

## CHAPTER 1

## InFocus

# CREATING WORKBOOKS

There are many aspects to learn when it comes to creating workbooks, including adding and formatting content and working with formulas.

**In this session you will:**

- ✓ gain an understanding of spreadsheets and how they work
- ✓ gain an understanding of what a spreadsheet can do for you
- ✓ learn how to start **Excel** from the desktop in **Windows 8**
- ✓ 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 to apply easy formatting
- ✓ learn how print a worksheet
- ✓ learn how to safely close a workbook
- ✓ learn how to open an existing workbook
- ✓ 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
- ✓ gain an understanding of common error messages
- ✓ learn how to apply easy formatting.

# HOW SPREADSHEETS WORK

Word processing packages are designed to process words – they let you write letters, compose faxes, prepare reports, write books, and much more. **Spreadsheet** packages on the other

hand, are designed to process numbers. While word processing applications are perfect for creating documents, spreadsheets are ideal for budgets, statistics, sales analyses, and the like.

## What Is A Spreadsheet?

According to the *Oxford Dictionary of Computing* a spreadsheet is...

*“A program that manipulates tables consisting of rows and columns of cells, and displays them on a screen; the cells contain numerical information and formulas, or text... The value in a numerical cell is either typed in or is calculated from a formula in the cell; this formula can involve other cells. Each time the value of a cell is changed by typing in a new value from the keyboard, the value of all other cells whose values depend on this one are recalculated.”*

The screen below shows a spreadsheet application being used to calculate weekly pay for four employees. Spreadsheet applications are laid out as tables comprising **rows** and **columns** – notice how the columns have alphabetical headings and the rows are numbered (down the side) numerically. The intersection of a column and a row is known as a **cell**. Your data, comprising text (referred to as **labels**), numbers (referred to as **values**) or **formulas** is typed into these cells.

**Text** is typed into cells and is normally used as labels – here text has been used as headings, to list employees, and to identify the types of calculations.

	A	B	C	D	E	F
1	<b>Weekly Pays</b>					
2						
3	<b>First Name</b>	<b>Last Name</b>	<b>Hourly Rate</b>	<b>Hours</b>	<b>Gross Pay</b>	
4						
5	Margaret	Adams	15.50	24.00	372.00	
6	John	Brown	16.75	16.20	271.35	
7	Grace	Francis	12.50	12.00	150.00	
8	Stephen	Simpson	9.65	18.30	176.60	
9						
10			<b>Total</b>	70.50	969.95	
11			<b>Average</b>	17.63	242.49	
12			<b>Maximum</b>	24.00	372.00	
13			<b>Minimum</b>	12.00	150.00	
14						
15						

**Numerical information** appears here as values representing the Hourly Rate and the Hours worked.

It also appears here as **formulas** which calculated the Gross Pay, the Total, the Average, and the Maximum and Minimum hours and pays.

## What Are Formulas?

In the example above, the gross pays, total, average, maximum, and minimum figures are **formulas** that are dependent on the data values under **Hourly Rate** and **Hours**. Each time a value in **Hourly Rate** or **Hours** is changed, all of the formulas that are dependent on that value are recalculated instantly. In the screen below, the hours worked by **Stephen Simpson** have changed from **18.30** to **27.50**, and the hourly rate for **Grace Francis** has increased from **12.50** to **18.00** – notice how the relevant **Gross Pay** information and statistics have changed.

	A	B	C	D	E	F
1	<b>Weekly Pays</b>					
2						
3	<b>First Name</b>	<b>Last Name</b>	<b>Hourly Rate</b>	<b>Hours</b>	<b>Gross Pay</b>	
4						
5	Margaret	Adams	15.50	24.00	372.00	
6	John	Brown	16.75	16.20	271.35	
7	Grace	Francis	18.00	12.00	216.00	
8	Stephen	Simpson	9.65	27.50	265.38	
9						
10			<b>Total</b>	79.70	1,124.73	
11			<b>Average</b>	19.93	281.18	
12			<b>Maximum</b>	27.50	372.00	
13			<b>Minimum</b>	12.00	216.00	
14						
15						

Only two changes, to the value in hours for Stephen Smith and the hourly rate for Grace Francis, led to the instant recalculation of many of the formulas in the other cells – this is an important aspect of spreadsheets.

# WHAT A SPREADSHEET CAN DO

Over the years the functionality of spreadsheets has increased. Today spreadsheets provide three main functions. Primarily they allow you to type numbers to perform calculations. They also

allow you to display those numbers pictorially as graphs. Finally, spreadsheets allow you to enter data into lists and to perform operations such as sorting, filtering, and summarising of those lists.

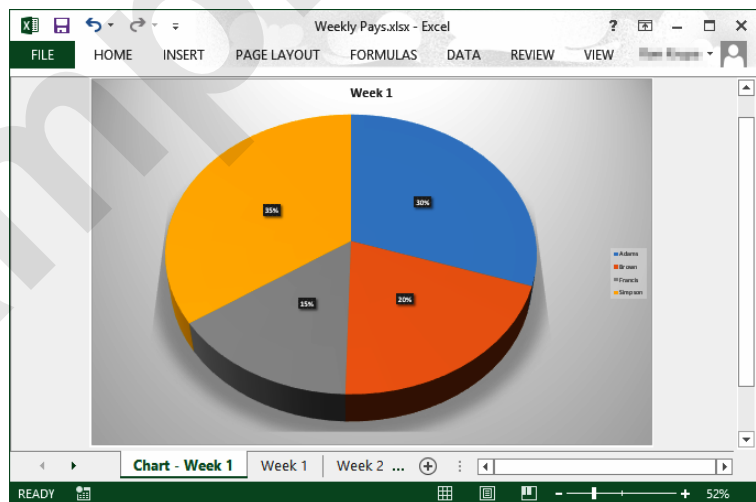
## Performing Calculations

Spreadsheets are most commonly identified as applications that help you process numbers. Numbers are entered into cells and formulas that use these numbers are automatically and instantly recalculated. This is sometimes referred to as **numeric modelling**.

First Name	Last Name	Hourly Rate	Hours	Gross Pay
Margaret	Adams	15.50	24.00	372.00
John	Brown	16.75	16.20	271.35
Grace	Francis	18.00	12.00	216.00
Stephen	Simpson	9.65	27.50	265.38
Total			79.70	1,124.73
Average			19.93	281.18
Maximum			27.50	372.00
Minimum			12.00	216.00

## Creating Graphs

Graphs, or **charts** as they are known in Excel, allow you to pictorially view the data in a worksheet. Charts are created based on one or more series of numbers that are in the worksheet. These numbers may have been typed or may appear as the result of a calculation. Like formulas, charts are automatically updated when the data in the worksheet changes.



## Working With Lists

A list is simply a collection of items organised into columns and rows – and since that is how a worksheet is organised it is only logical that list-type operations can be performed. These operations include the ability to filter (search and display) specific data, the ability to sort the data either numerically or alphabetically, and the ability to summarise the data such as displaying the total of a particular column. Notice how this list has been sorted by *Hourly Rate* from largest to smallest.

First Name	Last Name	Department	Location	Hourly Rate
Helen	Davison	Management	Head Office	27.90
Julie	Moore	Sales	North Region	23.40
Michael	Shoo	Management	South Region	22.60
Bill	Abrams	Finance	Head Office	21.50
Debra	Barnes	Sales	East Region	18.60
Grace	Francis	Admin	Head Office	18.00
John	Brown	Sales	North Region	16.75
Betty	Bluster	Sales	East Region	16.70
Marty	Zammit	Sales	South Region	15.90
Margaret	Adams	Sales	Head Office	15.50
Jason	Blair	Sales	South Region	13.50
Montgomery	Jones	Admin	South Region	11.20
Stephen	Simpson	Finance	South Region	9.65

# STARTING EXCEL FROM THE DESKTOP

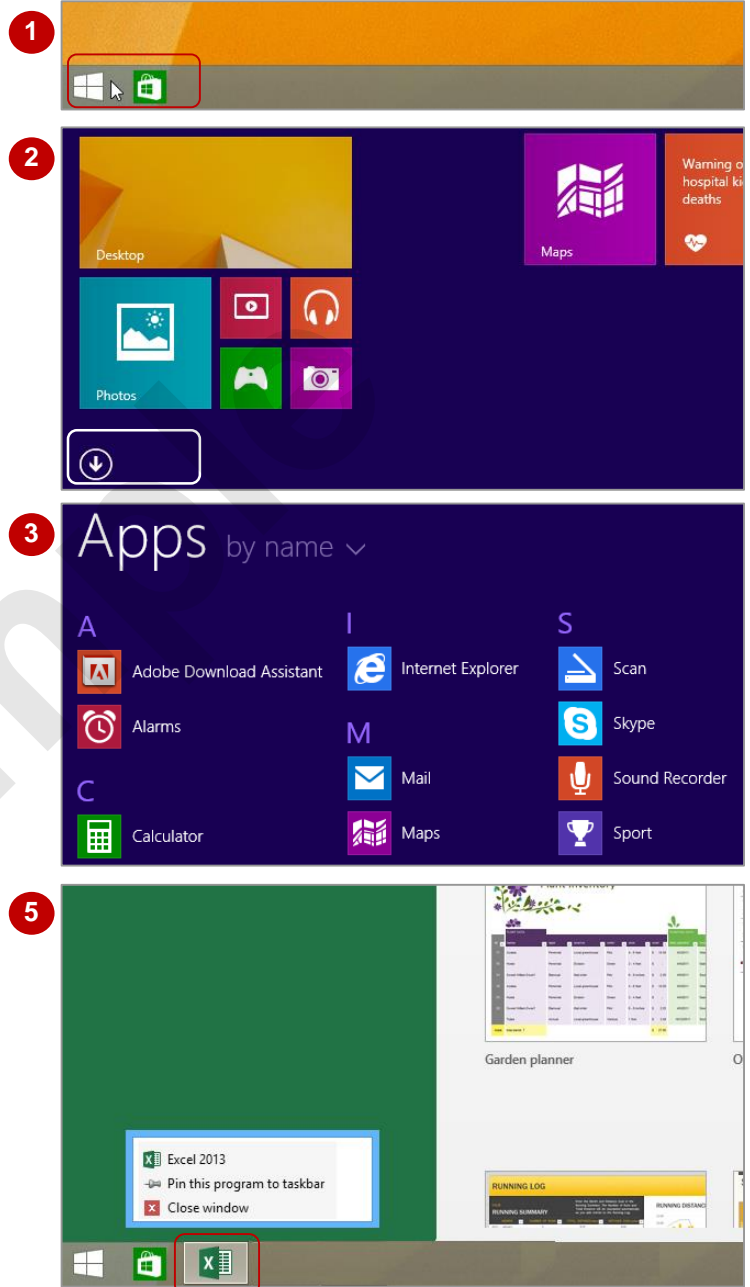
To create or edit a workbook, the first thing you must do is start Excel. If your computer uses Windows 8.1 it will default to either the desktop or the **Windows Start** screen, depending on the

technology you are using. If the desktop appears by default, you may need to access the **Windows Start** screen to open Excel, unless you have previously created a shortcut icon on the desktop.

## 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** screen
- 2 Move the mouse pointer to display the white **down arrow** icon in the bottom left corner of the **Start** screen, as shown
- 3 Click on the white arrow to display the **Apps** view  
*From here you can view all of your apps, including Excel...*
- 4 Locate the **Microsoft Office 2013** apps, then click on **Excel 2013** to open Excel with the Excel **Start** screen displayed
- 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



## For Your Reference...

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

1. From the **Windows Start** screen, click on the white down arrow icon to display the **Apps** view
2. Right-click on **Excel 2013**
3. Select **Pin to taskbar**

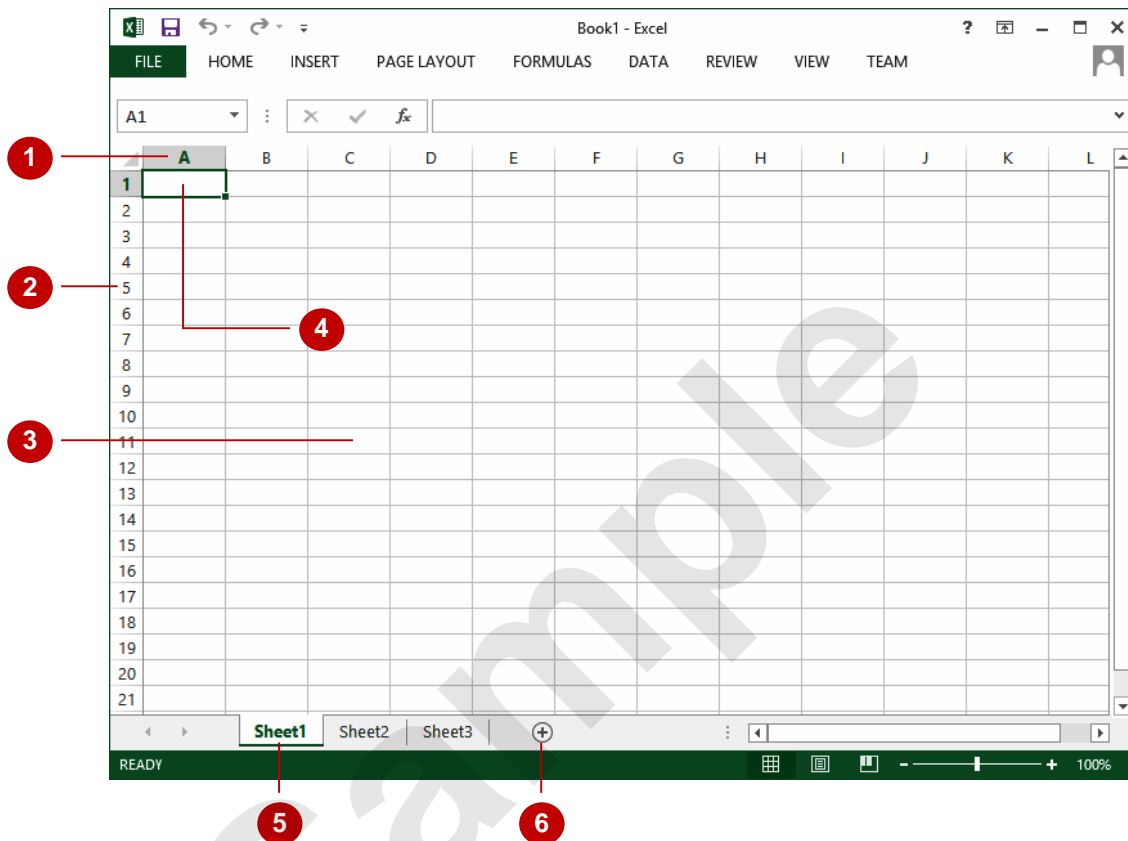
## Handy to Know...

- If your computer displays the **Start** screen, rather than the desktop by default, you can type the name of the application you wish to open directly into the **Start** screen to display the **Search** pane, then simply click on the application's name that appears in the **Search** pane.

# 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.

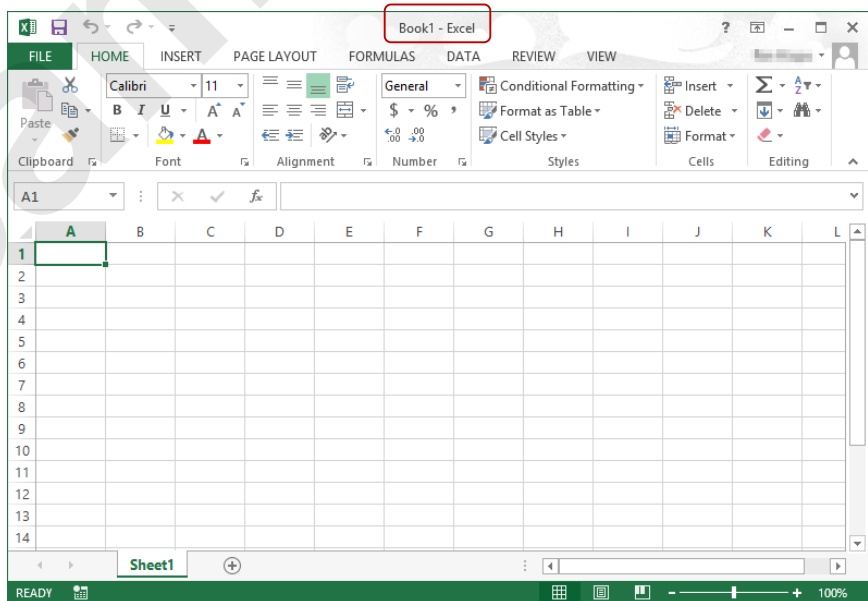
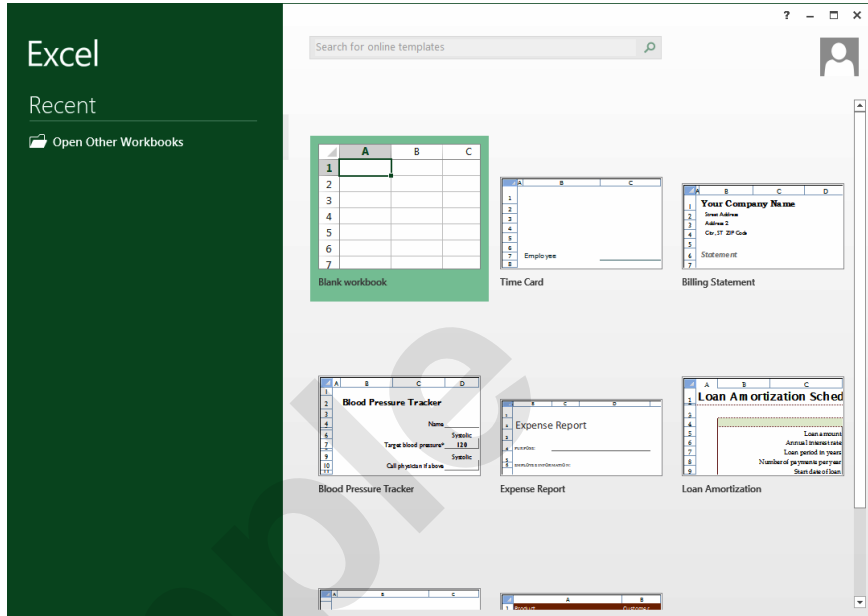
## Try This Yourself:

*Before you begin ensure Windows has started...*

- 1 Start **Excel 2013** 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*



## 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**
- 5 Enter the remaining text in row **2** as shown

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

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

	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							

	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							

	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 *E1302\_Creating A New Workbook\_1.xlsx...*

- 1 Click in cell **B3** to make this the active cell
- 2 Type **17200**, then press  or
- 3 Enter the remaining values into the other cells as shown

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...

1

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

2

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

3

	A	B	C	D	E	F
1						
2		AUS	NZ	UK	Europe	
3	Garden Settings	17200	17850	18100	63598	
4	Pool Covers	21412	25942	24944	53624	
5	Fountains	20824	31288	37456	48569	
6	Large Tubs	20722	29782	35963	25126	
7	Brush Fencing	49254	64750	125811	75863	
8						
9						

## For Your Reference...

To **enter values**:

1. Click in the desired cell and type the required information
2. Press , an arrow key or  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 *E1302\_Creating A New Workbook\_2.xlsx*...

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

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...

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

1

	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	64750	125811	75863		
8							
9							
10							
11							
12							

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	64750	125811	75863		
8							
9							
10	Sales at:	31-Aug					
11							
12							

5

	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	64750	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.

	A	B	C	D	E	F	G	H
1								
2								
3								
4		Monday						
5								
6								
7								
8								
9								

The fill handle

	A	B	C	D	E	F	G	H
1								
2								
3								
4		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
5								
6								
7								
8								
9								

## 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
1						
2		AUS	NZ	UK	Europe	
3	Garden Settings	17200	17850	35050	52900	123000
4	Pool Covers	21412	25942	24944	53624	
5	Fountains	20824	31288	37456	48569	
6	Large Tubs	20722	29782	35963	25126	
7	Brush Fencing	49254	64750	125811	75863	

	A	B	C	D	E	F	G
1							
2		AUS	NZ	UK	Europe		
3	Garden Settings	17200	17850	35050	52900	123000	
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	64750	125811	75863	315678	

# 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:

Open  
File

Before starting this exercise you **MUST** open the file *E1302\_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	64750	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	64750	125811	75863		
8		129412					
9							

5

B8	:	X	✓	f <sub>x</sub>	=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	64750	125811	75863		
8		129412	169612				
9							

6

C8	:	X	✓	f <sub>x</sub>	=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	64750	125811	75863		
8		129412	169612				
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 *E1302\_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

C8

:

✕

✓

*f<sub>x</sub>*

=SUM(C3:C7)

	A	B	C	D	E	F	G	H
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	64750	125811	75863			
8		129412	169612					
9								

5

SUM		:	X	✓	f <sub>x</sub>	=SUM(B3:E3)		
	A	B	C	D	E	F	G	H
1								
2		AUS	NZ	UK	Europe			
3	Garden Se	17200	17850	18100	63598	=SUM(B3:E3)		
4	Pool Cove	21412	25942	24944	53624	SUM(number1, [number2], ...)		
5	Fountains	20824	31288	37456	48569			
6	Large Tub	20722	29782	35963	25126			
7	Brush Fen	49254	64750	125811	75863			
8		129412	169612	242274	266780			
9								

7

F3

:

✕

✓

*f<sub>x</sub>*

=SUM(B3:E3)

	A	B	C	D	E	F	G	H
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	64750	125811	75863	315678		
8		129412	169612	242274	266780	808078		
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**.