selected...*

3. Select **A5** to see how much data would fit on the smaller paper size

4. Repeat step ***2*** to select **A4** again

   *Now the data fits across the page*

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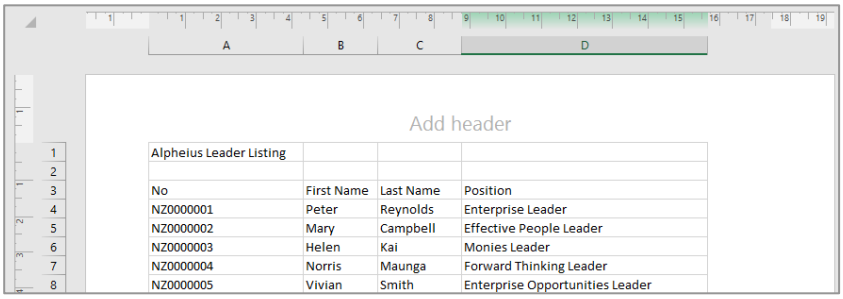
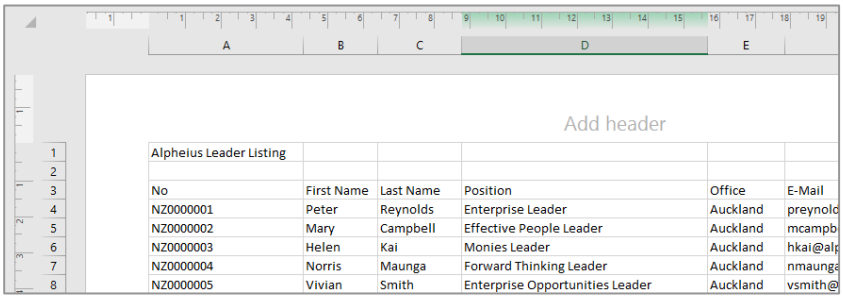



3

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### For Your Reference…

To ***specify*** the ***paper size***:

1. Click on the ***Page Layout*** tab, then click on ***Size*** in the ***Page Setup*** group
2. Select the paper size of your choice

### Handy to Know…

- You can access the paper size settings by clicking on the ***File*** tab, clicking on ***Print***, then clicking on ***Page Setup***.
- You can access the printer settings and check all available paper sizes by clicking on ***Page Layout*** > ***Page Setup*** > ***Size***, then selecting **More Paper Sizes.**

# SETTING THE PRINT AREA

By default, Excel's ***print area*** is all of the data in the current worksheet. One option for printing part of the data is to select it, then print the selection. However, if you want to print this area frequently, you would have to reselect it each time you open the file. ***Print areas***, on the other hand, are saved with the spreadsheet so that you can use them at a later date.

## Try This Yourself:

***Same File***

*Continue using the previous file with this exercise, or open the file Page Setup_7.xlsx...*

1. Ensure the ***Large*** worksheet tab is selected and ***Normal*** view is active, then select the range ***A3:G21***

   *This is the list of staff in Auckland...*

2. Click on the ***Page Layout*** tab, then click on ***Print Area*** in the ***Page Setup*** group

3. Select **Set Print Area**, then click away from the selected area to deselect it

   *After a moment a line will appear around the area…*

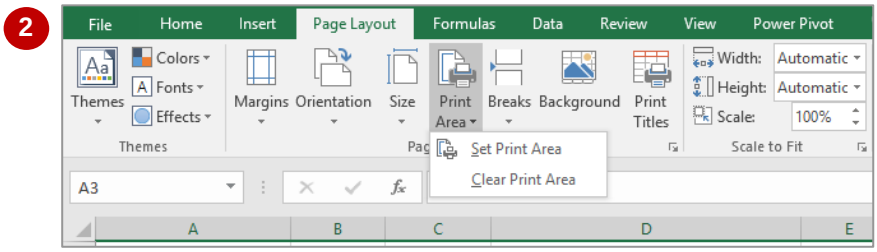
4. Click on the ***File*** tab, then click on ***Print***

   *The print preview shows you that only the Auckland data will be printed, as per the print area...*

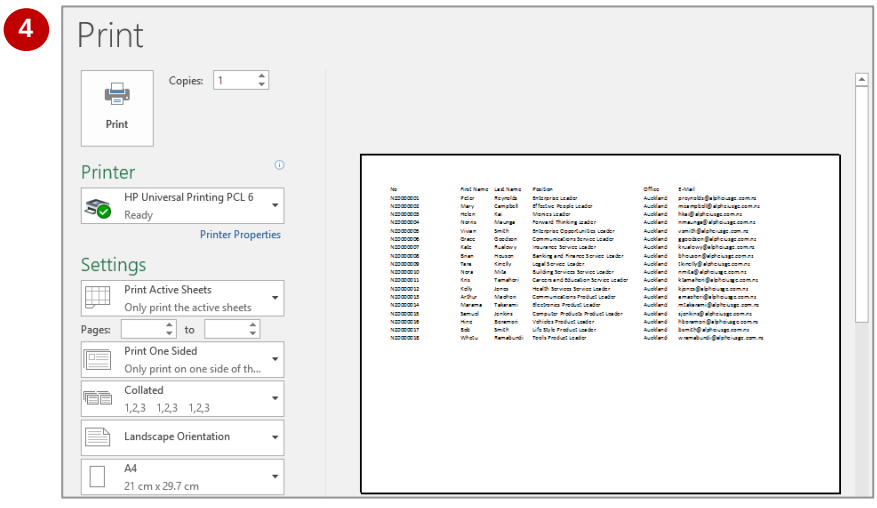
5. Click on the ***Back*** arrow to return to the worksheet

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Alpheius Leader Listing | | | | | | |
| 2 | | | | | | | |
| 3 | No | First Name | Last Name | Position | Office | E-Mail | Telephone |
| 4 | NZ0000001 | Peter | Reynolds | Enterprise Leader | Auckland | preynolds@alpheiusge.com.nz | 64 9 344 0219 |
| 5 | NZ0000002 | Mary | Campbell | Effective People Leader | Auckland | mcampbell@alpheiusge.com.nz | 64 9 344 0202 |
| 6 | NZ0000003 | Helen | Kai | Monies Leader | Auckland | hkai@alpheiusge.com.nz | 64 9 344 0203 |
| 7 | NZ0000004 | Norris | Maunga | Forward Thinking Leader | Auckland | nmaunga@alpheiusge.com.nz | 64 9 344 0204 |
| 8 | NZ0000005 | Vivian | Smith | Enterprise Opportunities Leader | Auckland | vsmith@alpheiusge.com.nz | 64 9 344 0205 |
| 9 | NZ0000006 | Grace | Goodson | Communications Service Leader | Auckland | ggoodson@alpheiusge.com.nz | 64 9 344 0206 |
| 10 | NZ0000007 | Kate | Rualowy | Insurance Service Leader | Auckland | krualowy@alpheiusge.com.nz | 64 9 344 0207 |
| 11 | NZ0000008 | Brian | Houson | Banking and Finance Service Leader | Auckland | bhouson@alpheiusge.com.nz | 64 9 344 0208 |
| 12 | NZ0000009 | Tara | Kinelly | Legal Service Leader | Auckland | tkinelly@alpheiusge.com.nz | 64 9 344 0209 |
| 13 | NZ0000010 | Nora | Mita | Building Services Service Leader | Auckland | nmita@alpheiusge.com.nz | 64 9 344 0210 |
| 14 | NZ0000011 | Kris | Tamahori | Careers and Education Service Leader | Auckland | ktamahori@alpheiusge.com.nz | 64 9 344 0211 |
| 15 | NZ0000012 | Kelly | Jones | Health Services Service Leader | Auckland | kjones@alpheiusge.com.nz | 64 9 344 0212 |
| 16 | NZ0000013 | Arthur | Maohori | Communications Product Leader | Auckland | amaohori@alpheiusge.com.nz | 64 9 344 0213 |
| 17 | NZ0000014 | Marama | Takarami | Electronics Product Leader | Auckland | mtakarami@alpheiusge.com.nz | 64 9 344 0214 |
| 18 | NZ0000015 | Samuel | Jenkins | Computer Products Product Leader | Auckland | sjenkins@alpheiusge.com.nz | 64 9 344 0215 |
| 19 | NZ0000016 | Hine | Boramori | Vehicles Product Leader | Auckland | hboramori@alpheiusge.com.nz | 64 9 344 0216 |
| 20 | NZ0000017 | Bob | Smith | Life Style Product Leader | Auckland | bsmith@alpheiusge.com.nz | 64 9 344 0217 |
| 21 | NZ0000018 | Whetu | Ramabundi | Tools Product Leader | Auckland | wramabundi@alpheiusge.com.nz | 64 9 344 0218 |
| 22 | IR0000001 | Paula | Cleary | Enterprise Leader | Dublin | pcleary@alpheiusge.ie | 353 1 873 6558 |

1




2




4

### For Your Reference…

To ***set*** a ***print area***:

1. Select the range
2. Click on the ***Page Layout*** tab
3. Click on ***Print Area***, then select **Set Print Area**

### Handy to Know…

- You can set non-contiguous areas as the print area but each range will print on a separate page. To print two different parts of a worksheet adjacent to each other, select the area between the ranges then click on ***Home*** > ***Cells*** > ***Format***, then select **Hide & UnHide** > **Hide Rows/Columns**.

# CLEARING THE PRINT AREA

Any print area that you set is saved with the spreadsheet and will be remembered next time you go to print that particular worksheet. If you want to print another part of the worksheet, you need to clear the existing print area. If you have several non-contiguous ranges set as the print area, these will all be cleared at once when you clear the print area.

## Try This Yourself:

***Same File***

*Continue using the previous file with this exercise, or open the file Page Setup_8.xlsx...*

1. Ensure the ***Large*** worksheet tab is selected and ***Normal*** view is active

   *You can see the print area indicated by a line around the cells...*

2. On the ***Page Layout*** tab, click on ***Print Area*** in the ***Page Setup*** group, then select **Clear Print Area**

   *The print area outline will disappear...*

3. Click on the ***File*** tab, then click on ***Print***

   *The preview shows that all of the data will now print...*

4. Click on the ***Back*** arrow to return to the worksheet

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Alpheius Leader Listing | | | | | | |
| 2 | | | | | | | |
| 3 | No | First Name | Last Name | Position | Office | E-Mail | Telephone |
| 4 | NZ0000001 | Peter | Reynolds | Enterprise Leader | Auckland | preynolds@alpheiusge.com.nz | 64 9 344 0219 |
| 5 | NZ0000002 | Mary | Campbell | Effective People Leader | Auckland | mcampbell@alpheiusge.com.nz | 64 9 344 0202 |
| 6 | NZ0000003 | Helen | Kai | Monies Leader | Auckland | hkai@alpheiusge.com.nz | 64 9 344 0203 |
| 7 | NZ0000004 | Norris | Maunga | Forward Thinking Leader | Auckland | nmaunga@alpheiusge.com.nz | 64 9 344 0204 |
| 8 | NZ0000005 | Vivian | Smith | Enterprise Opportunities Leader | Auckland | vsmith@alpheiusge.com.nz | 64 9 344 0205 |
| 9 | NZ0000006 | Grace | Goodson | Communications Service Leader | Auckland | ggoodson@alpheiusge.com.nz | 64 9 344 0206 |
| 10 | NZ0000007 | Kate | Rualowy | Insurance Service Leader | Auckland | krualowy@alpheiusge.com.nz | 64 9 344 0207 |
| 11 | NZ0000008 | Brian | Houson | Banking and Finance Service Leader | Auckland | bhouson@alpheiusge.com.nz | 64 9 344 0208 |
| 12 | NZ0000009 | Tara | Kinelly | Legal Service Leader | Auckland | tkinelly@alpheiusge.com.nz | 64 9 344 0209 |
| 13 | NZ0000010 | Nora | Mita | Building Services Service Leader | Auckland | nmita@alpheiusge.com.nz | 64 9 344 0210 |
| 14 | NZ0000011 | Kris | Tamahori | Careers and Education Service Leader | Auckland | ktamahori@alpheiusge.com.nz | 64 9 344 0211 |
| 15 | NZ0000012 | Kelly | Jones | Health Services Service Leader | Auckland | kjones@alpheiusge.com.nz | 64 9 344 0212 |
| 16 | NZ0000013 | Arthur | Maohori | Communications Product Leader | Auckland | amaohori@alpheiusge.com.nz | 64 9 344 0213 |
| 17 | NZ0000014 | Marama | Takarami | Electronics Product Leader | Auckland | mtakarami@alpheiusge.com.nz | 64 9 344 0214 |
| 18 | NZ0000015 | Samuel | Jenkins | Computer Products Product Leader | Auckland | sjenkins@alpheiusge.com.nz | 64 9 344 0215 |
| 19 | NZ0000016 | Hine | Boramori | Vehicles Product Leader | Auckland | hboramori@alpheiusge.com.nz | 64 9 344 0216 |
| 20 | NZ0000017 | Bob | Smith | Life Style Product Leader | Auckland | bsmith@alpheiusge.com.nz | 64 9 344 0217 |
| 21 | NZ0000018 | Whetu | Ramabundi | Tools Product Leader | Auckland | wramabundi@alpheiusge.com.nz | 64 9 344 0218 |
| 22 | IR0000001 | Paula | Cleary | Enterprise Leader | Dublin | pcleary@alpheiusge.ie | 353 1 873 6558 |

1

| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | Alpheius Leader Listing | | | | | | |
| 2 | | | | | | | |
| 3 | No | First Name | Last Name | Position | Office | E-Mail | Telephone |
| 4 | NZ0000001 | Peter | Reynolds | Enterprise Leader | Auckland | preynolds@alpheiusge.com.nz | 64 9 344 0219 |
| 5 | NZ0000002 | Mary | Campbell | Effective People Leader | Auckland | mcampbell@alpheiusge.com.nz | 64 9 344 0202 |
| 6 | NZ0000003 | Helen | Kai | Monies Leader | Auckland | hkai@alpheiusge.com.nz | 64 9 344 0203 |
| 7 | NZ0000004 | Norris | Maunga | Forward Thinking Leader | Auckland | nmaunga@alpheiusge.com.nz | 64 9 344 0204 |
| 8 | NZ0000005 | Vivian | Smith | Enterprise Opportunities Leader | Auckland | vsmith@alpheiusge.com.nz | 64 9 344 0205 |
| 9 | NZ0000006 | Grace | Goodson | Communications Service Leader | Auckland | ggoodson@alpheiusge.com.nz | 64 9 344 0206 |
| 10 | NZ0000007 | Kate | Rualowy | Insurance Service Leader | Auckland | krualowy@alpheiusge.com.nz | 64 9 344 0207 |
| 11 | NZ0000008 | Brian | Houson | Banking and Finance Service Leader | Auckland | bhouson@alpheiusge.com.nz | 64 9 344 0208 |
| 12 | NZ0000009 | Tara | Kinelly | Legal Service Leader | Auckland | tkinelly@alpheiusge.com.nz | 64 9 344 0209 |
| 13 | NZ0000010 | Nora | Mita | Building Services Service Leader | Auckland | nmita@alpheiusge.com.nz | 64 9 344 0210 |
| 14 | NZ0000011 | Kris | Tamahori | Careers and Education Service Leader | Auckland | ktamahori@alpheiusge.com.nz | 64 9 344 0211 |
| 15 | NZ0000012 | Kelly | Jones | Health Services Service Leader | Auckland | kjones@alpheiusge.com.nz | 64 9 344 0212 |
| 16 | NZ0000013 | Arthur | Maohori | Communications Product Leader | Auckland | amaohori@alpheiusge.com.nz | 64 9 344 0213 |
| 17 | NZ0000014 | Marama | Takarami | Electronics Product Leader | Auckland | mtakarami@alpheiusge.com.nz | 64 9 344 0214 |
| 18 | NZ0000015 | Samuel | Jenkins | Computer Products Product Leader | Auckland | sjenkins@alpheiusge.com.nz | 64 9 344 0215 |
| 19 | NZ0000016 | Hine | Boramori | Vehicles Product Leader | Auckland | hboramori@alpheiusge.com.nz | 64 9 344 0216 |
| 20 | NZ0000017 | Bob | Smith | Life Style Product Leader | Auckland | bsmith@alpheiusge.com.nz | 64 9 344 0217 |
| 21 | NZ0000018 | Whetu | Ramabundi | Tools Product Leader | Auckland | wramabundi@alpheiusge.com.nz | 64 9 344 0218 |
| 22 | IR0000001 | Paula | Cleary | Enterprise Leader | Dublin | pcleary@alpheiusge.ie | 353 1 873 6558 |

2

### For Your Reference…

To ***clear*** a ***print area***:

1. Click on the ***Page Layout*** tab
2. Click on ***Print Area*** in the ***Page Setup*** group
3. Select **Clear Print Area**

### Handy to Know…

- You can add to existing print areas by selecting another range then clicking on ***Print Area*** and selecting **Add to Print Area**.
- You can replace an existing print area by selecting and setting another range.

# INSERTING PAGE BREAKS

Excel creates its own page breaks when you print preview a worksheet and displays them as dashed lines across and down the worksheet. However, you do have the option of inserting your own page breaks wherever you need them. You can insert them at the start of a column, the start of a row, or in fact in any cell in the worksheet except A1.

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Page Setup_9.xlsx...*

1. Ensure the ***Large*** worksheet tab is selected and ***Page Layout*** view is active, then click in cell ***A22*** to select the cell

   *This is the first record for the staff in Dublin. We want to list them on a separate page…*

2. Click on the ***Page Layout*** tab, click on ***Breaks*** in the ***Page Setup*** group, then select **Insert Page Break**

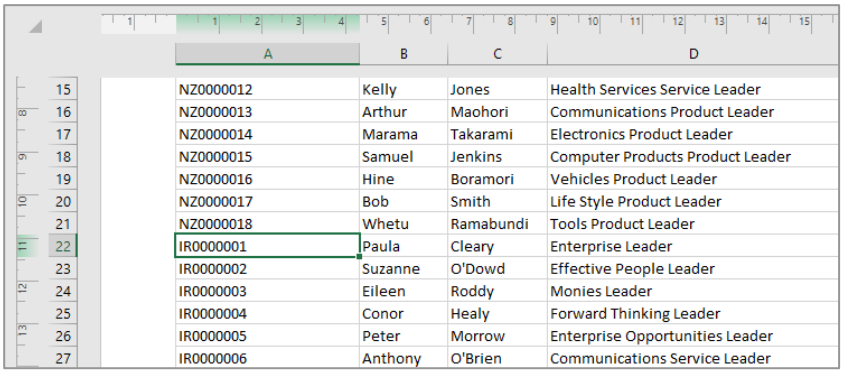
   *Cell A22 now appears at the start of the second page...*

3. Scroll up and examine the first page

   *Only the first 21 rows will be printed on this page...*

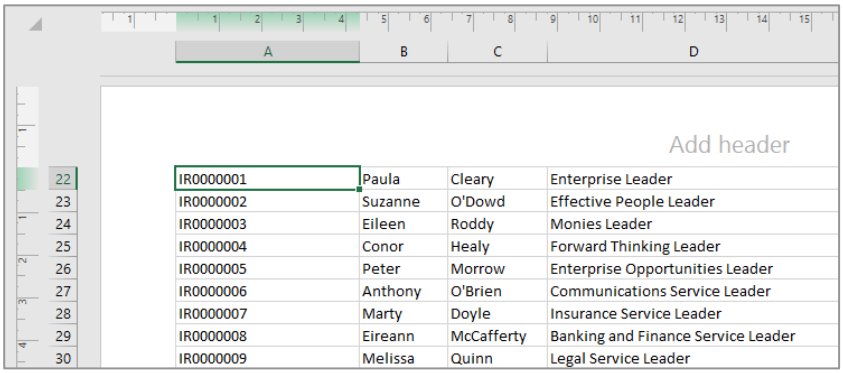
4. Repeat steps ***1*** and ***2*** to insert page breaks at cell ***A40***, ***A58*** and ***A76*** so that every city starts on a new page

5. Scroll up to view the changes



| | A | B | C | D |
|---|---|---|---|---|
| 15 | NZ0000012 | Kelly | Jones | Health Services Service Leader |
| 16 | NZ0000013 | Arthur | Maohori | Communications Product Leader |
| 17 | NZ0000014 | Marama | Takarami | Electronics Product Leader |
| 18 | NZ0000015 | Samuel | Jenkins | Computer Products Product Leader |
| 19 | NZ0000016 | Hine | Boramori | Vehicles Product Leader |
| 20 | NZ0000017 | Bob | Smith | Life Style Product Leader |
| 21 | NZ0000018 | Whetu | Ramabundi | Tools Product Leader |
| 22 | IR0000001 | Paula | Cleary | Enterprise Leader |
| 23 | IR0000002 | Suzanne | O'Dowd | Effective People Leader |
| 24 | IR0000003 | Eileen | Roddy | Monies Leader |
| 25 | IR0000004 | Conor | Healy | Forward Thinking Leader |
| 26 | IR0000005 | Peter | Morrow | Enterprise Opportunities Leader |
| 27 | IR0000006 | Anthony | O'Brien | Communications Service Leader |

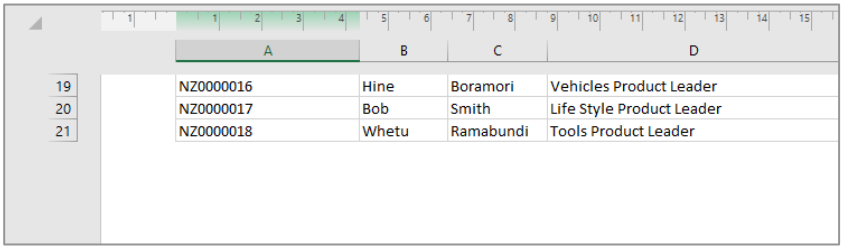
1



Add header

| | A | B | C | D |
|---|---|---|---|---|
| 22 | IR0000001 | Paula | Cleary | Enterprise Leader |
| 23 | IR0000002 | Suzanne | O'Dowd | Effective People Leader |
| 24 | IR0000003 | Eileen | Roddy | Monies Leader |
| 25 | IR0000004 | Conor | Healy | Forward Thinking Leader |
| 26 | IR0000005 | Peter | Morrow | Enterprise Opportunities Leader |
| 27 | IR0000006 | Anthony | O'Brien | Communications Service Leader |
| 28 | IR0000007 | Marty | Doyle | Insurance Service Leader |
| 29 | IR0000008 | Eireann | McCafferty | Banking and Finance Service Leader |
| 30 | IR0000009 | Melissa | Quinn | Legal Service Leader |

2



| | A | B | C | D |
|---|---|---|---|---|
| 19 | NZ0000016 | Hine | Boramori | Vehicles Product Leader |
| 20 | NZ0000017 | Bob | Smith | Life Style Product Leader |
| 21 | NZ0000018 | Whetu | Ramabundi | Tools Product Leader |

3

### For Your Reference…

To ***insert*** a ***page break***:

1. Click on the ***Page Layout*** tab
2. Click on ***Breaks*** in the ***Page Layout*** group
3. Select **Insert Page Break**

### Handy to Know…

- You can also insert vertical page breaks by clicking in the first row (i.e. cell) of a column and clicking on ***Breaks*** then selecting **Insert Page Break**. The page break will be inserted to the left of the selected column.

# USING PAGE BREAK PREVIEW

***Page Break Preview*** is a special view created to help you rearrange and organise page breaks. It zooms out from the worksheet so that you can see more of the pages and see the effect that changes to margins or formatting changes have on the position of page breaks. Page breaks can be either inserted by you (***manual*** page breaks) or created by Excel (***automatic*** page breaks).

## Try This Yourself:

*Same File*

*Continue using the previous file with this exercise, or open the file Page Setup_10.xlsx...*

1. Ensure the ***Large*** worksheet tab is active, click on the ***View*** tab, then click on ***Page Break Preview*** in the ***Workbook Views*** group to display the workbook in this view

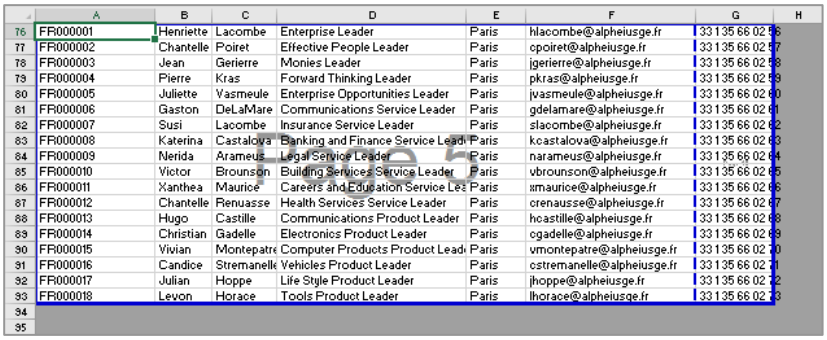
2. Scroll up so that you can see page ***1***

   *The page breaks are clearly marked by solid blue lines to signify they were inserted by you and differentiate them from the automatic page breaks Excel creates, which appear as dashed lines...*

3. Drag the second blue line (bottom of page 2) down to before cell ***A45*** to make page ***2*** longer

4. Click on ***Normal*** in the ***Workbook Views*** group

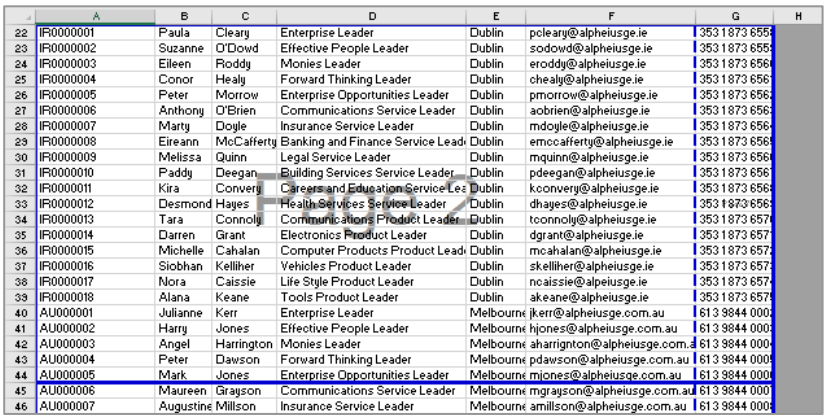
   *You'll see that the position of the line has changed*



| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 76 | FR000001 | Henriette | Lacombe | Enterprise Leader | Paris | hlacombe@alpheiusge.fr | 33 1 35 68 02 56 |
| 77 | FR000002 | Chantelle | Poiret | Effective People Leader | Paris | cpoiret@alpheiusge.fr | 33 1 35 68 02 57 |
| 78 | FR000003 | Jean | Gerierre | Monies Leader | Paris | jgerierre@alpheiusge.fr | 33 1 35 68 02 58 |
| 79 | FR000004 | Pierre | Kras | Forward Thinking Leader | Paris | pkras@alpheiusge.fr | 33 1 35 68 02 59 |
| 80 | FR000005 | Juliette | Vasmeule | Enterprise Opportunities Leader | Paris | jvasmeule@alpheiusge.fr | 33 1 35 68 02 60 |
| 81 | FR000006 | Gaston | DeLaMare | Communications Service Leader | Paris | gdelamare@alpheiusge.fr | 33 1 35 68 02 61 |
| 82 | FR000007 | Susi | Lacombe | Insurance Service Leader | Paris | slacombe@alpheiusge.fr | 33 1 35 68 02 62 |
| 83 | FR000008 | Katerina | Castalova | Banking and Finance Service Leadi | Paris | kcastalova@alpheiusge.fr | 33 1 35 68 02 63 |
| 84 | FR000009 | Nerida | Arameus | Legal Service Leader | Paris | narameus@alpheiusge.fr | 33 1 35 68 02 64 |
| 85 | FR000010 | Victor | Brounson | Building Services Service Leader | Paris | vbrounson@alpheiusge.fr | 33 1 35 68 02 65 |
| 86 | FR000011 | Xanthea | Maurice | Careers and Education Service Lea | Paris | xmaurice@alpheiusge.fr | 33 1 35 68 02 66 |
| 87 | FR000012 | Chantelle | Renuasse | Health Services Service Leader | Paris | crenausse@alpheiusge.fr | 33 1 35 68 02 67 |
| 88 | FR000013 | Hugo | Castille | Communications Product Leader | Paris | hcastille@alpheiusge.fr | 33 1 35 68 02 68 |
| 89 | FR000014 | Christian | Gadelle | Electronics Product Leader | Paris | cgadelle@alpheiusge.fr | 33 1 35 68 02 69 |
| 90 | FR000015 | Vivian | Montepatre | Computer Products Product Leadi | Paris | vmontepatre@alpheiusge.fr | 33 1 35 68 02 70 |
| 91 | FR000016 | Candice | Stremanelle | Vehicles Product Leader | Paris | cstremanelle@alpheiusge.fr | 33 1 35 68 02 71 |
| 92 | FR000017 | Julian | Hoppe | Life Style Product Leader | Paris | jhoppe@alpheiusge.fr | 33 1 35 68 02 72 |
| 93 | FR000018 | Levon | Horace | Tools Product Leader | Paris | lhorace@alpheiusge.fr | 33 1 35 68 02 73 |
| 94 | | | | | | | |
| 95 | | | | | | | |

Page 1

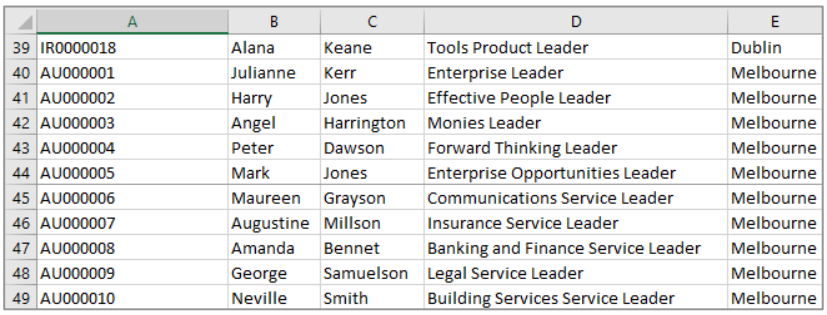
1



| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 22 | IR0000001 | Paula | Cleary | Enterprise Leader | Dublin | pcleary@alpheiusge.ie | 353 1 873 655 |
| 23 | IR0000002 | Suzanne | O'Dowd | Effective People Leader | Dublin | sodowd@alpheiusge.ie | 353 1 873 655 |
| 24 | IR0000003 | Eileen | Roddy | Monies Leader | Dublin | eroddy@alpheiusge.ie | 353 1 873 656 |
| 25 | IR0000004 | Conor | Healy | Forward Thinking Leader | Dublin | chealy@alpheiusge.ie | 353 1 873 656 |
| 26 | IR0000005 | Peter | Morrow | Enterprise Opportunities Leader | Dublin | pmorrow@alpheiusge.ie | 353 1 873 656 |
| 27 | IR0000006 | Anthony | O'Brien | Communications Service Leader | Dublin | aobrien@alpheiusge.ie | 353 1 873 656 |
| 28 | IR0000007 | Marty | Doyle | Insurance Service Leader | Dublin | mdoyle@alpheiusge.ie | 353 1 873 656 |
| 29 | IR0000008 | Eireann | McCafferty | Banking and Finance Service Leadi | Dublin | emccafferty@alpheiusge.ie | 353 1 873 656 |
| 30 | IR0000009 | Melissa | Quinn | Legal Service Leader | Dublin | mquinn@alpheiusge.ie | 353 1 873 656 |
| 31 | IR0000010 | Paddy | Deegan | Building Services Service Leader | Dublin | pdeegan@alpheiusge.ie | 353 1 873 656 |
| 32 | IR0000011 | Kira | Convery | Careers and Education Service Lea | Dublin | kconvery@alpheiusge.ie | 353 1 873 656 |
| 33 | IR0000012 | Desmond | Hayes | Health Services Service Leader | Dublin | dhayes@alpheiusge.ie | 353 1 873 656 |
| 34 | IR0000013 | Tara | Connolly | Communications Product Leader | Dublin | tconnolly@alpheiusge.ie | 353 1 873 657 |
| 35 | IR0000014 | Darren | Grant | Electronics Product Leader | Dublin | dgrant@alpheiusge.ie | 353 1 873 657 |
| 36 | IR0000015 | Michelle | Cahalan | Computer Products Product Leadi | Dublin | mcahalan@alpheiusge.ie | 353 1 873 657 |
| 37 | IR0000016 | Siobhan | Kelliher | Vehicles Product Leader | Dublin | skelliher@alpheiusge.ie | 353 1 873 657 |
| 38 | IR0000017 | Nora | Caissie | Life Style Product Leader | Dublin | ncaissie@alpheiusge.ie | 353 1 873 657 |
| 39 | IR0000018 | Alana | Keane | Tools Product Leader | Dublin | akeane@alpheiusge.ie | 353 1 873 657 |
| 40 | AU000001 | Julianne | Kerr | Enterprise Leader | Melbourne | jkerr@alpheiusge.com.au | 61 3 9844 000 |
| 41 | AU000002 | Harry | Jones | Effective People Leader | Melbourne | hjones@alpheiusge.com.au | 61 3 9844 000 |
| 42 | AU000003 | Angel | Harrington | Monies Leader | Melbourne | aharrignton@alpheiusge.com.a | 61 3 9844 000 |
| 43 | AU000004 | Peter | Dawson | Forward Thinking Leader | Melbourne | pdawson@alpheiusge.com.au | 61 3 9844 000 |
| 44 | AU000005 | Mark | Jones | Enterprise Opportunities Leader | Melbourne | mjones@alpheiusge.com.au | 61 3 9844 000 |
| 45 | AU000006 | Maureen | Grayson | Communications Service Leader | Melbourne | mgrayson@alpheiusge.com.au | 61 3 9844 000 |
| 46 | AU000007 | Augustine | Millson | Insurance Service Leader | Melbourne | amillson@alpheiusge.com.au | 61 3 9844 000 |

Page 2

3



| | A | B | C | D | E |
|---|---|---|---|---|---|
| 39 | IR0000018 | Alana | Keane | Tools Product Leader | Dublin |
| 40 | AU000001 | Julianne | Kerr | Enterprise Leader | Melbourne |
| 41 | AU000002 | Harry | Jones | Effective People Leader | Melbourne |
| 42 | AU000003 | Angel | Harrington | Monies Leader | Melbourne |
| 43 | AU000004 | Peter | Dawson | Forward Thinking Leader | Melbourne |
| 44 | AU000005 | Mark | Jones | Enterprise Opportunities Leader | Melbourne |
| 45 | AU000006 | Maureen | Grayson | Communications Service Leader | Melbourne |
| 46 | AU000007 | Augustine | Millson | Insurance Service Leader | Melbourne |
| 47 | AU000008 | Amanda | Bennet | Banking and Finance Service Leader | Melbourne |
| 48 | AU000009 | George | Samuelson | Legal Service Leader | Melbourne |
| 49 | AU000010 | Neville | Smith | Building Services Service Leader | Melbourne |

4

## For Your Reference…

To ***use Page Break Preview***:

1. Click on the ***View*** tab, then click on ***Page Break Preview*** in the ***Workbook Views*** group
2. Drag page breaks into new positions as needed

## Handy to Know…

- You can drag the vertical page breaks as well as the horizontal ones. For example, by dragging the far right page break across one column to the left we could have prevented the final column from being printed.
- If you move automatic page breaks, they become manual page breaks.

# REMOVING PAGE BREAKS

Manual page breaks are suitable if you always want the pages to start where you have indicated. However, circumstances may change; you may find that you don't need the page breaks anymore and wish to remove them. You can remove page breaks one at a time or all at once. If you remove all manual page breaks, they will be replaced by automatic ones.

## Try This Yourself:

Same File

*Continue using the previous file with this exercise, or open the file Page Setup_11.xlsx...*

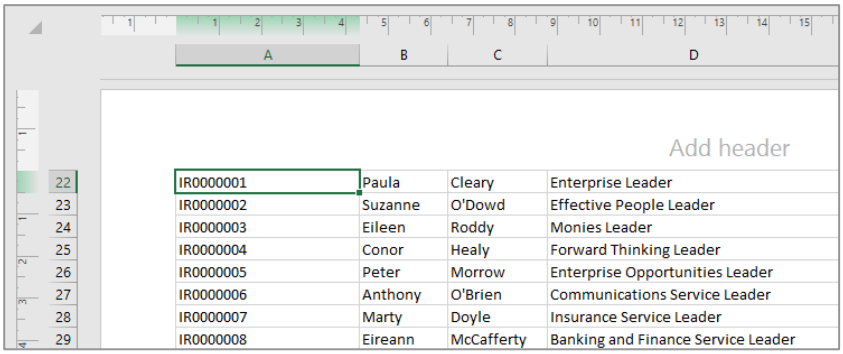
1. Ensure the ***Large*** worksheet tab is selected and ***Page Layout*** view is active
2. Scroll to and click in cell ***A22***

   *To remove a single page break, click in the cell where the page break was inserted – immediately below the page break line...*
3. Click on the ***Page Layout*** tab, click on ***Breaks*** in the ***Page Setup*** group, then select **Remove Page Break**

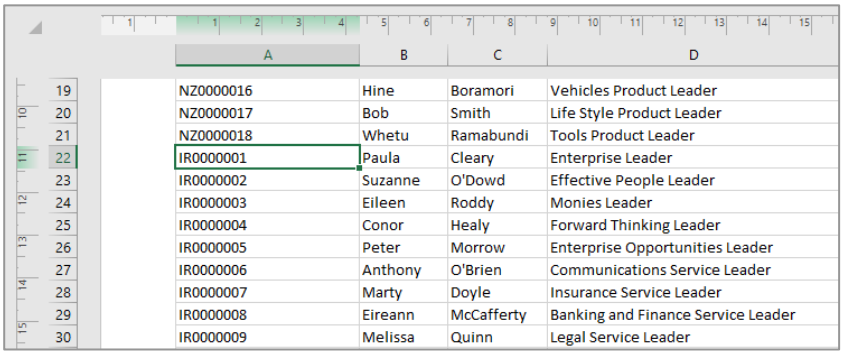
   *The page break will be deleted and a computer-generated one will appear between rows 33 and 34.*

   *You can also remove every manual page break in a worksheet simultaneously...*
4. Click on ***Breaks*** in the ***Page Setup*** group, then select **Reset All Page Breaks**

   *All of the page breaks that you created will be removed and automatic page breaks will be inserted where they're needed*




2. *If the page breaks aren't visible, click on the View tab, then click on Normal in Workbook Views to refresh them*




3

### For Your Reference…

To ***remove page break(s)***:

1. Click in the cell with the page break
2. Click on the ***Page Layout*** tab, then click on ***Breaks*** in the ***Page Setup*** group
3. Select **Remove Page Break** or **Reset All Page Breaks**

### Handy to Know…

- You can't remove automatic page breaks. These are created by Excel and are controlled by the paper size and the specifications of the selected printer.
- When you select **Reset All Page Breaks** Excel removes manual page breaks in the current worksheet only.

# SETTING A BACKGROUND

***Background*** refers to the area behind the numbers and text in the spreadsheet – the area that is plain white, by default. You can insert a photograph or other graphic file such as a clip art into the background for display purposes, but they are not printed. The image will be inserted at its default size and then tiled across the background of the entire worksheet.

## Try This Yourself:

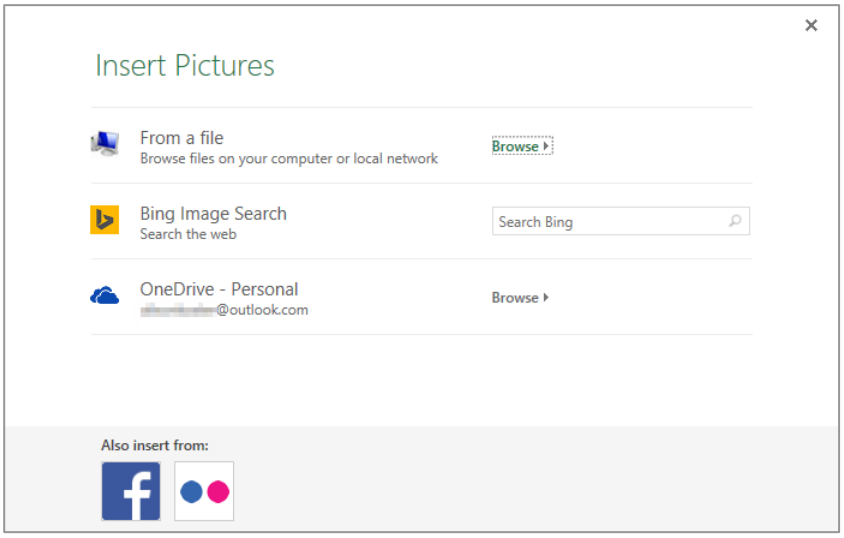
*Same File* *Continue using the previous file with this exercise, or open the file Page Setup_12.xlsx...*

1. Ensure the ***Large*** worksheet tab is selected and ***Page Layout*** view is active, then press Ctrl + Home to return to cell ***A1***

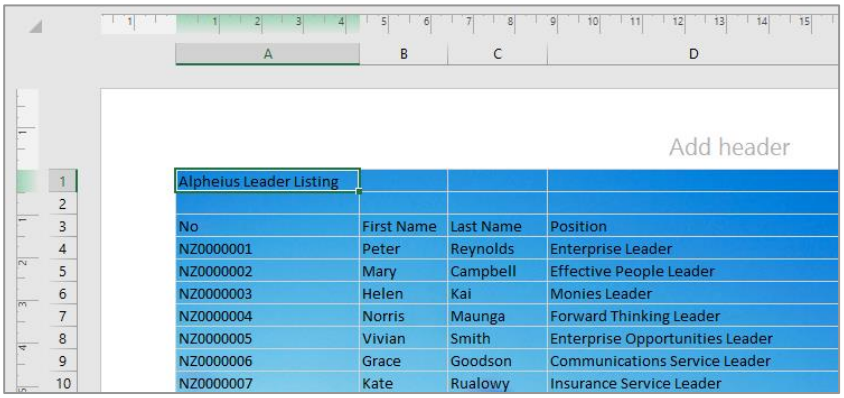
   *The background of the worksheet is currently white...*

2. Click on the ***Page Layout*** tab, then click on ***Background*** in the ***Page Setup*** group to display the ***Insert Pictures*** pane
3. Next to ***From a file*** click on ***Browse*** to display the ***Sheet Background*** dialog box
4. Navigate to the course files folder
5. Click on ***Dock.jpg***, then click on **[Insert]**

   *The white background of the spreadsheet will be replaced by the photograph*




2




5

### For Your Reference…

To ***set*** a ***background***:

1. Click on the ***Page Layout*** tab
2. Click on ***Background*** in the ***Page Setup*** group
3. Locate and click on the image file
4. Click on **[Insert]**

### Handy to Know…

- If you set a background, make sure that the figures and other information in the worksheet are still easy to read. If the background is quite dark, you may like to change the font colour to white or yellow. Either that or modify the image to create a paler version.

# CLEARING THE BACKGROUND

If you change your mind about the background you have applied for whatever reason, you can easily remove it. To replace the background with another image you must delete the current background before setting another. When a background is set, the ***Background*** tool in the ***Page Setup*** group on the ***Page Layout*** tab changes to ***Delete Background***.

## Try This Yourself:

*Same File*

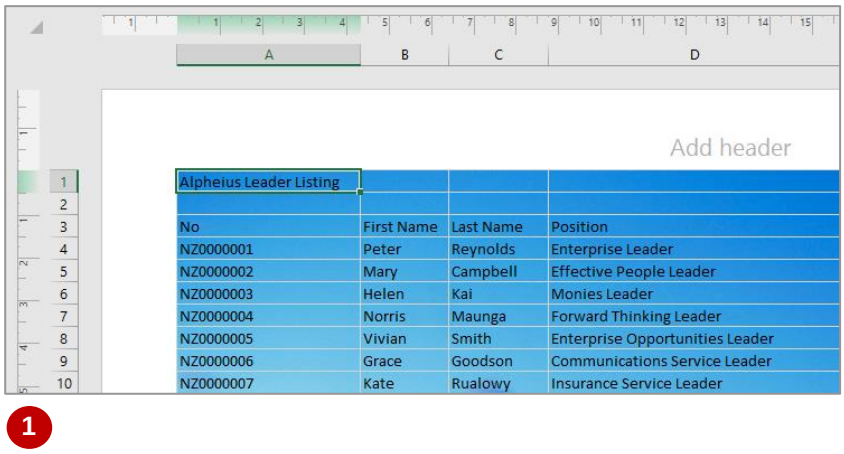
*Continue using the previous file with this exercise, or open the file Page Setup_13.xlsx...*

1. Ensure the ***Large*** worksheet tab is selected and ***Page Layout*** view is active, then examine the worksheet

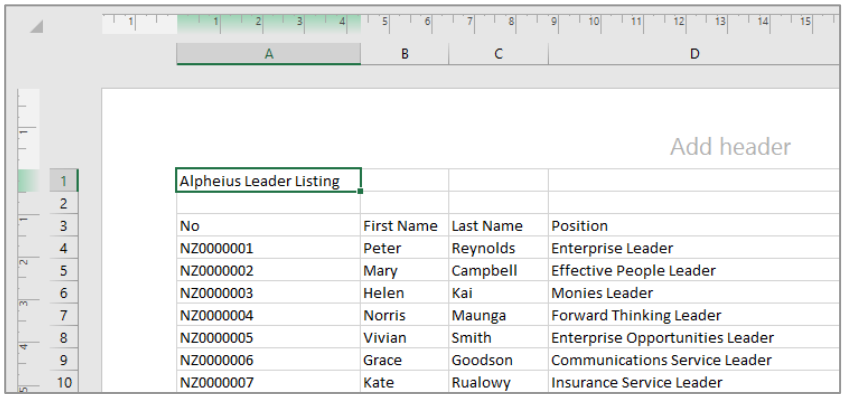
   *The background is currently filled with a photograph, tiled across the entire worksheet...*

2. On the ***Page Layout*** tab, click on ***Delete Background*** in the ***Page Setup*** group

   *The default white background will be restored*




1




2

### For Your Reference…

To ***clear*** a ***background***:

1. Click on the ***Page Layout*** tab
2. Click on ***Delete Background*** in the ***Page Setup*** group

### Handy to Know…

- An alternative to using a background image is to use ***Fill Colour*** in the ***Font*** group on the ***Home*** tab. Simply select the cells that you want to apply the fill colour to before selecting a colour.

# SETTINGS ROWS AS REPEATING PRINT TITLES

If you have a long list of data to print, it can be confusing by the time you get to the third page if you can't remember what each of the columns refers to. To make it easier for you to interpret printed data, Excel allows you to set a row or rows as print titles that are repeated at the top of every page. This way, each column has its own heading no matter which page it is on.

## Try This Yourself:

Same File

*Continue using the previous file with this exercise, or open the file Page Setup_14.xlsx...*

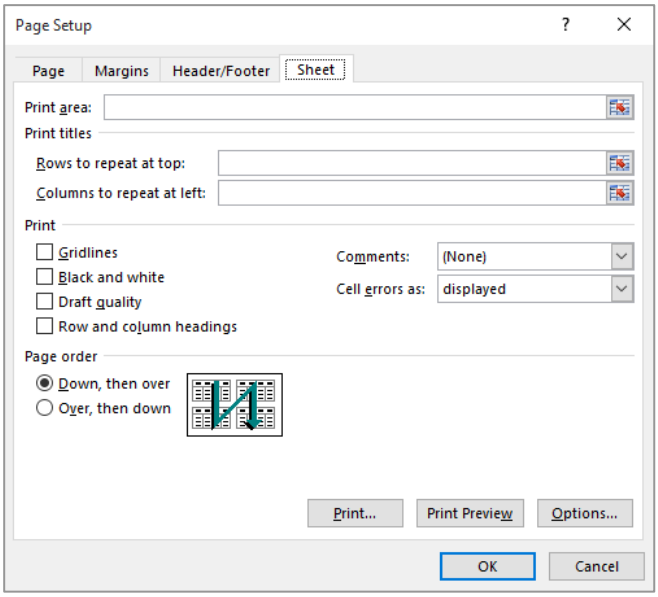
1. Ensure the workbook is in ***Page Layout*** view, then on the ***Page Layout*** tab, click on ***Print Titles*** in the ***Page Setup*** group to display the ***Sheet*** tab of the ***Page Setup*** dialog box
2. Click in ***Rows to repeat at top***, then click on the row header for row ***3***

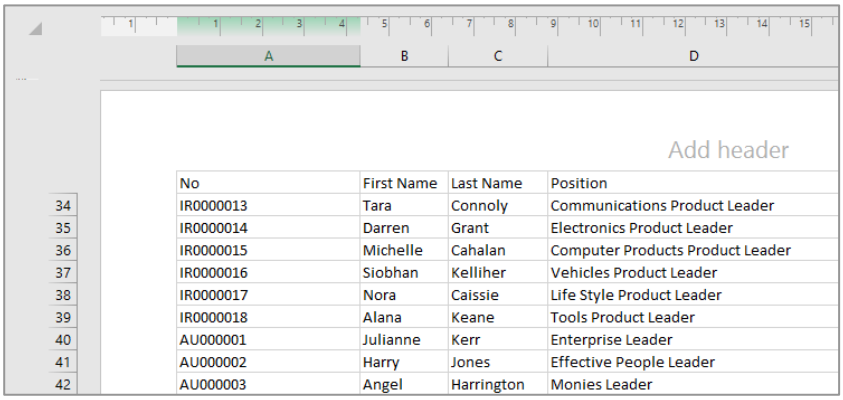
   *This inserts the reference $3:$3 in the text box...*
3. Click on **[OK]** to apply the changes
4. Scroll down to see the titles in row three repeated at the top of every page

   *In Normal view, the spreadsheet will appear unchanged….*
5. Click on the ***View*** tab, click on ***Normal*** view in the ***Workbook Views*** group, then scroll down to page ***2***

   *The titles in row 3 don't appear at the top of this page and if you scroll further, you will see that they don't appear at the top of any of the pages*

1




4

### For Your Reference…

To ***set*** a ***row*** as a ***repeated print title***:

1. Click on the ***Page Layout*** tab
2. Click on ***Print Titles*** in the ***Page Setup*** group
3. Click in ***Rows to repeat at top***, then click on the row header(s)
4. Click on **[OK]**

### Handy to Know…

- If you only want part of a row to be repeated at the top of a page, set the part of the list that you want to display as the ***print area***. The rows and columns then repeated as titles will only be those that appear in the print area.

# CLEARING PRINT TITLES

***Print titles*** are columns that are repeated on the left of every page or rows that are repeated at the top of every page. They make it easier to understand tables of information. However, if your worksheet has repeated titles that you no longer need, you can ***clear*** them simply by removing the row or column references in the ***Page Setup*** dialog box.

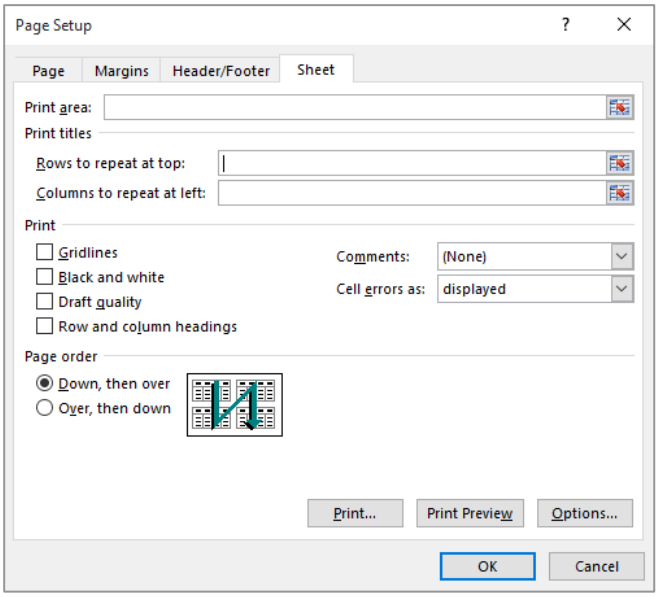
## Try This Yourself:

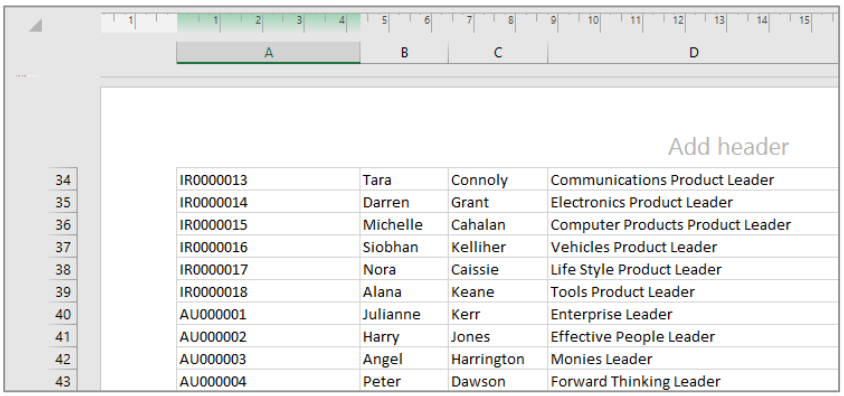
*Same File* *Continue using the previous file with this exercise, or open the file Page Setup_15.xlsx...*

1. Ensure the ***Large*** worksheet tab is selected and that ***Page Layout*** view is enabled
2. Click on the ***Page Layout*** tab, then click on ***Print Titles*** in the ***Page Setup*** group
3. Select the range in ***Rows to repeat at top***, then press Del
4. Click on **[OK]** to apply the change, then scroll down the worksheet

   *There are no longer headers for each column in the table on the second page and subsequent pages*

3




4

### For Your Reference…

To ***clear print titles***:

1. Click on the ***Page Layout*** tab, then click on ***Print Titles*** in the ***Page Setup*** group
2. Select the ranges in ***Rows to repeat at top*** or ***Columns to repeat at left***, then press Del
3. Click on **[OK]**

### Handy to Know…

- When you set rows or columns to be repeated on each page, Excel automatically creates a range name of ***Print_Titles*** for the cells that will be repeated. You can identify which cells will be repeated by selecting this range using the ***Name box*** in the ***Formula Bar***.

# PRINTING GRIDLINES

In longer lists with row after row of data, it can be difficult to follow data across the printed page. In these situations, it may be more convenient to ***print gridlines*** with the report so that you can easily follow data across the page or down the page. Gridlines also make the process of proofing and editing a worksheet much easier.

## Try This Yourself:

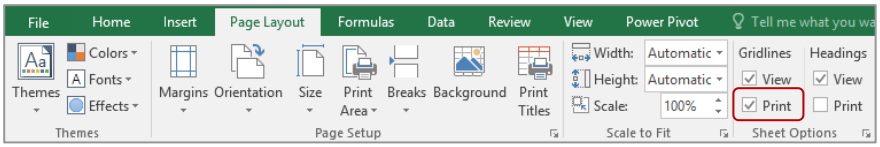
***Same File***

*Continue using the previous file with this exercise, or open the file Page Setup_16.xlsx...*

1. Select the ***Large*** worksheet, then ensure that the ***Page Layout*** tab is active
2. In the ***Sheet Options*** group, click on ***Print*** under ***Gridlines*** so it appears ticked

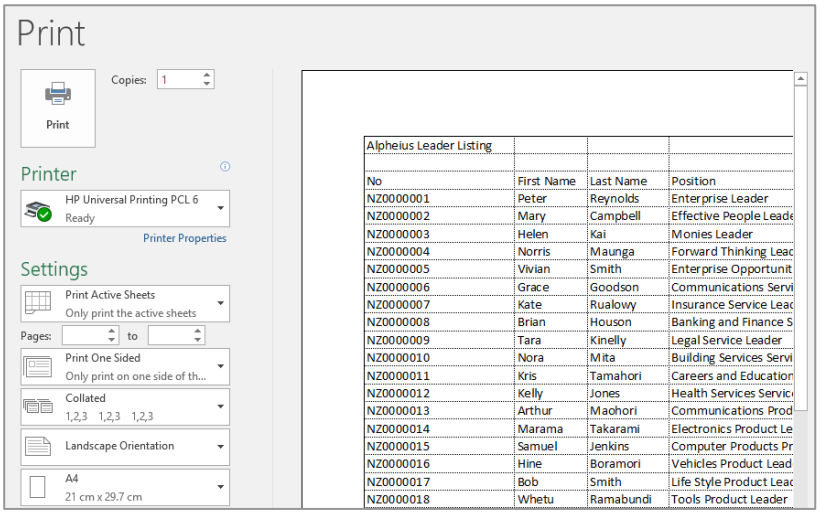
   *Let's see how the gridlines will look...*
3. Click on the ***File*** tab, then click on ***Print*** to see a preview of the worksheet

   *The preview clearly shows that the gridlines will print with the rest of the worksheet...*
4. Click on ***Zoom to Page*** to make the preview larger, so you can view it more easily
5. Click on the ***Back*** arrow to return to the worksheet




2

4




### For Your Reference…

To ***print gridlines***:

1. Click on the ***Page Layout*** tab
2. In the ***Sheet Options*** group, click on ***Print*** under ***Gridlines***
3. Print the worksheet

### Handy to Know…

- You can print gridlines by clicking on the ***Sheet*** tab of the ***Page Setup*** dialog box, then clicking on ***Gridlines*** so it appears ticked. The ***Page Setup*** dialog box is accessible by clicking on the dialog box launcher in the ***Sheet Options*** group on the ***Page Layout*** tab.

# PRINTING HEADINGS

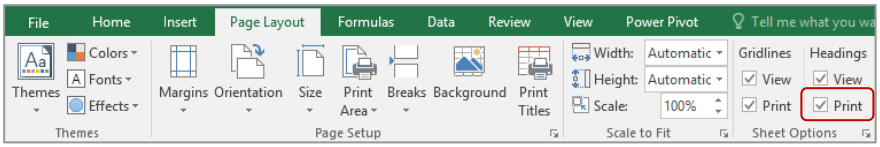
The term ***headings***, in a spreadsheet, refers to the column and row headings – the letters across the top and the numbers down the left. These help you locate and identify specific cells and are particularly helpful if you are trying to check the integrity of formulas and other information in the spreadsheet. You can choose to print headings with the rest of your data.

## Try This Yourself:

***Same File***

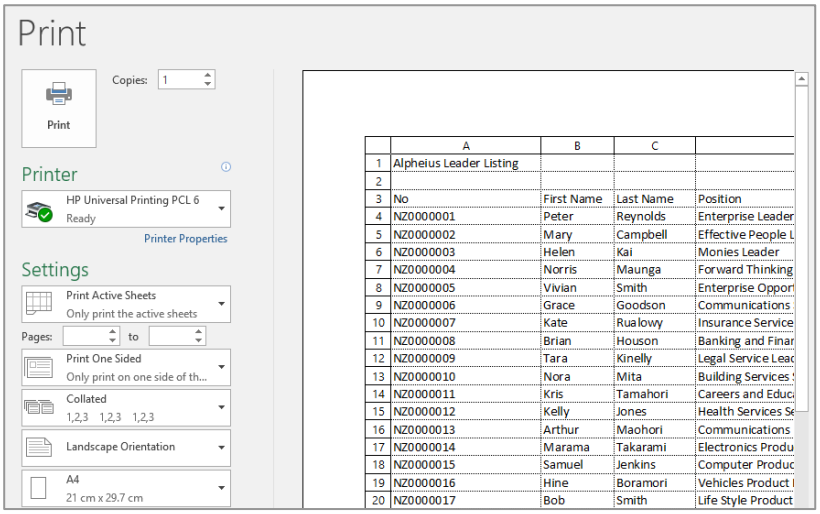
*Continue using the previous file with this exercise, or open the file Page Setup_17.xlsx...*

1. Select the ***Large*** worksheet and ensure that the ***Page Layout*** tab is active
2. In the ***Sheet Options*** group, click on ***Print*** under ***Headings*** so it appears ticked
3. Click on the ***File*** tab, then click on ***Print*** to display a preview of the document
4. Click on ***Zoom to Page*** to make the preview larger if necessary, so you can view it more easily
5. Click on the ***Back*** arrow to return to the worksheet




2

4




### For Your Reference…

To ***print headings***:

1. Click on the ***Page Layout*** tab
2. In the ***Sheet Options*** group, click on ***Print*** under ***Headings*** so it appears ticked

### Handy to Know…

- You can print headings by clicking on the ***Sheet*** tab of the ***Page Setup*** dialog box, then clicking on ***Row and column headings*** so it appears ticked. The ***Page Setup*** dialog box is accessible by clicking on the dialog box launcher in the ***Sheet Options*** group on the ***Page Layout*** tab.

# SCALING TO A PERCENTAGE

If you want to increase or decrease the size of data to make the best use of available space, you can change the ***scale*** at which the spreadsheet will be printed by percentage. For example, if you have a small amount of data and want to increase the size, you could change the percentage to 110%. If you want to shrink the data to fit more on a page, you could choose 90%.

## Try This Yourself:

*Same File* *Continue using the previous file with this exercise, or open the file Page Setup_18.xlsx...*

1. Click on the worksheet tab for ***Small*** to display the worksheet, then ensure ***Page Layout*** view is active

   *We want to make this as large as possible without going onto a second page...*

2. On the ***Page Layout*** tab, click on the up spinner arrow for ***Scale*** in the ***Scale to Fit*** group to increase the percentage to ***105%***

   *You'll notice that fewer columns fit on the page...*

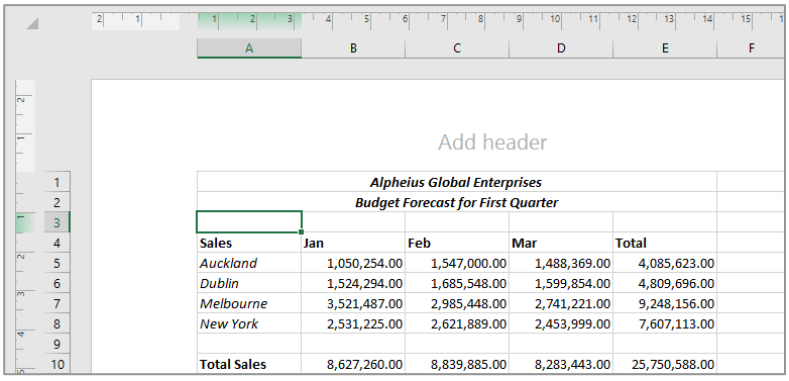
3. Click on the up spinner arrow for ***Scale*** in the ***Scale to Fit*** group three times to increase the percentage to ***120%***

   *Notice all of the data no longer fits on the page…*

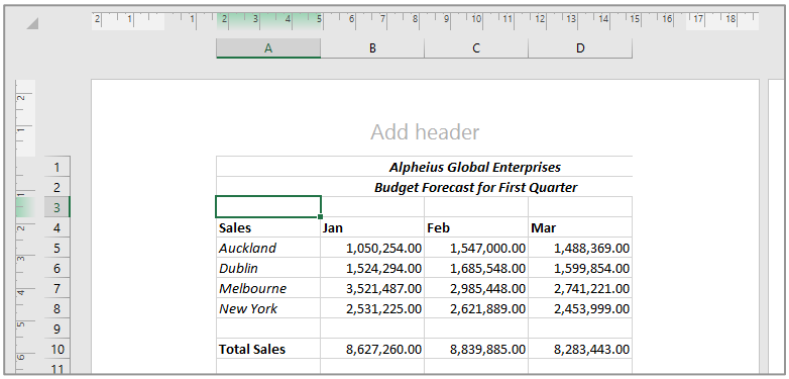
4. Click on the down spinner arrow for ***Scale*** in the ***Scale to Fit*** group to decrease the percentage to ***115%***

5. Click on the ***File*** tab, then click on ***Print*** to display a preview of the document

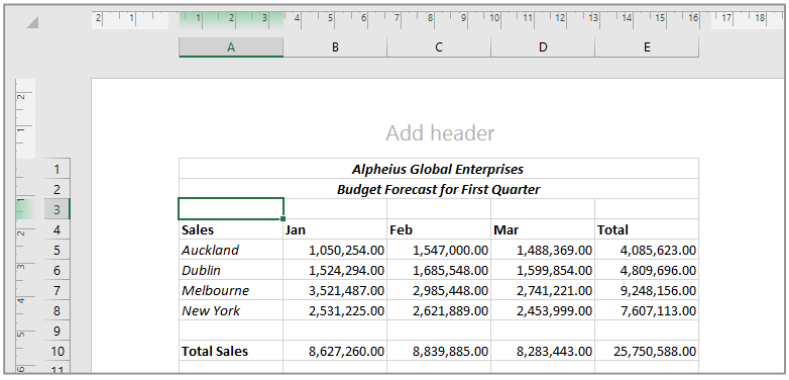
6. Click on the ***Back*** arrow to return to the worksheet




1




3




4

### For Your Reference…

To ***scale*** to a ***percentage***:

1. Click on the ***Page Layout*** tab
2. Click on one of the spinner arrows for ***Scale*** in the ***Scale to Fit*** group

### Handy to Know…

- If you know exactly what percentage you want to scale to, you can click on the ***Page Layout*** tab, click in the box for ***Scale*** in the ***Scale to Fit*** group, then type the desired number.

# FIT TO A SPECIFIC NUMBER OF PAGES

If you only need to scale the data down a small amount to get it to fit onto one page, you can try the ***Scale to Fit*** options of ***Height*** or ***Width***. These allow you to specify how many pages high and how many pages wide you want the printed worksheet to fit into. By default, ***Height*** and ***Width*** are set to ***Automatic*** and Excel then assumes you want to print according to the format settings.

## Try This Yourself:

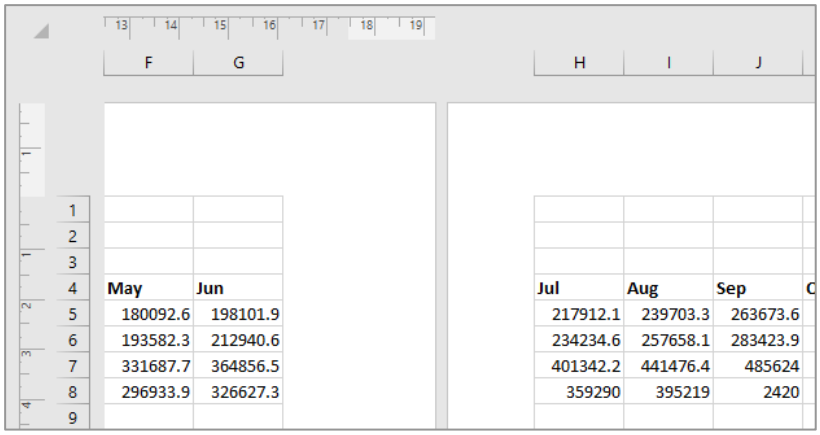
*Same File* *Continue using the previous file with this exercise, or open the file Page Setup_19.xlsx...*

1. Click on the ***Medium*** worksheet tab, click on the ***View*** tab, then click on ***Page Layout*** in the ***Workbook Views*** group to view the worksheet in ***Page Layout*** view
2. Scroll across to see how the worksheet is spread over two pages

   *The status bar also indicated this…*
3. Click on the ***Page Layout*** tab, click on the drop arrow for ***Width*** in the ***Scale to Fit*** group, then select **1 page**

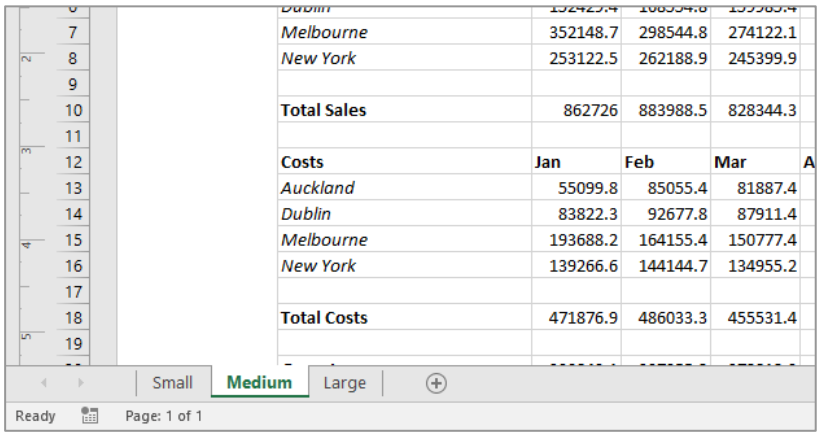
   *The worksheet is scaled down to fit on one page.*

   *Notice the status bar now reads Page 1 of 1*



| | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|
| 5 | 180092.6 | 198101.9 | 217912.1 | 239703.3 | 263673.6 |
| 6 | 193582.3 | 212940.6 | 234234.6 | 257658.1 | 283423.9 |
| 7 | 331687.7 | 364856.5 | 401342.2 | 441476.4 | 485624 |
| 8 | 296933.9 | 326627.3 | 359290 | 395219 | 2420 |

2



| | | | | |
|---|---|---|---|---|
| 7 | *Melbourne* | 352148.7 | 298544.8 | 274122.1 |
| 8 | *New York* | 253122.5 | 262188.9 | 245399.9 |
| 10 | **Total Sales** | 862726 | 883988.5 | 828344.3 |
| 12 | **Costs** | **Jan** | **Feb** | **Mar** |
| 13 | *Auckland* | 55099.8 | 85055.4 | 81887.4 |
| 14 | *Dublin* | 83822.3 | 92677.8 | 87911.4 |
| 15 | *Melbourne* | 193688.2 | 164155.4 | 150777.4 |
| 16 | *New York* | 139266.6 | 144144.7 | 134955.2 |
| 18 | **Total Costs** | 471876.9 | 486033.3 | 455531.4 |

Small | Medium | Large

Ready | Page: 1 of 1

3

## For Your Reference…

To ***fit*** to a ***specific number*** of ***pages***:

1. Click on the ***Page Layout*** tab
2. Click on the drop arrow for ***Width*** or ***Height*** in the ***Scale to Fit*** group
3. Select the required number of pages

## Handy to Know…

- You can't undo the changes you make using the ***Scale to Fit*** settings in the ***Scale to Fit*** group on the ***Page Layout*** tab so make sure you save your worksheet before trying them. This way you can exit without saving and return to the previous version if necessary.

CHAPTER 9

# THE QUICK ANALYSIS TOOLS

INFOCUS

There's no denying that Excel has a full and rich set of tools for analysing data. The only problem is that many people either don't use them or aren't aware that they exist.

Microsoft therefore decided that the best way to make these tools and features easier to use was to provide users with instant analysis of data from within your own workbooks. This is made possible by the ***Quick Analysis*** tools.

**In this session you will:**

- ✓ gain an understanding of the ***Quick Analysis*** feature
- ✓ learn how to apply ***Quick Formatting*** to worksheet data
- ✓ learn how to use ***Quick Charting*** to create an instant chart
- ✓ learn how to create calculations in a worksheet using the ***Quick Totals*** feature
- ✓ learn how to apply ***Quick Sparklines*** to a worksheet
- ✓ learn how to convert worksheet data into a table using ***Quick Tables***.

# UNDERSTANDING QUICK ANALYSIS

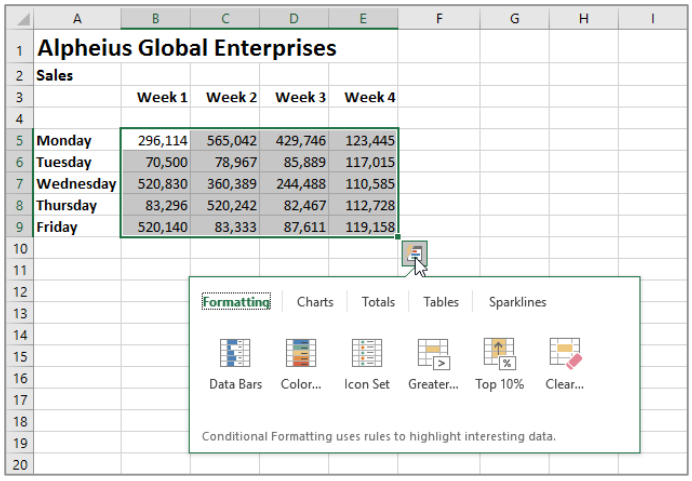
The ***Quick Analysis*** tools were developed in response to the fact that users weren't using or even aware of the more powerful analytical tools found in Excel. So Microsoft has combine ***Live Preview*** with some of these tools to create the ***Quick Analysis*** tools.

## The Quick Analysis Button

The ***Quick Analysis*** button appears when a range is selected in a worksheet. Clicking on the button displays the ***Quick Analysis*** gallery which contains quick analysis tools that can be applied to the selected data.

The tools have been organised along tabs at the top – ***Formatting***, ***Charts***, ***Totals***, ***Tables***, And ***Sparklines***.

When you click on a tab, options specific to that tab are presented.




## Using Quick Analysis Tools With Live Preview

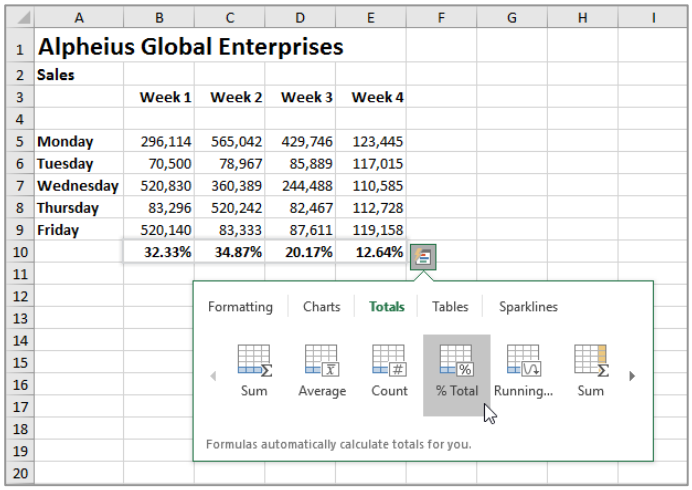
Most of the ***Quick Analysis*** tools in the ***Quick Analysis*** gallery provide a Live Preview of the changes in the worksheet when you point to an option.

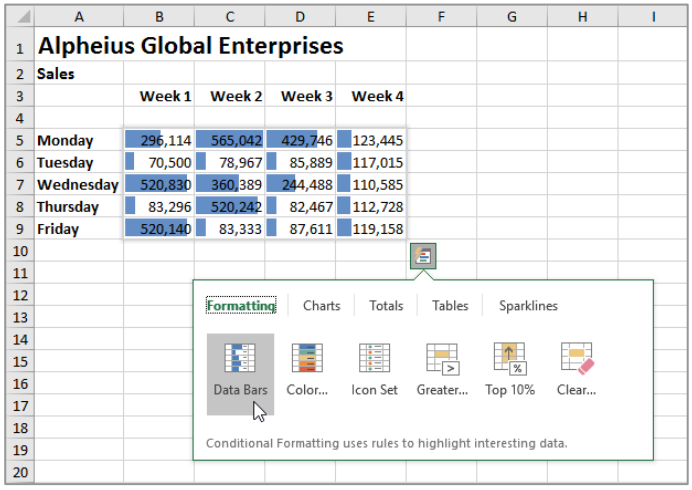
This is very useful if you are not sure of the formatting or type of analysis you require as it provides you with a preview of what the data would look like if you selected that specific option.

At the right we have selected only the totals from the worksheet shown above. We have pointed to options from the ***Totals*** tab (*% Total* and *Average*) and from the ***Formatting*** tab (*Data Bars*).

Live Preview has either presented another row of analysed data or has formatted the selection accordingly.

All of these tools are also available on the ribbon but using the ***Quick Analysis*** tools is much quicker.



# QUICK FORMATTING

The first tab in the ***Quick Analysis*** gallery is ***Formatting***. This tab provides access to the conditional formatting tools of Excel. These are the tools that allow you to analyse data by colouring it or presenting it in a slightly different way. In the ***Quick Analysis*** gallery you can apply data bars, colour high and low values, values over or below a value, and more.

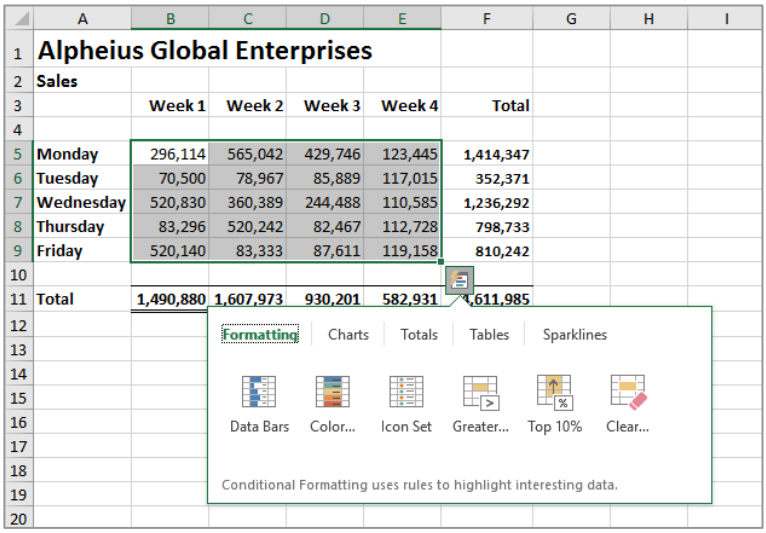
## Try This Yourself:

Open File

*Before starting this exercise you MUST open the file Quick Analysis_1.xlsx…*

1. Click in cell ***B5***, hold down Shift, then click in cell ***E9*** to select the range ***B5:E9***
2. Point to the bottom of the selected range so that the ***Quick Analysis*** button appears, as shown, then click on it to see the ***Quick Analysis*** gallery
3. On the ***Formatting*** tab, point to ***Data Bars*** to see data bars representing the size of the selected values
4. Point to ***Colour Scale*** to see colours used to signify the scale of values (from red for low to green for high)
5. Point to ***Top 10%*** to see the top 10% of values
6. Click on ***Greater Than*** to see the ***Greater Than*** dialog box
7. Type **200000** in ***Format cells that are GREATER THAN***, then click on **[OK]**

2

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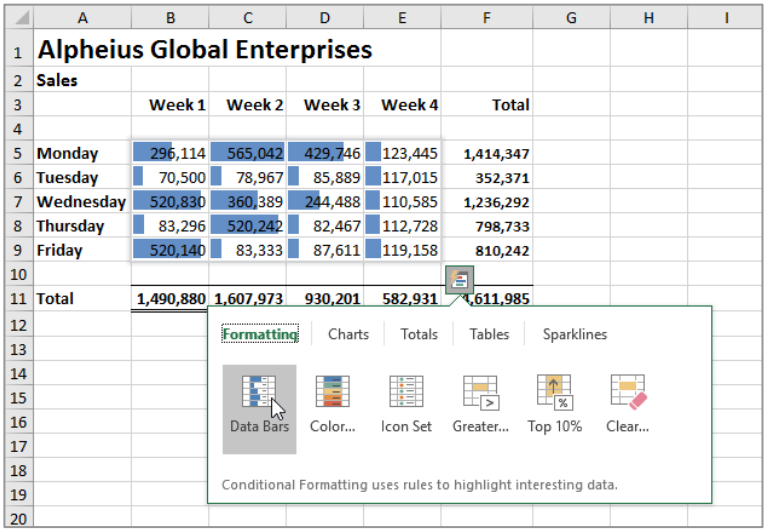



### For Your Reference…

To ***apply Quick Formatting*** in a ***worksheet***:

1. Select the range to be formatted, then click on the ***Quick Analysis*** button
2. Choose the desired formatting from the ***Formatting*** tab

### Handy to Know…

- ***Quick Formatting*** applies conditional formatting, not the standard formatting.
- The ***Clear Format*** option in the ***Quick Analysis*** gallery will clear any conditional formatting that has been applied.

# QUICK CHARTING

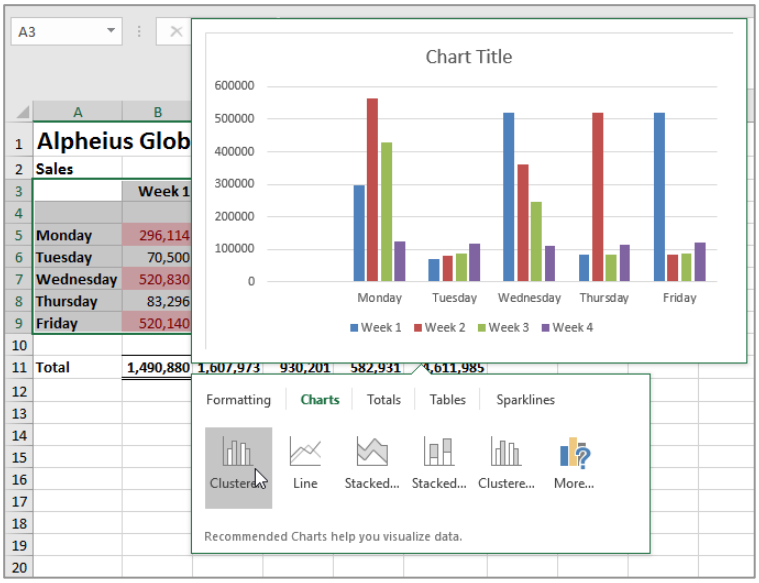
Charts aren't all that difficult to create in Excel, especially with the ***Recommended Charts*** feature. However, deciding what style and type of chart can be daunting. Fortunately, the ***Charts*** tools provide a way of seeing what the different charts will look like without having to first create the chart.

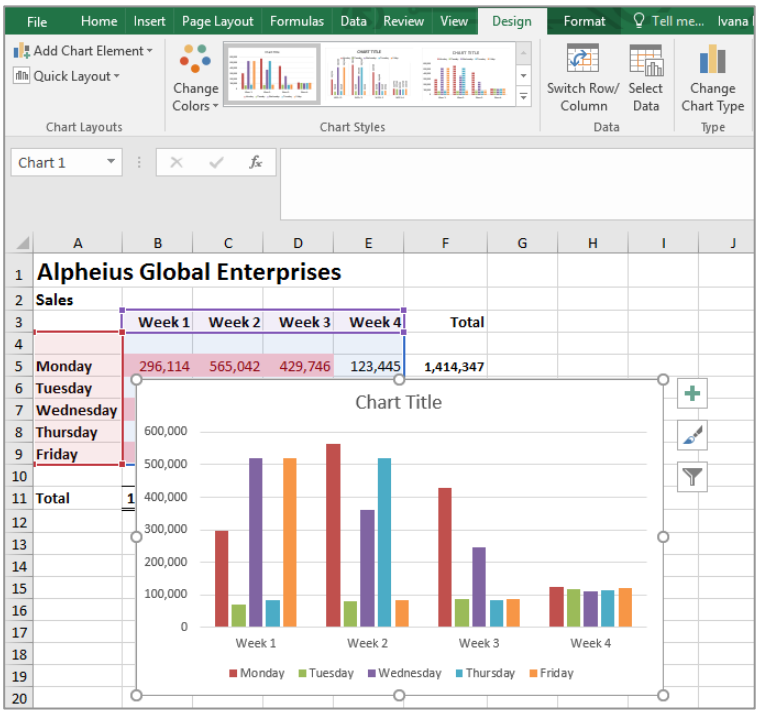
## Try This Yourself:

Same File

*Continue using the previous file with this exercise, or open the file Quick Analysis_2.xlsx...*

1. Click in cell ***A3***, hold down Shift, then click in cell ***E9*** to select the range ***A3:E9***
2. Click on the ***Quick Analysis*** button, then click on the ***Charts*** tab to see a range of recommended chart types for this range
3. Point to ***Clustered Column*** to see a Live Preview of the chart with the ***Week*** as the legend
4. Point to ***Line***, then ***Stacked Area***, then ***Stacked Column*** to see how these options appear in Live Preview
5. Point to the second ***Clustered Column*** to see a preview of the chart with the ***Days*** as the legend
6. Click on the second ***Clustered Column*** to create a chart in the worksheet




### For Your Reference…

To ***use*** the ***Quick Charting tools***:

1. Select the range to be charted, then click on the ***Quick Analysis*** button
2. Choose the desired option from the ***Charts*** tab

### Handy to Know…

- When creating a chart, you'll need to ensure that the range you select includes the labels to be used on the chart.

# QUICK TOTALS

The ***Totals*** tab in the ***Quick Analysis*** gallery has some useful tools and options to help you build your worksheet. You can use the options to analyse data and perform alternate arithmetic operations (e.g. *AVERAGE* instead of *SUM*) or use the options to create the totals and calculations in the first place.

## Try This Yourself:

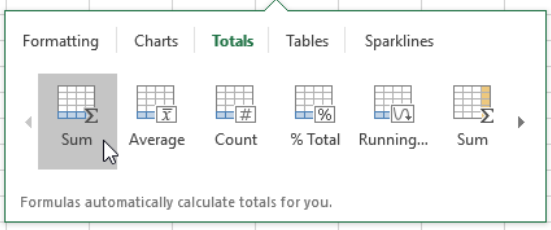
Open File

*Before starting this exercise you MUST open the file Quick Analysis_3.xlsx…*

1. Click in cell ***B5***, hold down Shift, then click in cell ***E9*** to select the range ***B5:E9***
2. Click on the ***Quick Analysis*** button, then click on the ***Totals*** tab to see the calculation options for this range
3. Point to ***Vertical Sum*** to see a preview of the totals for each column
4. Point to ***Horizontal Sum*** to see a preview of the totals for each row
5. Point to the other options and study the results – do not click on any at this stage
6. Click on ***Vertical Sum*** to create column totals
7. Reselect the range ***B5:E9***, click on the ***Quick Analysis*** button, click on the ***Totals*** tab, then click on ***Horizontal %*** to see the percentages for each day of the week

3

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | |
| 2 | **Sales** | | | | |
| 3 | | **Week 1** | **Week 2** | **Week 3** | **Week 4** |
| 4 | | | | | |
| 5 | **Monday** | 296,114 | 565,042 | 429,746 | 123,445 |
| 6 | **Tuesday** | 70,500 | 78,967 | 85,889 | 117,015 |
| 7 | **Wednesday** | 520,830 | 360,389 | 244,488 | 110,585 |
| 8 | **Thursday** | 83,296 | 520,242 | 82,467 | 112,728 |
| 9 | **Friday** | 520,140 | 83,333 | 87,611 | 119,158 |
| 10 | | **1,490,880** | **1,607,973** | **930,201** | **582,931** |




6

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | |
| 2 | **Sales** | | | | |
| 3 | | **Week 1** | **Week 2** | **Week 3** | **Week 4** |
| 4 | | | | | |
| 5 | **Monday** | 296,114 | 565,042 | 429,746 | 123,445 |
| 6 | **Tuesday** | 70,500 | 78,967 | 85,889 | 117,015 |
| 7 | **Wednesday** | 520,830 | 360,389 | 244,488 | 110,585 |
| 8 | **Thursday** | 83,296 | 520,242 | 82,467 | 112,728 |
| 9 | **Friday** | 520,140 | 83,333 | 87,611 | 119,158 |
| 10 | | **1,490,880** | **1,607,973** | **930,201** | **582,931** |

7

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | **Alpheius Global Enterprises** | | | | | |
| 2 | **Sales** | | | | | |
| 3 | | **Week 1** | **Week 2** | **Week 3** | **Week 4** | |
| 4 | | | | | | |
| 5 | **Monday** | 296,114 | 565,042 | 429,746 | 123,445 | **30.67%** |
| 6 | **Tuesday** | 70,500 | 78,967 | 85,889 | 117,015 | **7.64%** |
| 7 | **Wednesday** | 520,830 | 360,389 | 244,488 | 110,585 | **26.81%** |
| 8 | **Thursday** | 83,296 | 520,242 | 82,467 | 112,728 | **17.32%** |
| 9 | **Friday** | 520,140 | 83,333 | 87,611 | 119,158 | **17.57%** |
| 10 | | **1,490,880** | **1,607,973** | **930,201** | **582,931** | |

### For Your Reference…

To ***create Quick Totals*** in a ***worksheet***:

1. Select the range to be totalled/calculated and click on the ***Quick Analysis*** button
2. Choose the desired calculation methodology from the ***Totals*** tab

### Handy to Know…

- Always check any operation that performs calculations and embeds formulas for you to ensure that the correct cells and ranges are included in totals.

# QUICK SPARKLINES

***Sparklines*** are mini charts that are embedded into a worksheet, usually immediately adjacent to the data. ***Sparklines*** are only relatively new in Excel and probably haven't gained the acceptance or understanding that Microsoft would like. So, you'll now find them in the ***Quick Analysis*** tools where you can easily implement them without too much head scratching.

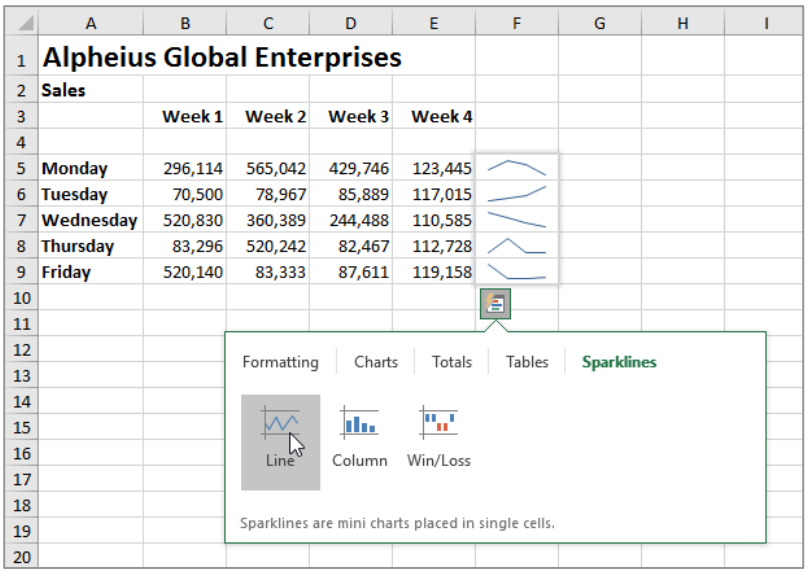
## Try This Yourself:

Open File

*Before starting this exercise you MUST open the file Quick Analysis_4.xlsx…*

1. Click in cell ***B5***, hold down Shift, then click in cell ***E9*** to select the range ***B5:E9***
2. Click on the ***Quick Analysis*** button, then click on the ***Sparklines*** tab
3. Point to ***Line*** to display a line drawing showing trends for each row across the four weeks
4. Point to ***Column*** to display the trend as columns rather than a continuous line
5. Click on ***Column*** to add *Sparklines* in column ***F***

   *Notice that after the Sparklines have been created the Sparkline Tools tab on the ribbon is now available so that you can further enhance or modify the Sparklines*

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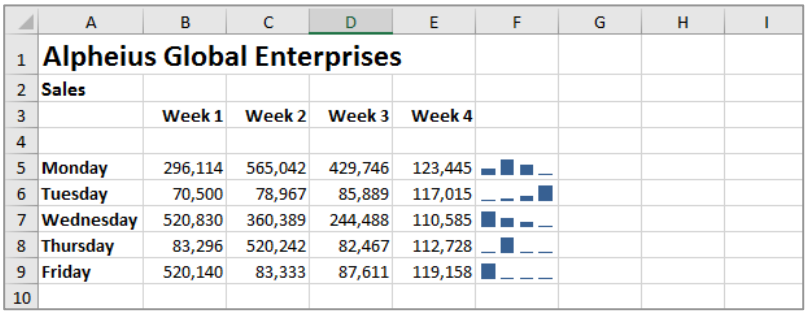



5

### For Your Reference…

To ***use Quick Sparklines*** in a ***worksheet***:

1. Select the range to be analysed, then click on the ***Quick Analysis*** button
2. Choose the desired ***Sparkline*** from the ***Sparklines*** tab

### Handy to Know…

- The ***Win/Loss*** is a special type of ***Sparkline*** that shows positives above an imaginary line and negatives below it. You need to have values range from the negative to the positive to make any good use of it.

# QUICK TABLES

In computer terminology a ***table*** is created when data is organised into rows and columns. You'd think then that a worksheet would be a table – but it is not in the Excel definition. In Excel a table does have columns and rows of continuous data. But it must also have headings which provide filter buttons. Creating a table is not hard, but it is much easier using ***Quick Tables***.

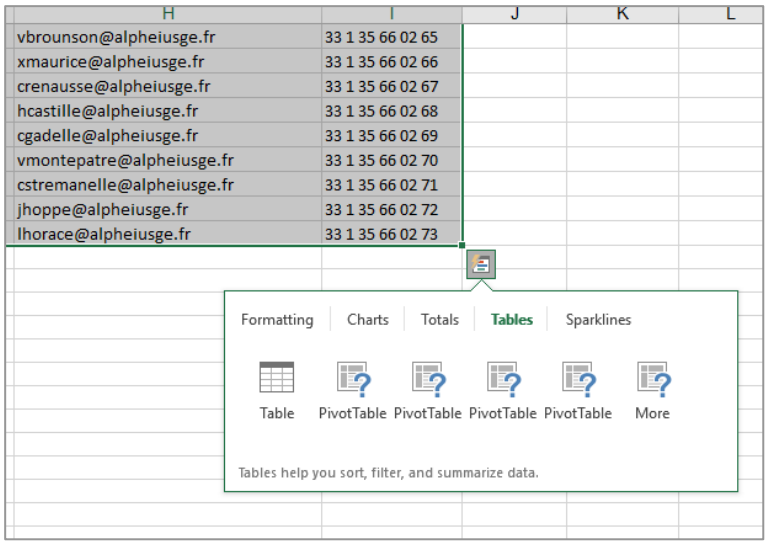
## Try This Yourself:

Open File

*Before starting this exercise you MUST open the file Quick Analysis_5.xlsx…*

1. Click in any cell containing data
2. Hold down Ctrl + Shift, then press 8 to select all of the non-empty cells around the current cell
3. Using the scroll bars, scroll to the bottom right corner of the selection, click on the ***Quick Analysis*** button, then click on the ***Tables*** tab
4. Click on ***Table*** to turn the selected range into a table
5. Scroll across and on the drop arrow for ***Position*** to see sorting and filtering options
6. Click on ***Select All*** to remove the tick, then click on ***Effective People Leader*** so it appears ticked
7. Click on **[OK]** to see only those people with this position title

3

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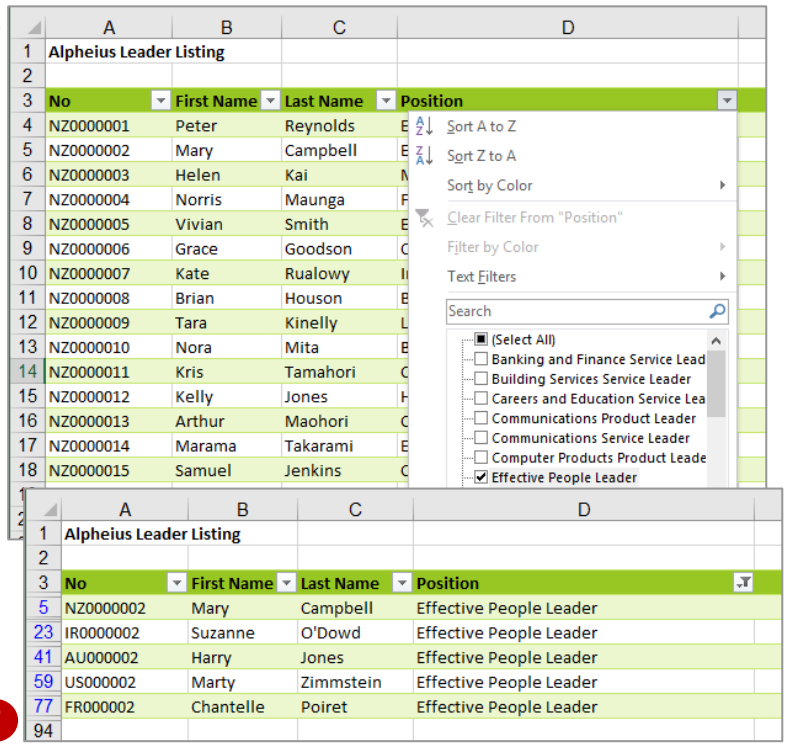


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### For Your Reference…

To ***use Quick Tables*** to ***create*** a ***table***:

1. Select the entire data to be used as a table
2. Click on the ***Quick Analysis*** button
3. Click on the ***Tables*** tab, then click on ***Table***

### Handy to Know…

- A drawback of using ***Quick Tables*** is that all of the data must be selected first. Using the normal operation to create a table (the ***Table*** command on the ***Insert*** tab of the ribbon) only one cell in the table needs to be selected.

# NOTES:

# CHAPTER 10 SHARING WORKBOOKS

INFOCUS

As a team you may be involved in a budget project, sales proposal, or engineering project where input and changes to a workbook (or workbooks) are made by several users. Excel allows you to share your workbook with other users of your network.

With just the one working file you don't need to email files between team members, manually merge multiple versions of the one document together or try to figure out what changes others have made to the original document.

While reviewing documents you can add comments to any elements of the document such as text, tables or images, making it easy for the author to see what each comment relates to. You can add and edit comments in a co-authoring session which means that others will see your comments the next time they save and get updates.

**In this session you will:**

- ✓ gain an understanding of sharing workbooks via the network
- ✓ gain an understanding of how to share workbooks via ***OneDrive***
- ✓ learn how to save a workbook to ***OneDrive***
- ✓ learn how to share workbooks
- ✓ gain an understanding of opening shared workbooks
- ✓ learn how to enable tracked changes
- ✓ learn how to accept or reject changes
- ✓ learn how to disable tracked changes
- ✓ learn how to add comments to worksheets
- ✓ learn how to navigate comments in a worksheet
- ✓ learn how to edit worksheet comments
- ✓ learn how to delete comments from a worksheet.

# SHARING WORKBOOKS VIA THE NETWORK

In Excel you can choose to share via OneDrive or you can choose to share via a network. In the workplace you may decide you would prefer to share workbooks via the network so that they are backed up and saved according to company policies. Using a network you can share, or prevent from sharing workbooks.

## Sharing Workbooks On The Network

By default, a normal workbook can only be accessed by one user at a time on a network. This is known as ***exclusive use***. If someone is already using a workbook when you open it, Excel will give you the option of opening a read-only version of the file until the exclusive use version of the file is available. When the other person closes the file Excel will notify you and replace the read-only version with the exclusive-use version.

However, you can adjust the settings so that more than one person can edit a document on the network at a time. To do so, simply:

1. Click on the ***Review*** tab
2. Click on ***Share Workbook*** in the ***Changes*** group to display the ***Share Workbook*** dialog box
3. Click on ***Allow changes by more than one user at the same time*** so it appears ticked then click on **[OK]**

## Working With Shared Workbooks On The Network

When you save a shared workbook, Excel automatically updates the workbook with the changes made by other users. Excel will then highlight the changed cells and advise you that the workbook has been updated with changes from other users. If you point to the parts of the workbook where changes have been made a message will appear informing you of what the change was, who made it and when they made it.

When a workbook is shared you cannot do the following:

- Delete worksheets
- Use drawing tools
- Create/modify macros or create data tables
- Insert automatic subtotals
- Change/remove passwords.

## Checking And Removing Sharing On The Network

If you are working on a document that you are mainly responsible for, you may at some point wish to make a significant change to the workbook. To do so, you may need to remove sharing privileges temporarily, or perhaps you wish to remove sharing privileges permanently. Whatever the case, Excel allows you to remove sharing at any time, even when other users have the workbook open.

To do so:

1. Click on the ***Review*** tab
2. Click on ***Share Workbook*** in the ***Changes*** group to display the ***Share Workbook*** dialog box
3. Click on ***Allow changes by more than one user at the same time*** so it appears without a tick, then click on **[OK]**

   A message will appear asking you to confirm that you want to remove sharing
4. Click on **[Yes]**

# SHARING WORKBOOKS VIA ONEDRIVE

If you don't wish to share your workbooks via a network, you may decide to share them via the web. Sharing documents using the web allows you greater flexibility as those you are sharing your workbook with can access your file from anywhere as long as they have an internet connection. All you need to start is a Microsoft account.

## The Benefits Of Sharing Via OneDrive

Getting feedback from multiple people used to be quite a chore. You'd email a copy of your document to each person so they could review it and then update your original document, carefully incorporating everyone's changes. Sharing files in Excel is much simpler with the added benefit of being able to comment and reply to other authors in real time makes the editing process much smoother. Excel will also tell you which other authors are working on the document.

## Setting Up For Sharing Via OneDrive

Setting up for co-authoring is easy. Everyone who is going to work on the document must have Microsoft Excel installed on their computer. It's then as simple as saving your document to OneDrive (in which case everyone must have their own, free Microsoft account) and sharing it with each person.

## How Sharing Via OneDrive Works

When you open a shared document it will open in ***Excel Online*** by default. From Excel Online you can then open the document in Excel. When you open the document in Excel, a message will appear telling you the other people who are currently editing the document. The status bar also shows the number of people who are working on the document at any one given time.

If two different people are working on their own areas of the one document, you're not likely to experience the problem of two people editing the same thing at the same time – such as two people altering the same line of text. However, if this situation does happen, Excel handles it by keeping the last change that was saved.

Each time you save your changes to the document, Excel synchronises them back to the server. At the same time, Excel updates your document and reflects all changes made and saved by everyone else.

When working collaboratively on documents in Excel, ensure you save frequently so that you have the latest changes the other authors have made and to provide them with your changes.

# SAVING TO ONEDRIVE

One of the easiest ways to allow multiple authors to work on your document at the same time is to save it to ***OneDrive***. To use ***OneDrive*** you'll need a free ***Microsoft account*** or an Office 365 account. When you sign up for a Microsoft account, you will be automatically given your own area in Microsoft's ***OneDrive.com*** into which you can save and share files.

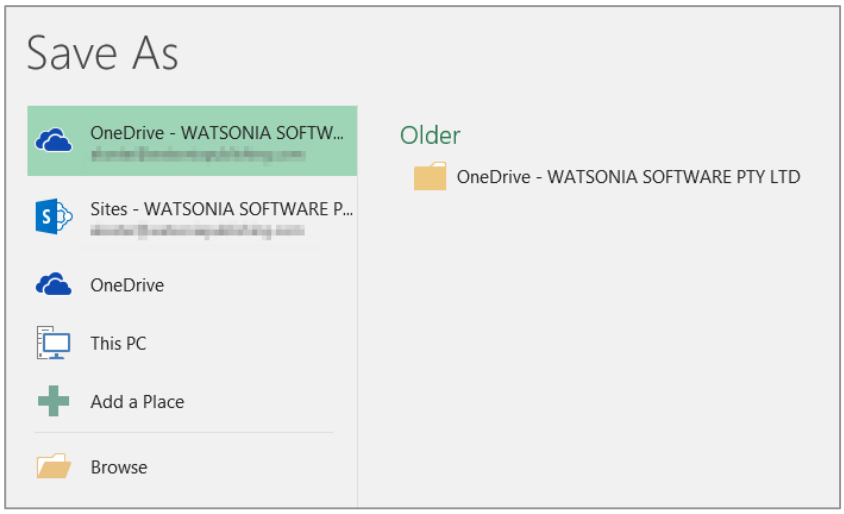
## Try This Yourself:

***Same File***

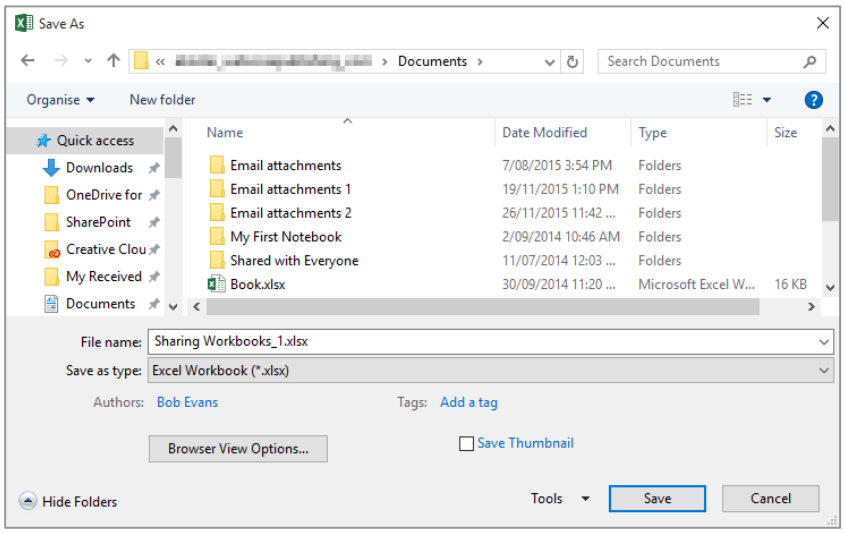
*Continue using the previous file with this exercise, or open the file Sharing Workbooks_1.xlsx...*

1. Click on the ***File*** tab, then click on ***Save As*** to display the ***Save As*** place
2. Click on ***OneDrive*** under ***Save As*** to see ***OneDrive*** folders to the right
3. Click on a folder in the right pane to display the ***Save As*** dialog box
4. Double-click on the required folder to open it, then click on **[Save]** to save this document to ***OneDrive***

*Leave this document open for the next exercise*




2




3 *Tip: If you haven't already signed in to your Microsoft account, ensure the Save As place is displayed and OneDrive is selected, then click on **[Sign in]** to open the **Add a service** dialog box. Type your email address and click on **[Next]**, then type your **Password** and click on **[Sign in]** to add **OneDrive** as a new connected service.*

## For Your Reference…

To ***save*** a ***file*** to ***OneDrive***:

1. Click on the ***File*** tab, then click on ***Save As***
2. Click on ***OneDrive*** and click on **[Sign in]** if necessary
3. Select a recent folder or click on **[Browse]**
4. Click on **[Save]**

## Handy to Know…

- Once you have signed into OneDrive you won't need to sign in again prior to saving a file to OneDrive. Instead, click on ***Your OneDrive*** in the ***Save As*** place to see your recently visited folders and the **[Browse]** button in the right pane.

# SHARING WORKBOOKS

Saving a workbook to OneDrive is just the first step required to prepare for co-authoring. The second step involves sharing your OneDrive document with other colleagues. As you complete this step, all invited recipients will receive an email with the link to your workbook.

## Try This Yourself:

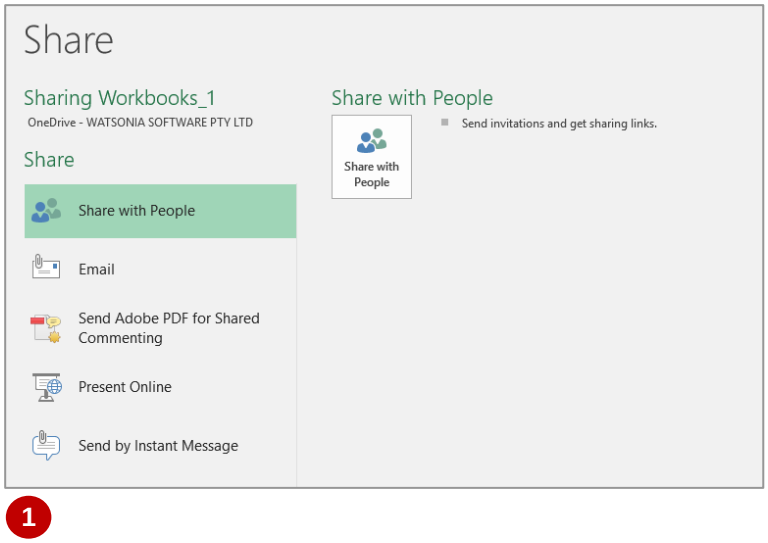
*Continue using the previous file with this exercise…*

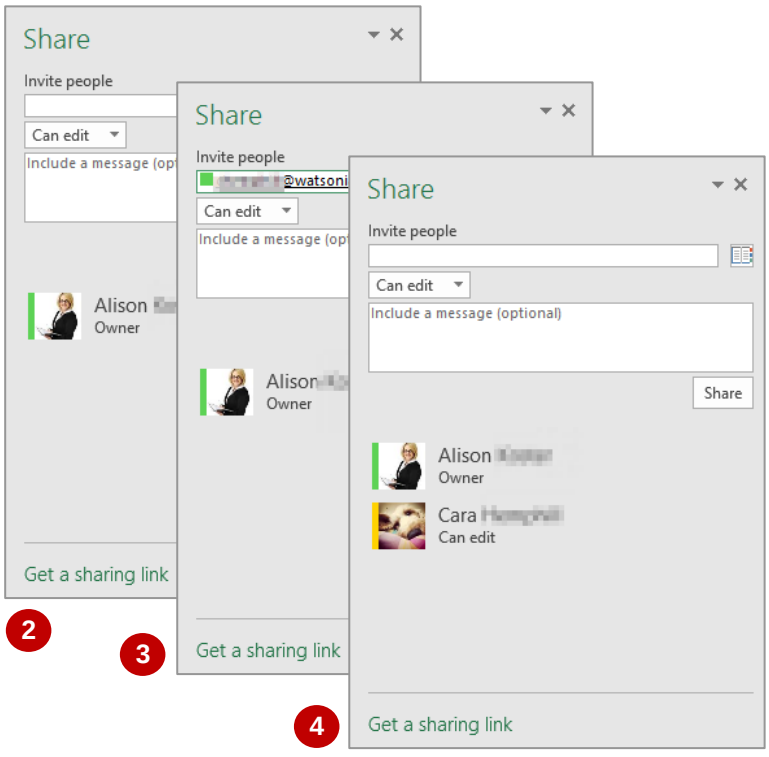
1. Click on the ***File*** tab, then click on ***Share*** to see the sharing options
2. Ensure ***Share with People*** is selected under ***Share***, then click on **[Share with People]** on the right side of the screen

   *The workbook is displayed again with the Share pane displayed on the right…*
3. Type the email address of the person with whom you wish to share the workbook in ***Invite people***, then ensure ***Can edit*** is selected below the email field

   *If you wish, you could type a message in the Include a personal message with this invitation box, otherwise only the default message will appear "Name has a document to share with you on OneDrive. To view it click the link below"…*
4. Click on **[Share]**

   *An email will be sent to the people you have shared the workbook with and they will be listed under you in the Share pane…*
5. Close the workbook without saving




### For Your Reference…

To ***share*** a ***document saved*** on ***OneDrive***:

1. Click on the ***File*** tab, then click on ***Share***
2. Click on ***Invite People***, type the email addresses and select ***Can edit***
3. Click on **[Share]**

### Handy to Know…

- The people with whom you share the workbook must have their own Microsoft account, as well as Excel installed on their computers.

# OPENING SHARED WORKBOOKS

People can share documents with you in a variety of different ways. Using the ***Share*** area in the ***Backstage*** they can elect to share the document for review or editing by emailing a link to you, providing a link in another way or posting to social networks. For the example below we are assuming that the person sharing the document has emailed a link to you.

## To Open A Shared Document

1. In ***Outlook*** (or the ***Mail*** app in Office 365), open the message with the subject ***Name has shared a document with you***, then click on the link
2. Depending on whether you are signed in to ***OneDrive*** or not, and whether the person who shared the file with you has specified whether you need to sign in to view the file, you may have to sign into your Microsoft account in ***OneDrive***
3. The document will automatically open in ***Excel Online***.

## Reviewing Documents Using The Excel Web App

When you first open a shared document, it will display in ***Excel Online*** by default. This window contains a limited number of tabs with minimal number of functions to help you quickly and easily review the document.

1. The ***Edit Workbook*** tab allows you to choose to edit the document in ***Excel*** or edit the document in ***Excel Online***.
2. The ***Print*** tab converts your document to a PDF for easy printing.
3. The ***Share*** tab shows you who has permission to view and edit the file, as well as the owner of the file.
4. The ***Data*** tab allows you to refresh the file to show the most recent changes, or recalculate the workbook to update the data.
5. The menu button provides a range of options including those for performing a ***Find*** operation, adding comments, downloading the file, saving a copy of the file, accessing help, providing feedback to Microsoft, and viewing information such as the terms of use and privacy information.

## Editing Documents Using The Excel Web App

***Excel Online*** provides you with two options for editing shared documents. You can either edit the document in the browser using a simplified version of Excel with limited functionality or you can choose to edit the document in your desktop version of Excel.

To edit the document in the browser:

- Click on the ***Edit Workbook*** tab and select **Edit in Excel Online**

To edit the document in Excel:

- Click on the ***Edit Workbook*** tab and select **Edit in Excel**, or
- If you opened the document for editing in ***Excel Online***, click on the ***OPEN IN EXCEL*** tab.

# ENABLING TRACKED CHANGES

When you are collaborating on a workbook, it is easy to forget who did what and when. That's where the ***Track Changes*** tool comes in! As the name suggests, ***tracking*** does not remove the original text from the document; it simply marks the change. In this way, you are able to clearly see where changes have been made, who made them and what the changes are.

## Try This Yourself:

*Same File* *Continue using the previous file with this exercise, or open the file Sharing Workbooks_2.xlsx...*

1. Click in cell ***G5,*** type **3555**, then press Enter

   *The new figures override the old…*

2. Click on the ***Review*** tab, click on ***Track Changes*** in the ***Changes*** group, then select **Highlight Changes**

   *The Highlight Changes dialog box will display…*

3. Click on ***Track changes while editing. This also shares your workbook.*** so it appears ticked, then click on **[OK]**

   *All changes in the worksheet will now be tracked…*

4. Click on **[OK]** to save the workbook

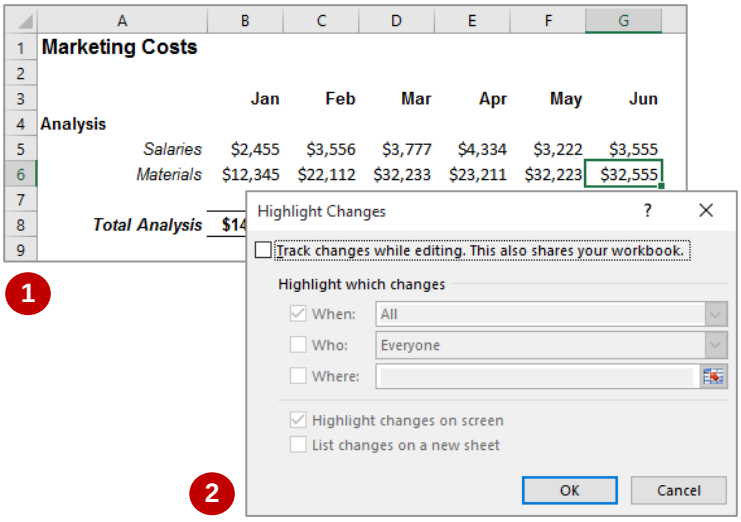
5. Repeat step ***1*** to change the value in cell ***G5*** to ***3444***

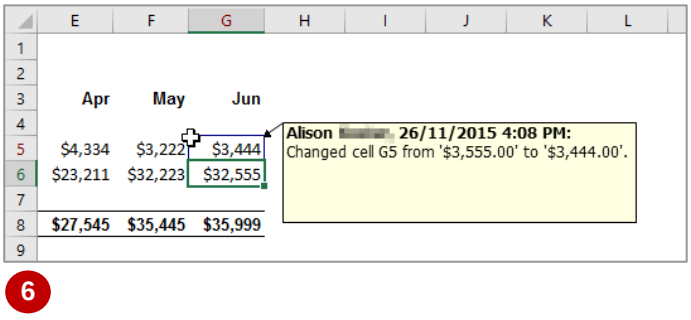
   *Notice a blue outline appears around the cell and a triangle appears in the top left corner…*

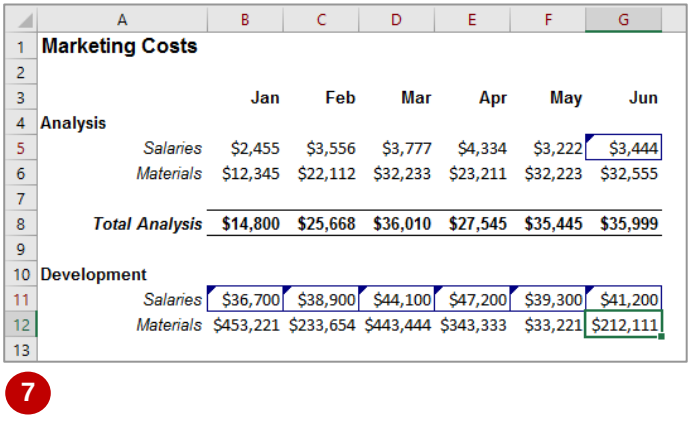
6. Point to the triangle to view a message describing details of the change

7. Repeat step ***1*** to make the changes to the following cells

| | | | |
|---|---|---|---|
| ***B11*** | ***36700*** | ***E11*** | ***47200*** |
| ***C11*** | ***38900*** | ***F11*** | ***39300*** |
| ***D11*** | ***44100*** | ***G11*** | ***41200*** |




### For Your Reference…

To ***track changes***:

1. Click on the ***Review*** tab, then click on ***Track Changes*** in the ***Changes*** group
2. Select **Highlight Changes**
3. Click on ***Track changes while editing*** so it appears ticked
4. Click on **[OK]** twice

### Handy to Know…

- ***Track Changes*** is extremely useful when you are working collaboratively as it allows you to see changes alongside the original text and accept or reject these changes. Each reviewers' changes are distinguished from another's, making it easy to see what each individual reviewer has contributed.

# ACCEPTING OR REJECTING CHANGES

***Change tracking*** stores a history of the changes made to cells. It is designed so that you can review the changes that have been made by other users and either ***accept*** or ***reject*** them.

This feature is useful if a number of people in your team are working on a single proposal. You can let people make their recommendations then, as co-ordinator, either accept or reject them.

## Try This Yourself:

Same File

*Continue using the previous file with this exercise, or open the file Sharing Workbooks_3.xlsx...*

1. On the ***Review*** tab, click on ***Track Changes*** in the ***Changes*** group and select **Accept/Reject Changes**

   *The Select Changes to Accept or Reject dialog box appears. We'll work with all changes that are Not yet reviewed…*

2. Ensure that ***Not yet reviewed*** is selected in ***When*** under ***Which changes***, then click on **[OK]**

   *The Accept or Reject Changes dialog box will display with the first change displayed and a description of the change. You have several options at the bottom of the dialog box for how to deal with this change…*

3. Click on **[Accept]**

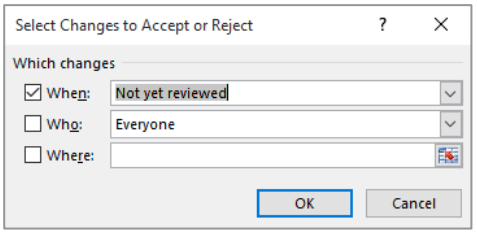
   *Excel will move to the next change – 2 of 7…*

4. Click on **[Reject]**

   *The original value will be restored to the cell and Excel will move to the next change…*

5. Click on **[Accept All]** to accept the remaining changes

1

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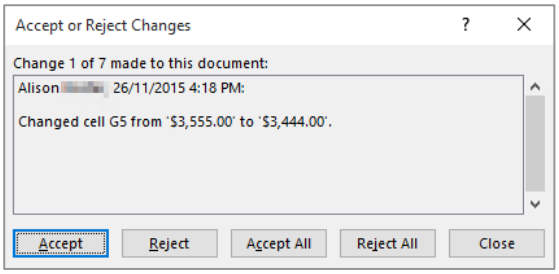
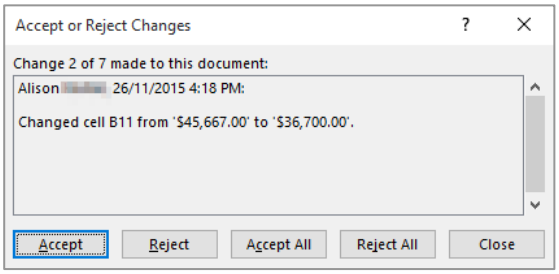
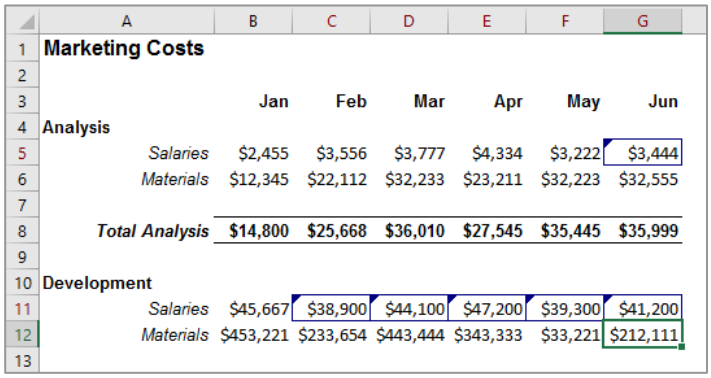



3



| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | **Marketing Costs** | | | | | | |
| 2 | | | | | | | |
| 3 | | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** |
| 4 | **Analysis** | | | | | | |
| 5 | *Salaries* | $2,455 | $3,556 | $3,777 | $4,334 | $3,222 | $3,444 |
| 6 | *Materials* | $12,345 | $22,112 | $32,233 | $23,211 | $32,223 | $32,555 |
| 7 | | | | | | | |
| 8 | ***Total Analysis*** | **$14,800** | **$25,668** | **$36,010** | **$27,545** | **$35,445** | **$35,999** |
| 9 | | | | | | | |
| 10 | **Development** | | | | | | |
| 11 | *Salaries* | $45,667 | $38,900 | $44,100 | $47,200 | $39,300 | $41,200 |
| 12 | *Materials* | $453,221 | $233,654 | $443,444 | $343,333 | $33,221 | $212,111 |
| 13 | | | | | | | |

5

### For Your Reference…

To ***accept*** or ***reject changes***:

1. On the ***Review*** tab, click on ***Track Changes*** in the ***Changes*** group
2. Select **Accept/Reject Changes**, then click on **[OK]**
3. Click on **[Accept]**, **[Reject]**, **[Accept All]**, or **[Reject All]** as required

### Handy to Know…

- The ***Select Changes to Accept or Reject*** dialog box enables you to control how you review the changes. You can review changes from a particular ***date***, limit the review to changes by a particular ***user***, or limit the review to a particular ***range*** in the worksheet.

# DISABLING TRACKED CHANGES

When you have finished collaborating with other users to create a single workbook, you will need to turn off change tracking. You can still use the ***Undo*** feature to undo changes you make during an editing session, but you will not be able to recall changes made before you last opened the file. If other users have the file open, they will need to save their changes with a different file name.

## Try This Yourself:

Same File

*Continue using the previous file with this exercise, or open the file Sharing Workbooks_4.xlsx...*

1. On the ***Review*** tab, click on ***Track Changes*** in the ***Changes*** group, then select **Highlight Changes**

   *The Highlight Changes dialog box will display…*

2. Click on ***Track changes while editing*** to remove the tick

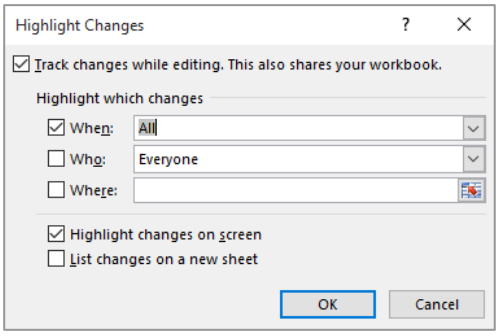
   *Excel will inform you that the workbook will be changed to exclusive use and ask for confirmation…*

3. Click on **[OK]**

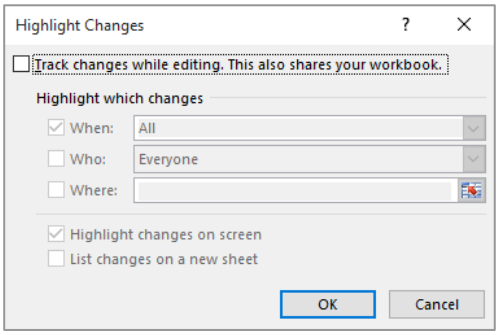
   *Excel will ask you to confirm that you want to remove the workbook from shared use…*

4. Click on **[Yes]**

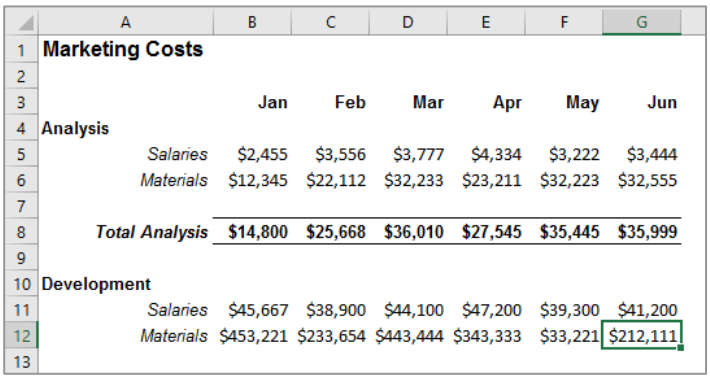
1




2




4



| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | **Marketing Costs** | | | | | | |
| 2 | | | | | | | |
| 3 | | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** |
| 4 | **Analysis** | | | | | | |
| 5 | *Salaries* | $2,455 | $3,556 | $3,777 | $4,334 | $3,222 | $3,444 |
| 6 | *Materials* | $12,345 | $22,112 | $32,233 | $23,211 | $32,223 | $32,555 |
| 7 | | | | | | | |
| 8 | ***Total Analysis*** | **$14,800** | **$25,668** | **$36,010** | **$27,545** | **$35,445** | **$35,999** |
| 9 | | | | | | | |
| 10 | **Development** | | | | | | |
| 11 | *Salaries* | $45,667 | $38,900 | $44,100 | $47,200 | $39,300 | $41,200 |
| 12 | *Materials* | $453,221 | $233,654 | $443,444 | $343,333 | $33,221 | $212,111 |
| 13 | | | | | | | |

### For Your Reference…

To ***turn off change tracking***:

1. On the ***Review*** tab, click on ***Track Changes*** and select **Highlight Changes**
2. Click on ***Track changes while editing*** until the tick is removed and click on **[OK]**

### Handy to Know…

- If you have opened a workbook and can't see the changes highlighted, click on the ***Review*** tab, click on ***Track Changes***, select **Highlight Changes** and click on **[OK]**. The comment boxes for each changed cell will appear.

# ADDING WORKSHEET COMMENTS

***Comments*** are notes that are added to cells. They don't appear in the cell themselves, but are indicated by a small red triangle at the top right-hand corner of the cell. ***Comments*** can be used for a variety of reasons such as recording feedback for other users or explaining a complicated formula. They can be viewed by hovering over any cell in which a red triangle appears.

## Try This Yourself:

Same File

*Continue using the previous file with this exercise, or open the file Sharing Workbooks_5.xlsx...*

1. Click in cell ***B5*** to select it

   *Let's add a comment to this cell…*

2. Click on the ***Review*** tab, then click on ***New Comment*** in the ***Comments*** group to display a new blank comment

   *The name of the user is automatically added and precedes the comment text…*

3. Type **Higher due to special marketing campaign**

4. Click elsewhere in the worksheet to hide the comment

   *Notice the red triangle is still visible in the cell…*

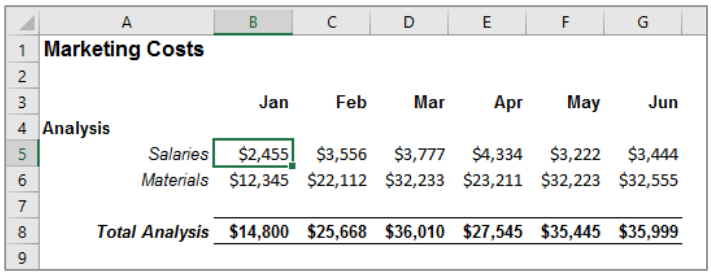
5. Point to the cell to see the comment

6. Repeat steps ***1*** to ***5*** to insert and view the following comments:

   ***E22*** **Highest since 2001**

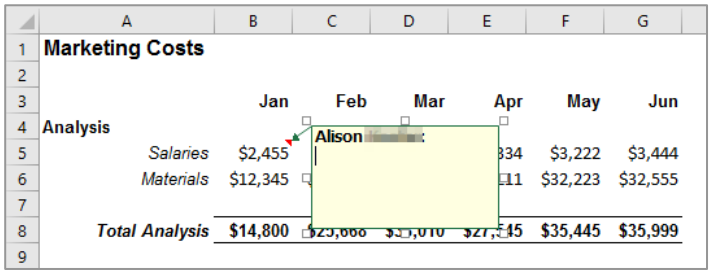
   ***F12*** **Savings achieved through partnership deal**

1



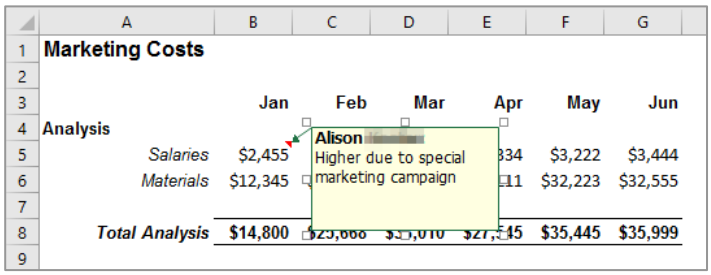
| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | **Marketing Costs** | | | | | | |
| 2 | | | | | | | |
| 3 | | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** |
| 4 | **Analysis** | | | | | | |
| 5 | *Salaries* | $2,455 | $3,556 | $3,777 | $4,334 | $3,222 | $3,444 |
| 6 | *Materials* | $12,345 | $22,112 | $32,233 | $23,211 | $32,223 | $32,555 |
| 7 | | | | | | | |
| 8 | ***Total Analysis*** | **$14,800** | **$25,668** | **$36,010** | **$27,545** | **$35,445** | **$35,999** |
| 9 | | | | | | | |

2



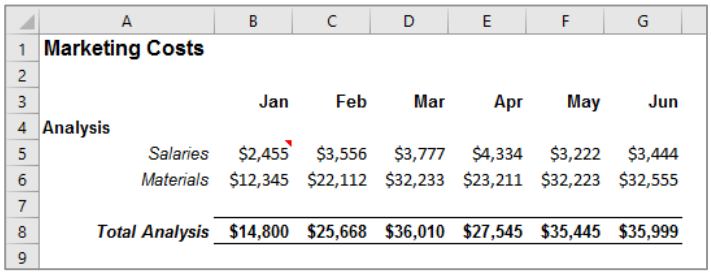
| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | **Marketing Costs** | | | | | | |
| 2 | | | | | | | |
| 3 | | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** |
| 4 | **Analysis** | | | | | | |
| 5 | *Salaries* | $2,455 | Alison: | | 334 | $3,222 | $3,444 |
| 6 | *Materials* | $12,345 | | | 11 | $32,223 | $32,555 |
| 7 | | | | | | | |
| 8 | ***Total Analysis*** | **$14,800** | | | 45 | **$35,445** | **$35,999** |
| 9 | | | | | | | |

3



| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | **Marketing Costs** | | | | | | |
| 2 | | | | | | | |
| 3 | | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** |
| 4 | **Analysis** | | | | | | |
| 5 | *Salaries* | $2,455 | Alison:<br>Higher due to special | | 334 | $3,222 | $3,444 |
| 6 | *Materials* | $12,345 | marketing campaign | | 11 | $32,223 | $32,555 |
| 7 | | | | | | | |
| 8 | ***Total Analysis*** | **$14,800** | | | 45 | **$35,445** | **$35,999** |
| 9 | | | | | | | |

4



| | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 1 | **Marketing Costs** | | | | | | |
| 2 | | | | | | | |
| 3 | | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** |
| 4 | **Analysis** | | | | | | |
| 5 | *Salaries* | $2,455 | $3,556 | $3,777 | $4,334 | $3,222 | $3,444 |
| 6 | *Materials* | $12,345 | $22,112 | $32,233 | $23,211 | $32,223 | $32,555 |
| 7 | | | | | | | |
| 8 | ***Total Analysis*** | **$14,800** | **$25,668** | **$36,010** | **$27,545** | **$35,445** | **$35,999** |
| 9 | | | | | | | |

### For Your Reference…

To ***add*** a ***worksheet comment***:

1. Click on the relevant cell
2. Click on the ***Review*** tab, then click on ***New Comment*** in the ***Comments*** group
3. Type the comment

### Handy to Know…

- You can right-click on a cell and select **Insert Comment** to insert a new comment.
- You can only add a single comment box to a cell. Any additional comments can be typed in the same box as the existing text.

# NAVIGATING WORKSHEET COMMENTS

If you have a large quantity of comments in a workbook it can be quite a tedious process to read through them all. Fortunately, Excel makes the process easier with some handy ways for navigating between different comments and showing or hiding them.

## Try This Yourself:

*Same File* *Continue using the previous file with this exercise, or open the file Sharing Workbooks_6.xlsx...*

1. Click in cell ***B5*** to select it

   *Notice when you move the cursor away the comment disappears…*

2. Click on the ***Review*** tab, then click on ***Next*** in the ***Comments*** group

   *This displays the comment for cell B5…*

3. Repeat step ***2*** to navigate to the comment for cell ***F12***

4. Click on ***Previous*** in the ***Comments*** group

   *Excel returns to the previous comment which is the comment for cell B5...*

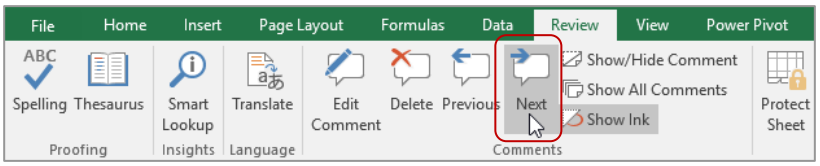
5. Click in cell ***E22*** to select it

6. Click on ***Show/Hide Comment*** in the ***Comments*** group to show the comment

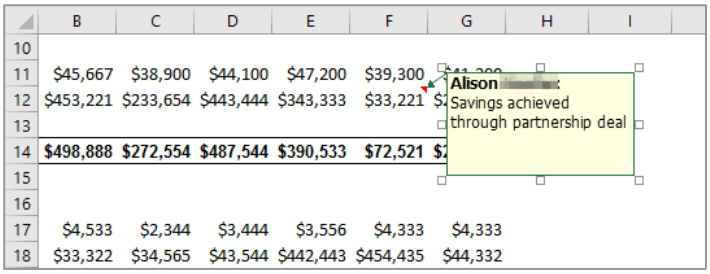
7. Repeat step ***6*** to hide the comment

8. Click on ***Show All Comments*** to display all comments

9. Repeat step ***8*** to hide all comments




2

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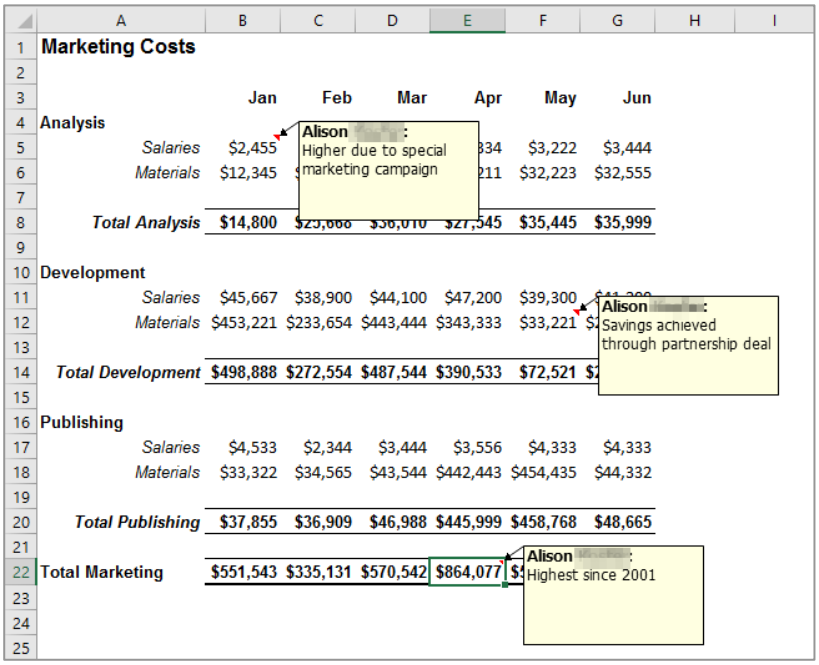



8

### For Your Reference…

To ***show all comments***:

1. Click on the ***Review*** tab
2. Click on ***Show All Comments*** in the ***Comments*** group

### Handy to Know…

- You can right-click on a cell and select **Show/Hide Comments** to display a single comment.
- You can print displayed comments. Click on the ***File*** tab and select **Print**. Click on ***Page Setup*** and click on the ***Sheet*** tab. Select an option in ***Comments***.

# EDITING WORKSHEET COMMENTS

Worksheet comments can be edited at any time – either to correct or amend the existing text, or to record additional comments. If different users access the same worksheet, the user's name will be included prior to the comment. You can either edit a comment via a ribbon command, or view the comments and then edit the text as displayed in the worksheet.

## Try This Yourself:

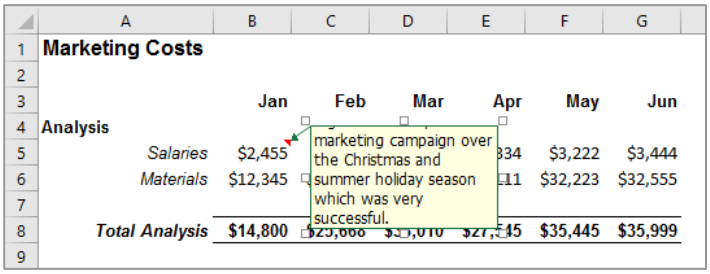
Same File

*Continue using the previous file with this exercise, or open the file Sharing Workbooks_7.xlsx...*

1. Click in cell ***B5*** to select it
2. On the ***Review*** tab, click on ***Edit Comment*** in the ***Comments*** group to display the comment text
3. Press Space and type **over the Christmas and summer holiday season which was very successful.**
4. Drag the right middle handle of the comment box to the right to resize it so that all of the text is visible, as shown
5. Click elsewhere to close the comment
6. On the ***Review*** tab, click on ***Show All Comments***
7. Click in the lowest comment, then type **due to hardcover expansion.**
8. Select the text ***Highest since 2001***, click on the ***Home*** tab, then click on ***Bold*** and ***Italic*** in the ***Font*** group

   *This changes the selected text to bold and italic*

3

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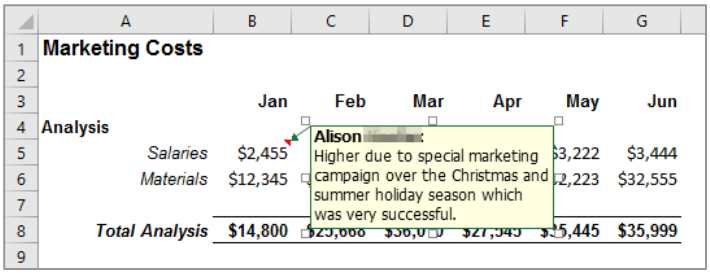


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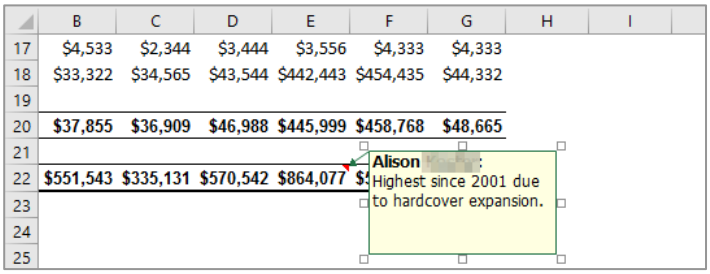
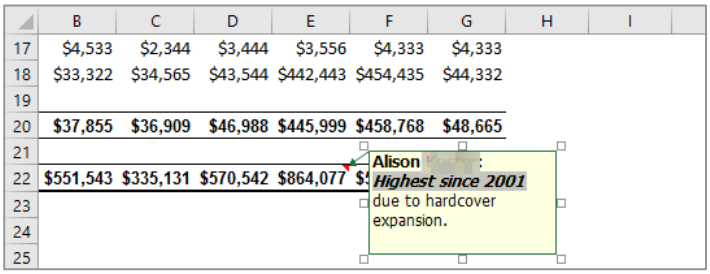



8




## For Your Reference…

To ***edit*** a ***comment***:

1. Click on the relevant cell then
2. Click on the ***Review*** tab, then click on ***Edit Comment*** in the ***Comments*** group
3. Click in the comment and edit the text
4. Click elsewhere to close the comment

## Handy to Know…

- You can format comments to change and edit things such as the font, text alignment, colour, size etc. by using the options in the ***Format Comment*** dialog box. To display the ***Format Comment*** dialog box, right-click on a selected comment and select **Format Comment**.

# DELETING COMMENTS

Worksheet comments can be ***deleted*** from a worksheet either individually or all at once. You may decide to delete an individual comment because it has been responded to or is no longer required. Alternatively, you may need to remove all comments before you pass the worksheet on to a client or on to another department.

## Try This Yourself:

***Same File***

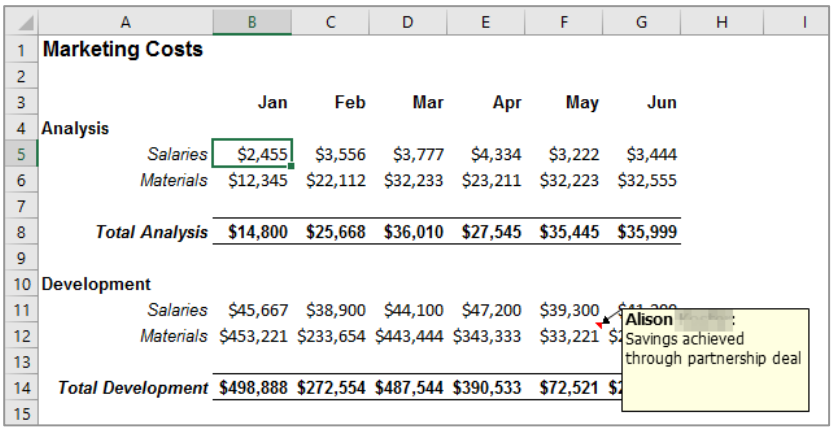
*Continue using the previous file with this exercise, or open the file Sharing Workbooks_8.xlsx...*

1. Ensure the ***Review*** tab is active and all comments are displayed
2. Click in cell ***B5***, then click on ***Delete*** in the ***Comments*** group

   *The comment for cell B5 is deleted.*

   *Let's try another method…*
3. Click in cell ***F12***, then click on the ***Home*** tab
4. Click on ***Clear*** in the ***Editing*** group and select **Clear Comments**, as shown

   *The comment for cell F12 is deleted*

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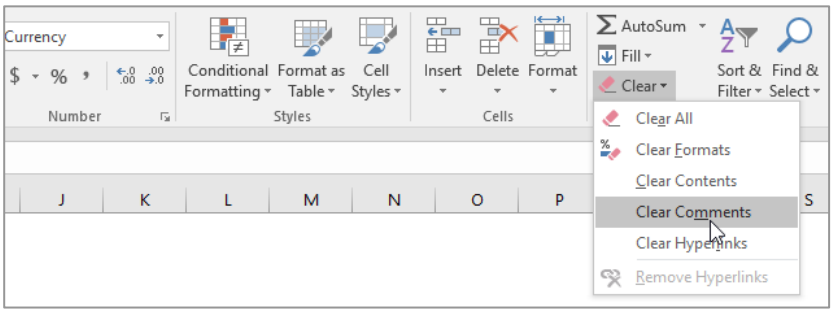


4

### For Your Reference…

To ***delete comments***:

1. Select the relevant cell
2. Click on the ***Review*** tab and click on ***Delete*** in the ***Comments*** group, or

   Click on the ***Home*** tab, click on ***Clear*** in the ***Editing*** group, then select **Clear Comments**

### Handy to Know…

- You can delete a comment by right-clicking on the relevant cell to display a shortcut menu and selecting **Delete Comment**.

# NOTES:

# CONCLUDING REMARKS

## Congratulations!

You have now completed Microsoft Excel 2016 - Essentials. Microsoft Excel 2016 - Essentials was designed to get you to the point where you can competently perform a variety of operations.

We have tried to build up your skills and knowledge by having you work through specific tasks. The step by step approach will serve as a reference for you when you need to repeat a task.

## Where To From Here?

The following is a little advice about what to do next:

- Spend some time playing with what you have learnt. You should reinforce the skills that you have acquired and use some of the application's commands. This will test just how much of the concepts and features have stuck! Don't try a big task just yet if you can avoid it - small is a good way to start.
- Some aspects of the course may now be a little vague. Go over some of the points that you may be unclear about. Use the examples and exercises in these notes and have another go - these step-by-step notes were designed to help you in the classroom and in the work place!

Here are a few techniques and strategies that we've found handy for learning more about technology:

- read computer magazines - there are often useful articles about specific techniques
- if you have the skills and facilities browse the Internet, specifically the technical pages of the application that you have just learnt
- take an interest in what your work colleagues have done and how they did it - we don't suggest that you plagiarise but you can certainly learn from the techniques of others
- if your software came with a manual (which is rare nowadays) spend a bit of time each day reading a few pages. Then try the techniques out straight away - over a period of time you'll learn a lot this way
- and of course, there are also more courses and books for you to work through.

### Hungry for More?

We live in an ever-changing world where we all need to review and upgrade our skills.

If you have received this course book on a training course why not ask the tutor or trainer for other courses that may be of benefit to you. If you are attending a college ask for one of their brochures.

Alternatively, if you've enjoyed using this course book you can find others that cover a wide range of topics at our web site www.watsoniapublishing.com.

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