Guided Computer Tutorials

Learning Microsoft® Excel® 2019

Module 2

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Learning Microsoft Excel 2019

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Making Predictions With Excel

One of the many advantages of using a spreadsheet is that it allows you to make predictions about possible outcomes; for example, predicting profits, wages bills or sales. In this chapter you will use a spreadsheet to predict the possible profits for a motel.

The Motel Template

You are the manager of a seaside motel which does most of its business during the summer months. It has 20 single rooms and 30 doubles. Prices must be set to ensure enough profit is made in the holiday season to stay in business through the leaner winter months.

You know from past experience that single room occupants will spend an average of $15 a day on food, whilst double room occupants will spend $20.

A   Loading the Template

1   Load Microsoft Excel and click on the OPEN icon in the QUICK ACCESS TOOLBAR or from within the FILE tab or FILE menu.

2   Access the EXCEL 2019 SUPPORT FILES folder and open the CHAPTER 11 folder.

3   Open the MOTEL template, selecting YES to the READ-ONLY dialogue box.

B   Calculating the Income From Rooms

You will now be working with longer formulas. The INCOME FROM ROOMS is found by:

•   Multiplying the SINGLE ROOMS OCCUPIED by the SINGLE ROOM RATE, that is: B3 * B6

•   Multiplying the DOUBLE ROOMS OCCUPIED by the DOUBLE ROOM RATE, that is: B4 * B7

•   Combining the two parts into a single formula we have:

$$= (B3 * B6) + (B4 * B7)$$

Click in cell B9 and enter the formula:

= (B3 * B6) + (B4* B7)
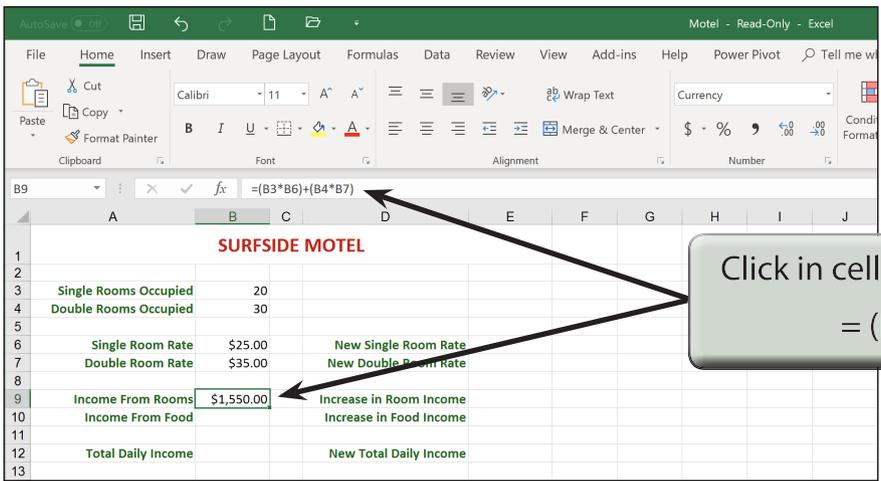
NOTE: **The brackets in the formula are not essential, but they do help to show clearly the two sections of the formula (income from single rooms and income from double rooms).**

C   Calculating the Income From Food

The INCOME FROM FOOD is calculated by:

- Multiplying SINGLE ROOMS OCCUPIED by $15 which is the average amount spent on food by single room occupants, that is: B3 * 15

- Multiplying DOUBLE ROOMS OCCUPIED by $20, that is: B4 * 20

- Combining the two parts of the formula together we have:

$$= (B3 * 15) + (B4 * 20)$$

Click in cell B10 and enter the formula:

= (B3 * 15) + (B4 * 20)
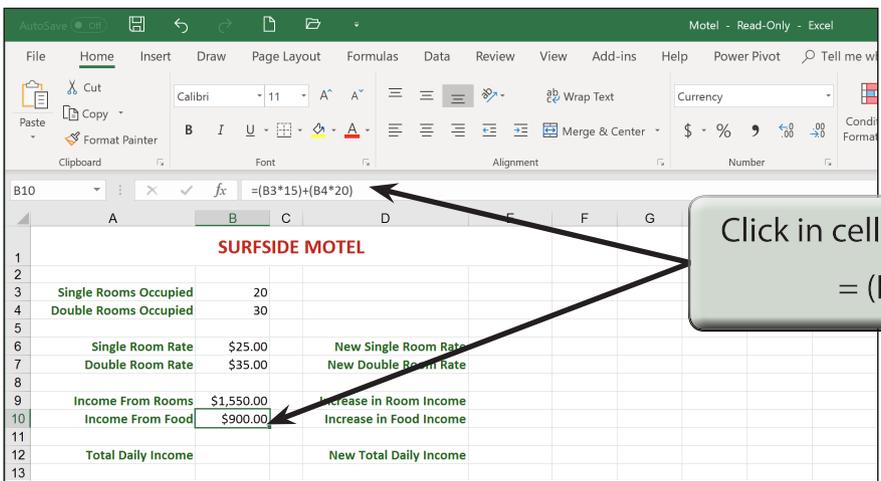
Making Decisions With Excel

We can instruct a spreadsheet to make decisions on entered labels and values. This is achieved by using the IF function, which takes the form:

IF (something is true, do this, otherwise, do something else)

The IF function uses mathematical symbols (operators) to make comparisons:

Operator	Meaning
<	less than
>	greater than
<=	less than or equal to
>=	greater than or equal to
=	equal to
<>	is not equal to

For example, look at the following formula:

=IF(A1>0,A1,0)

This formula reads: If the contents of cell A1 is greater than zero then display the contents of A1, otherwise display zero. The sections of an IF statement must be separated by commas. The first comma stands for 'then' and the second comma stands for 'otherwise'.

The following diagram shows the sections of the formula:

IF(A1>0 ,A1, 0)

IF this condition is true

THEN

Display this

OTHERWISE

Display this
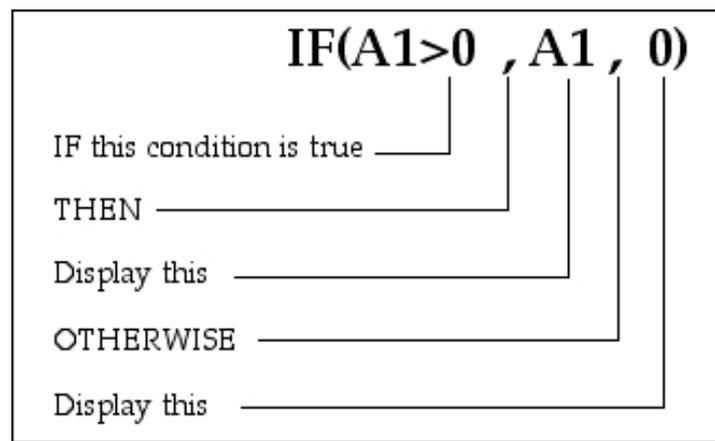
The IF Command

A template for a company that gives discounts on items priced over $100 will be used.

1   Load Microsoft Excel or close the current documents and click on the OPEN icon in the QUICK ACCESS TOOLBAR or from within the FILE tab or FILE menu.

2   Access the EXCEL 2019 SUPPORT FILES, open the CHAPTER 12 folder and load the CHAPTER 12 file, selecting YES to the READ-ONLY message.
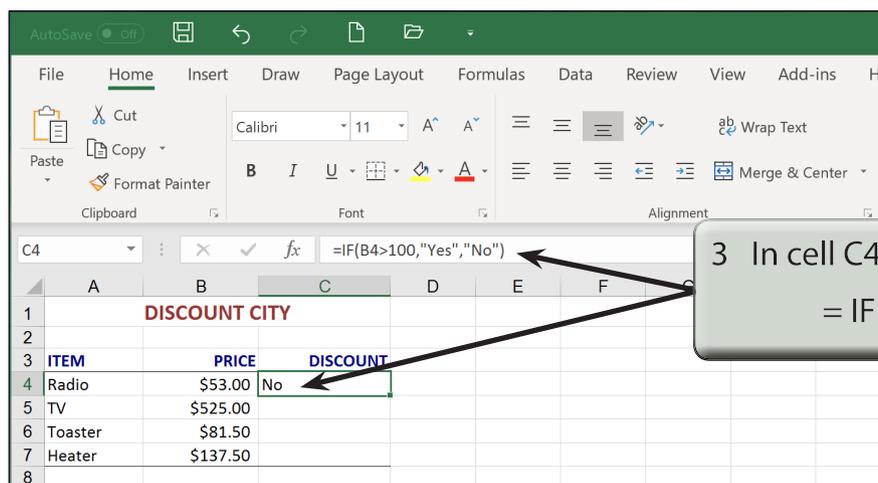
3   In cell C4 enter the formula:

$$= IF(B4>100,"Yes","No")$$

NOTE: **The spreadsheet is being told that if the contents of the cell B4 is greater than 100, then display YES, otherwise display NO. Quotation marks are used around YES and NO because they are LABELS.**
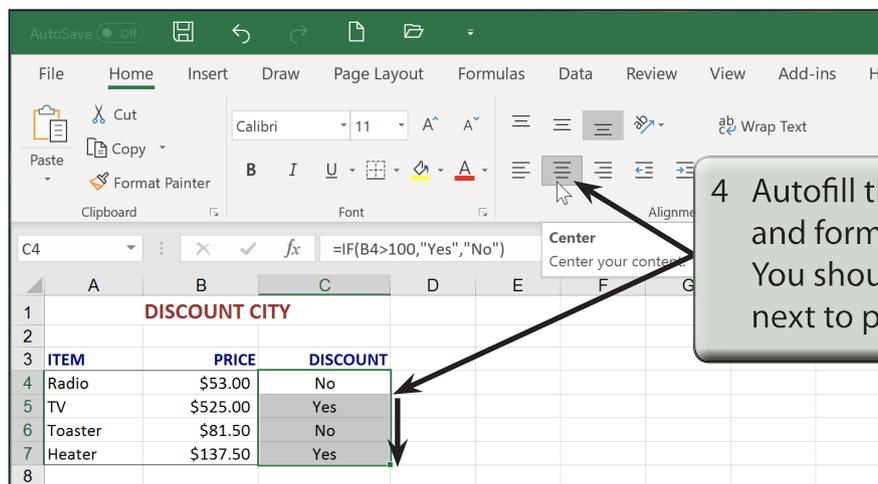
4   Autofill the formula down 3 cells and format the 4 labels to CENTRE. You should have a YES displayed next to prices over $100.

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5 Change the cost of the Heater to $95.60 and observe the change.
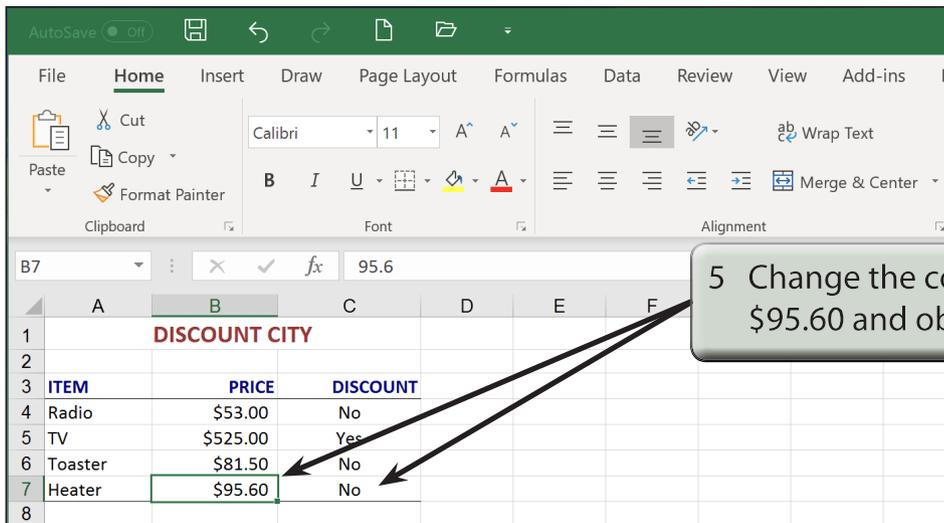
6 Mathematical calculations can also be done within IF functions.

7 Position the cursor at cell C4, enter:

$= IF(B4>100,B4*10\%,"")$

and press <enter> or <return>.
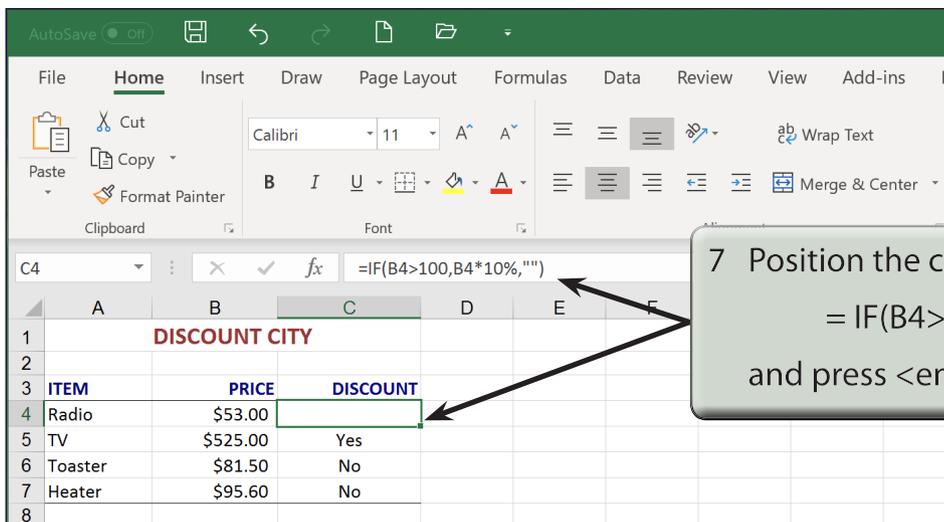
NOTE:	i	For the " ", press the double quotation key twice.
	ii	The formula reads: If the value in cell B4 is greater than 100, then work out and display B4 times 10%, otherwise display a blank space (two quotes entered next to one another).
	iii	You should receive a blank space in cell C4 as the Radio costs less than $100.

8 Autofill the formula down for the other 3 cells then format the 4 cells to CURRENCY with two decimal places and to be RIGHT ALIGNED.

9 Change the price of the Toaster to $137.50 and a discount should be allocated to it.

10 Change the cost of the Toaster to $100. A discount is not given because the value is not over $100.
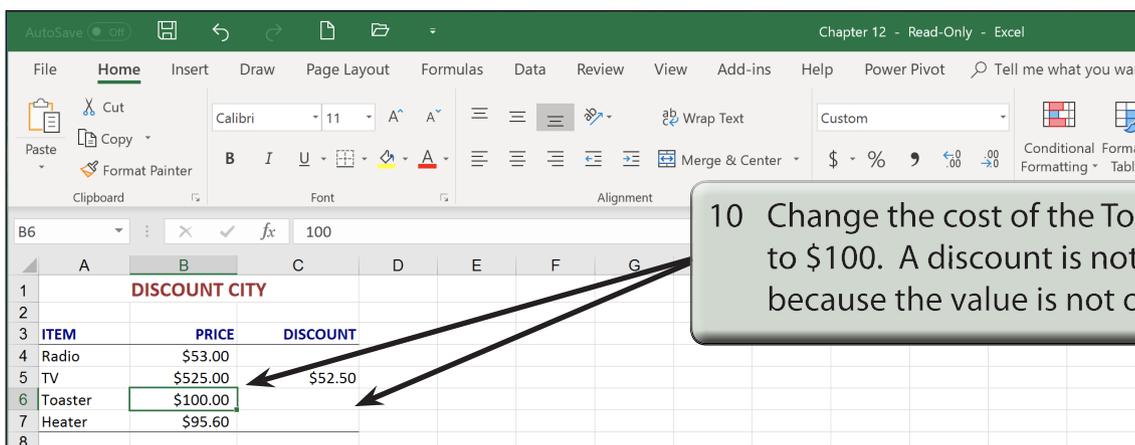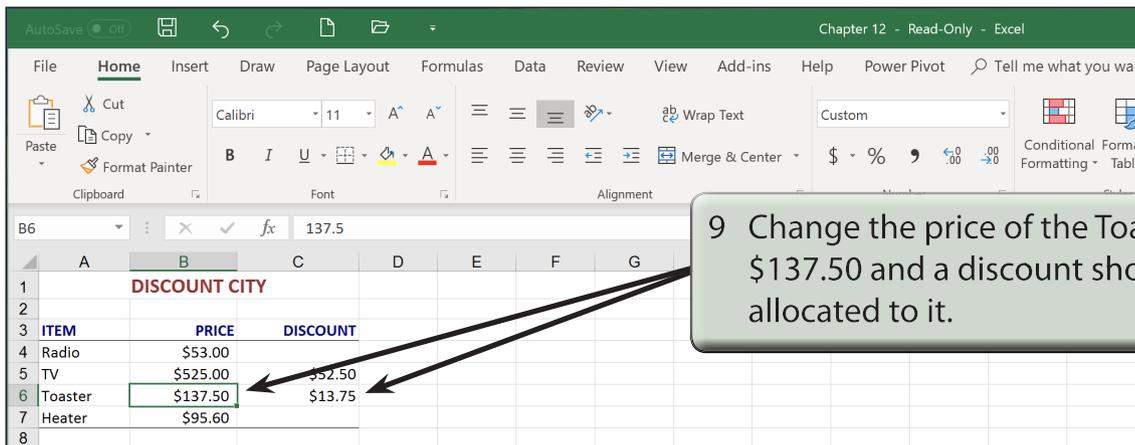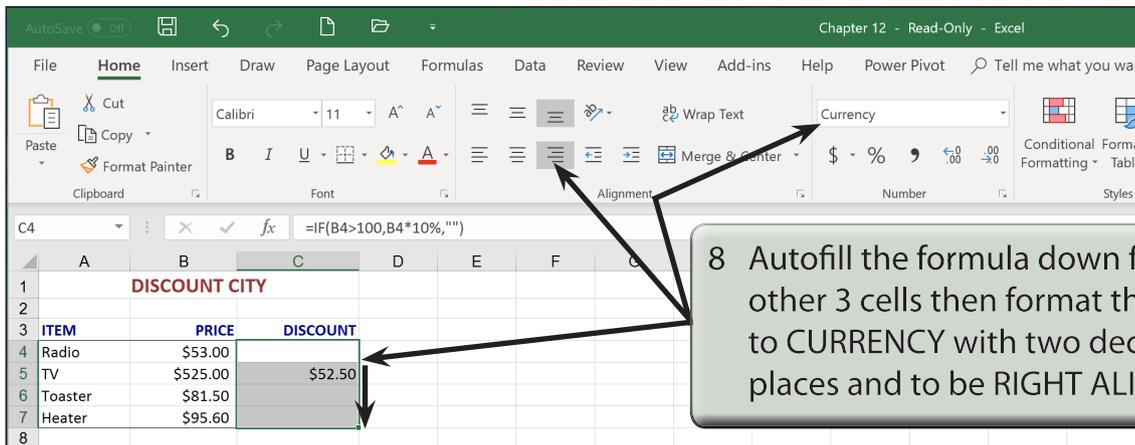
Lookup Commands

The LOOKUP COMMAND allows you to copy data from a table and insert that data in other parts of the spreadsheet. It saves time re-entering the same data over and over. To look up information from a table you need to use the LOOKUP function.

There are two different types of LOOKUP functions, VLOOKUP for searching vertically in columns and HLOOKUP for searching horizontally across rows. We will use the VLOOKUP function in this chapter, but the HLOOKUP function works in the same way.

Interest Rate Calculations

Many banks offer varying degrees of interest depending on the amount deposited in the account. We can use the LOOKUP function to display the correct amount of interest on any entered deposit.

A   Loading the Template

1   Load Microsoft Excel or close the current files and click on the OPEN icon in the QUICK ACCESS TOOLBAR or from within the FILE tab or FILE menu.

2   Access the EXCEL 2019 SUPPORT FILES, open the CHAPTER 13 folder and load the INTEREST TABLE file, selecting YES to the READ-ONLY message.
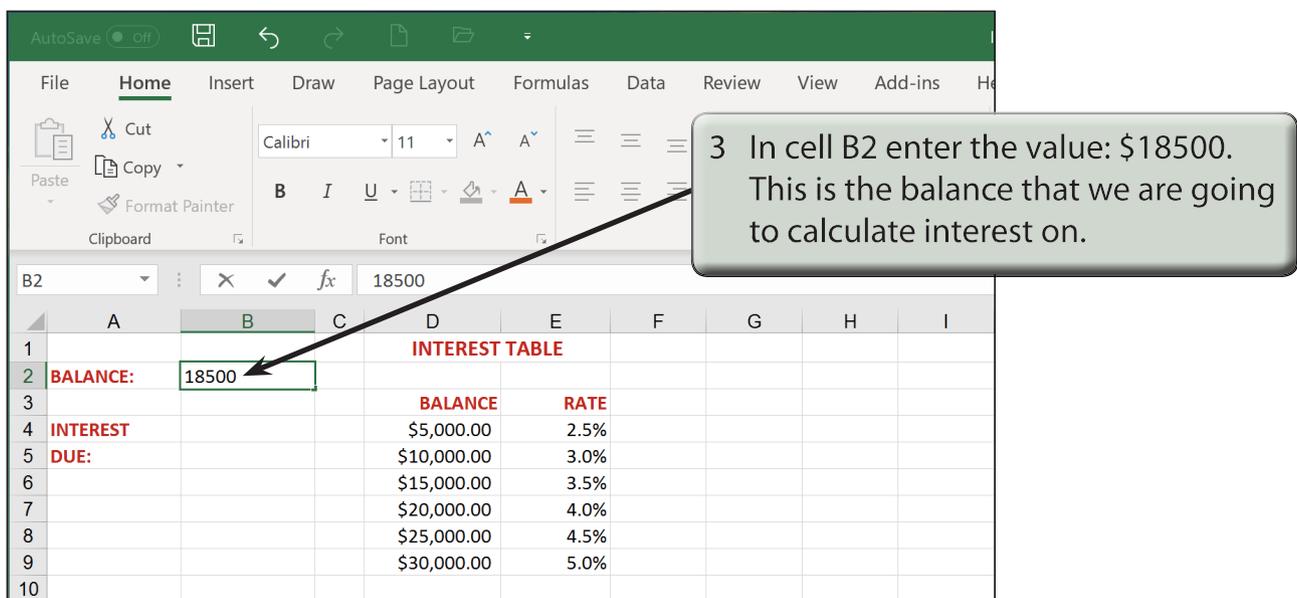
3   In cell B2 enter the value: $18500. This is the balance that we are going to calculate interest on.

B   Calculating the Interest Due

We need to use the LOOKUP function to find the interest due on the balance. Microsoft Excel will look up the table and find the EQUAL OR CLOSEST LOWER value to the balance ($15000).

1   Move the cursor to cell B5 and enter the formula:

=VLOOKUP(B2,D4:E9,2)

2   In the HOME tab of the RIBBON format the value to PER CENT with 1 decimal place.

NOTE: **The formula says: Look up the value stored in cell B2 then look at the values in the table, find the cell with the EQUAL or CLOSEST VALUE BELOW the B2 value, then display the adjacent value from the second column of the table - the value next to $15000 (that is, 3.5%).**

3   The LOOKUP function has three sections:

=VLOOKUP(B2,   D4:E9,   2

Reference Cell
What cell to look up.

Range Reference
Indicates the start and end of the data table.

Display Column
How many columns across from the first column in the table the value should be taken from.

Creating Sales Invoices

Many businesses create their own invoices (sales documents) and Microsoft Excel provides a medium for creating professional invoices, even linking them to a stock inventory.

Entering the Labels of the Invoice

1   Start a new BLANK WORKBOOK and set the following initial formats:

   • Widen COLUMN C to 26 characters.
   • Widen COLUMNS D and E to 14 characters.

2   Enter the labels shown in the indicated cells.

3   Change each heading to BOLD. Remember, you can hold down the CTRL or COMMAND key to select multiple cells.

4   CENTRE cells A8 to C8 and RIGHT ALIGN cells D5 to E18.

Adding Borders

Borders need to be placed around relevant sections of the invoice.

1 Highlight cells A8 to E15 then click on the arrow next to the BORDERS icon in the HOME tab of the RIBBON and select ALL BORDERS.

2 Highlight cells E16 to E18 and set their BORDERS to ALL BORDERS by clicking on the BORDERS icon.
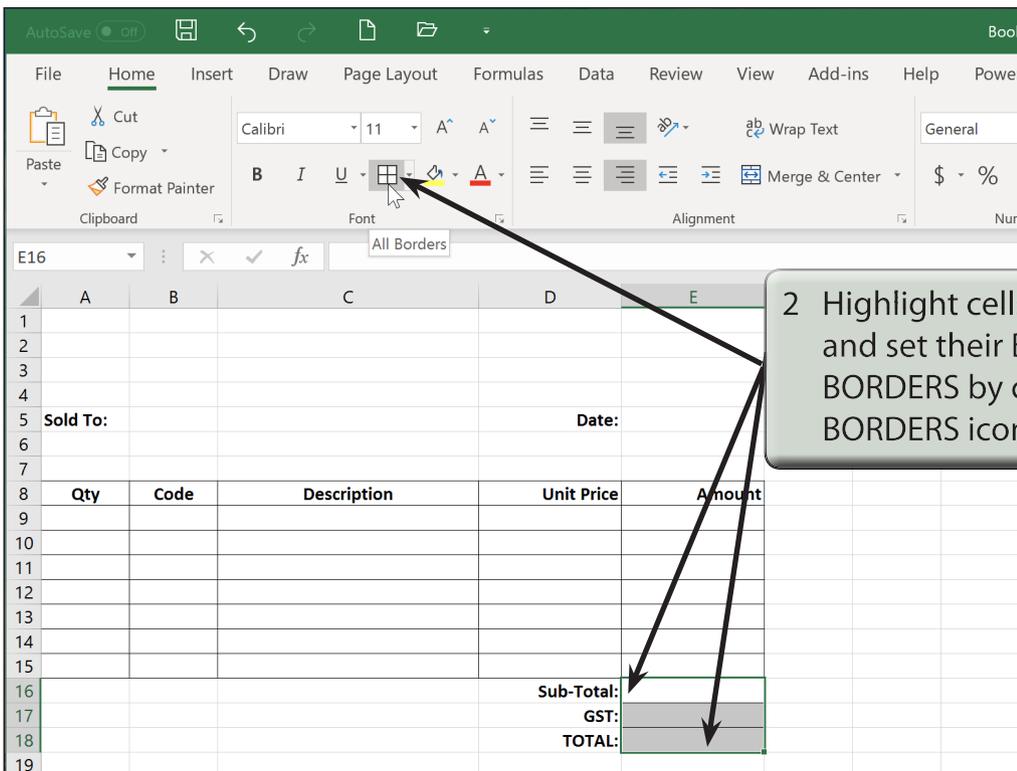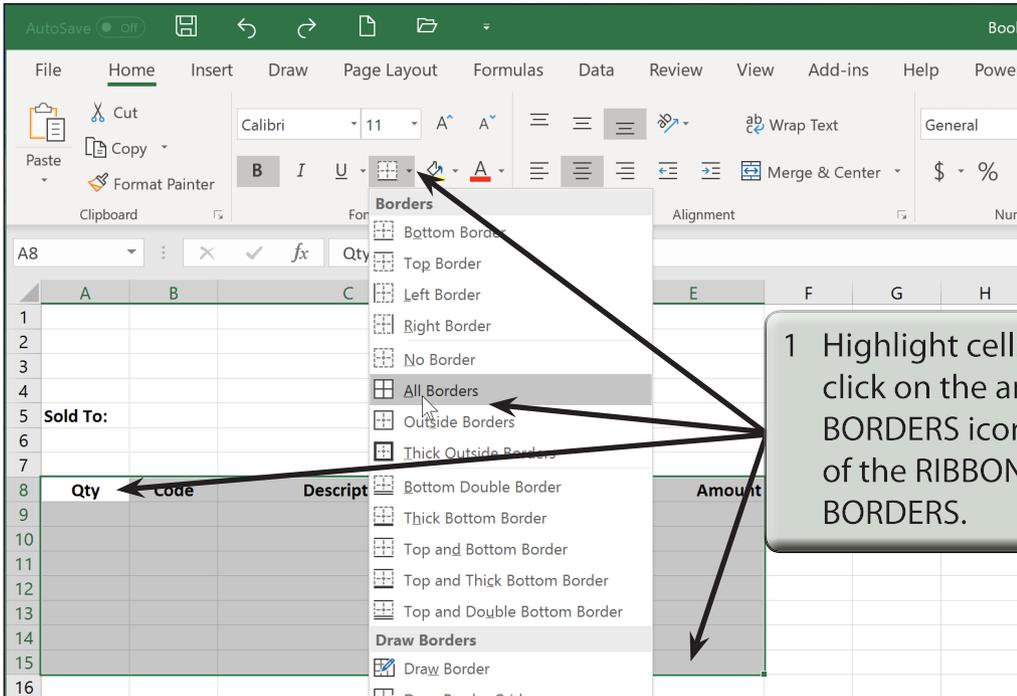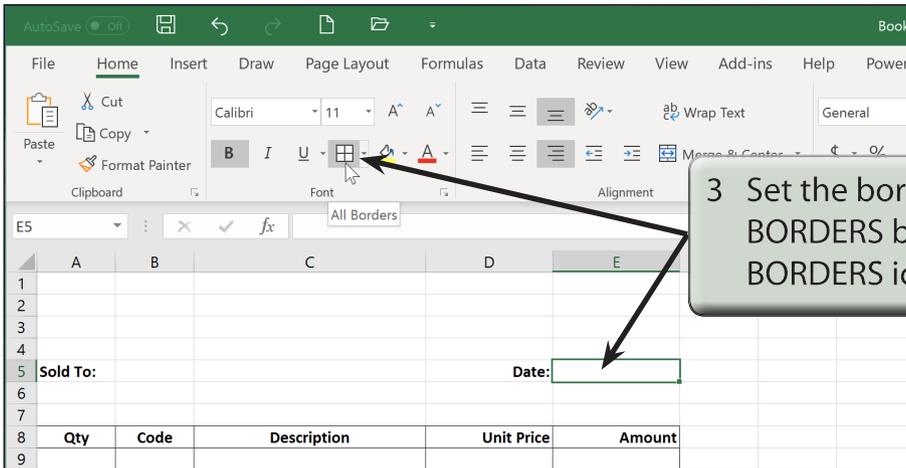
3 Set the border of cell E5 to ALL BORDERS by clicking on the BORDERS icon.
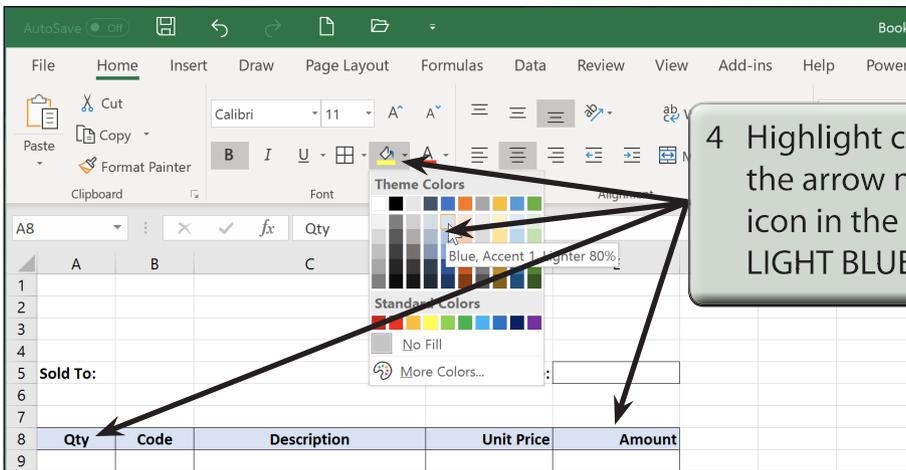
4 Highlight cells A8 to E8 then click on the arrow next to the FILL COLOUR icon in the HOME tab and select a LIGHT BLUE shade.

Creating the Company Title

The company's name needs to stand out from the rest of the invoice, although it should not be too overbearing. We will use WordArt in this case. We can also include a graphic or create a company logo.
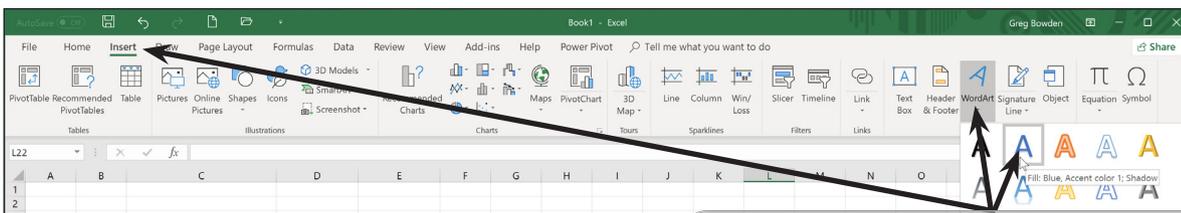
1 Open the INSERT tab of the RIBBON, click on the WORDART icon (it may be within the LINE icon on smaller screens) and select a blue style.

2 In the WordArt frame enter:

Maryanne's   <enter>
SuperMart

Click on the WordArt frame's border and, in the HOME tab, set the FONT SIZE 16 pt, BOLD and the ALIGNMENT to LEFT.
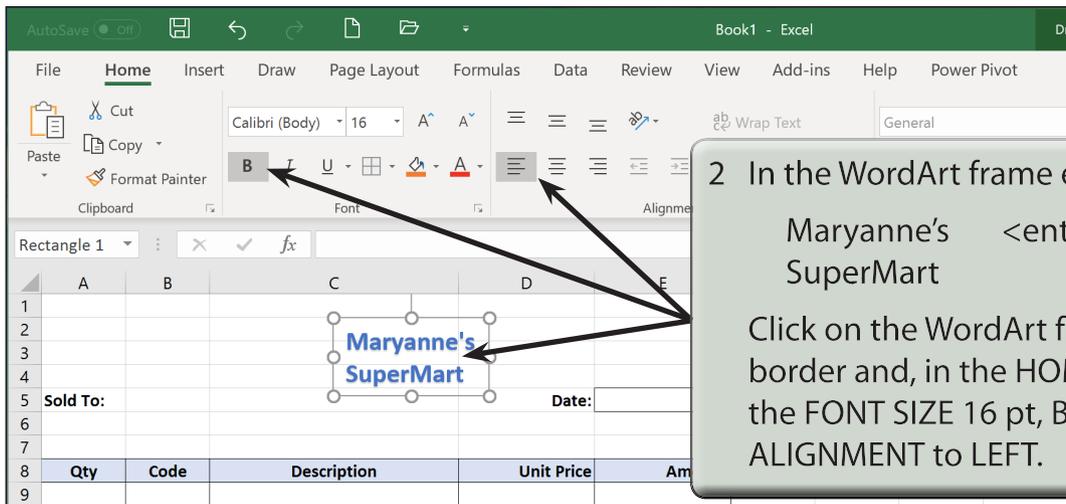
NOTE: You can add some WordArt Effects and Styles to the text if you wish to.

3 Move the WordArt text to the top left corner of the sheet. The arrow keys can be used to nudge the text into place.
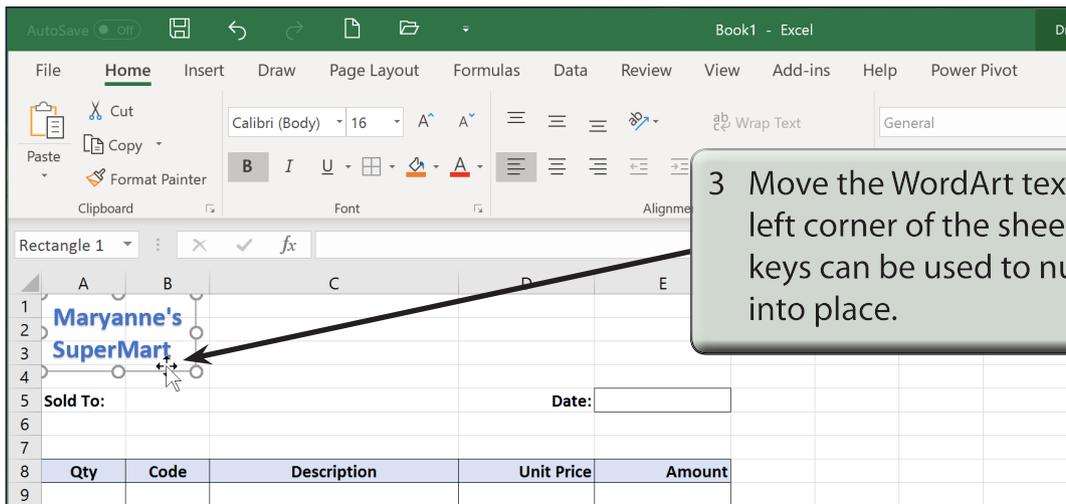
Sharing Data Between Files

In this chapter you will learn how to share information between different workbooks. This is called LINKING. In order to link spreadsheets together you need to know how to name cells. You can also share data between worksheets within a workbook as you will see in Chapter 17.

Naming Single Cells

As you saw in the last chapter Microsoft Excel allows you to name cells. This can make formulas easier to understand and allows for quicker movement to cells. Naming cells also permits Microsoft Excel to transfer information from one workbook to another, that is, to LINK workbooks together. Let's use names to calculate the area of a circle.

  1   Load Microsoft Excel or close the current files and start a new BLANK WORKBOOK.

2 Enter the labels in the indicated cells.
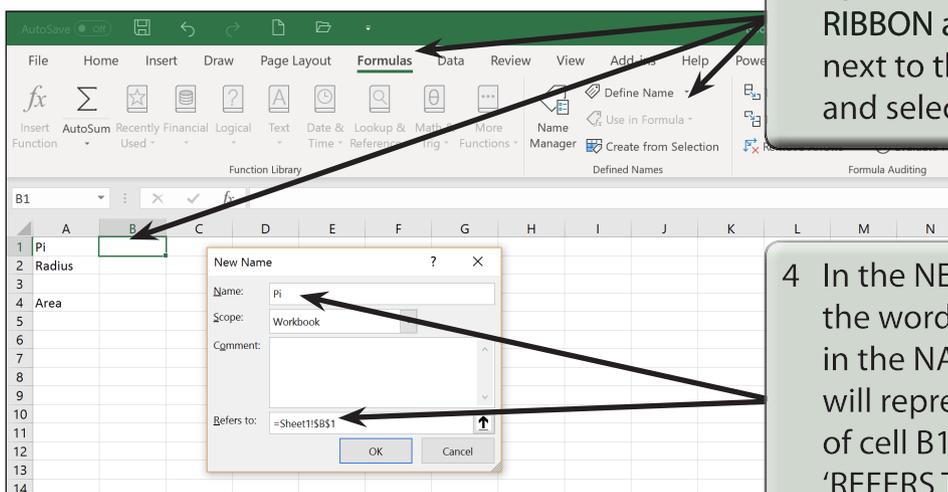
3 Move the cursor to cell B1, open the FORMULAS tab in the RIBBON and click on the arrow next to the DEFINE NAME icon and select DEFINE NAME.

4 In the NEW NAME dialogue box the word Pi should be inserted in the NAME box. This name will represent the contents of cell B1 as indicated in the 'REFERS TO' box at the bottom of the dialogue box.

5   Click on OK and Pi will be added to the NAME BOX at the left of the FORMULA BAR.

NOTE: You can enter different names to those inserted by the program.
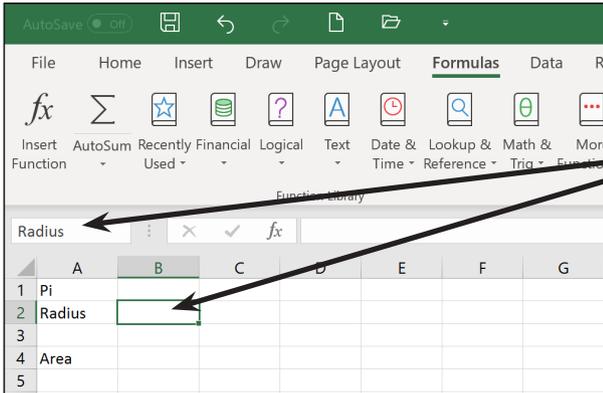
6 Move the cursor to cell B2, click in the NAME BOX in the FORMULA BAR, enter:

Radius

press the <enter> or <return>.

NOTE: i   Entering the name in the NAME BOX is a shortcut to using the DEFINE NAME icon in the FORMULAS tab.

ii   We have named the cell next to the label Pi as PI and the cell next to Radius as RADIUS.

7   Enter the following items in the indicated cells:

in cell B1:   =22/7

in cell B2:   10
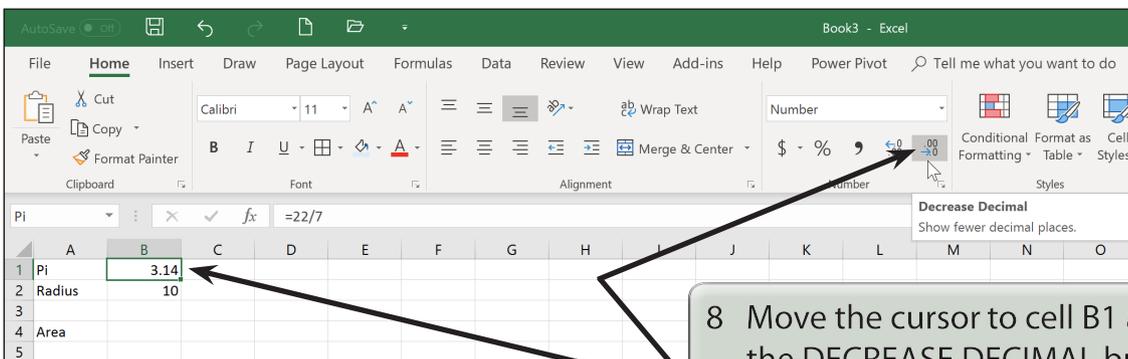
8 Move the cursor to cell B1 and use the DECREASE DECIMAL button in the HOME tab of the RIBBON to reduce the decimal places to 2.

Entering Formulas Using Names

A formula will be entered to calculate the area of a circle using cell names, that is: Pi times Radius squared.

1   Position the cursor at cell B4 and press the = key.
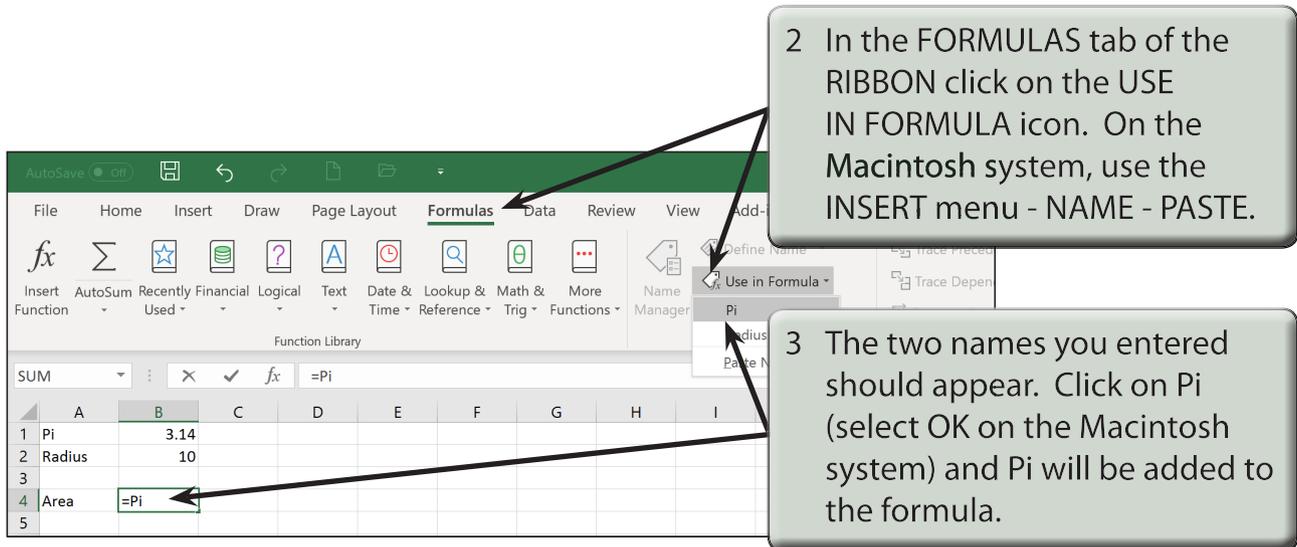
> 2   In the FORMULAS tab of the RIBBON click on the USE IN FORMULA icon. On the **Macintosh** system, use the INSERT menu - NAME - PASTE.

> 3   The two names you entered should appear. Click on Pi (select OK on the Macintosh system) and Pi will be added to the formula.

4   Enter: *   then click on the USE IN FORMULA icon (or INSERT menu - NAME - PASTE) again.
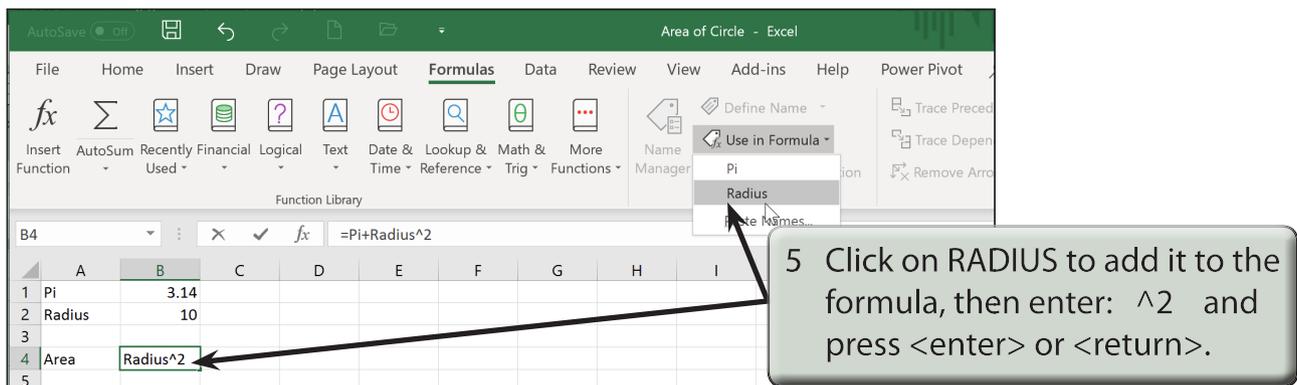
> 5   Click on RADIUS to add it to the formula, then enter: ^2   and press <enter> or <return>.

NOTE: **i   The ^ (SHIFT+6) stands for 'raised to the power of'.**

ii   You could have typed in the names directly without using the USE IN FORMULA icon, if you prefer to do things that way.

Naming Groups of Cells

Cell names can refer to single cells or to blocks of cells. The following activity will demonstrate how to name groups of cells. It will name all the sales that a company makes along with its expenses, then calculate the balance.

A   Loading the Template

1   Close the current file and click on the OPEN icon in the QUICK ACCESS TOOLBAR or from within the FILE tab or FILE menu.

2   Access the EXCEL 2019 SUPPORT FILES, open the CHAPTER 15 folder and load the CHAPTER 15 file, selecting YES to the READ-ONLY message.

B   Naming the Cells

1 Highlight cells B6 to B14, click in the NAME BOX, enter:

Sales

and press <enter> or <return>.

NOTE: The two blank cells (B13 and B14) will cater for any additional sales.

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Using Macros and Buttons

Microsoft Excel allows you to record the steps that you carry out within a spreadsheet. These recordings are called MACROS and they can be played back as often as required. You can assign a shape to represent a MACRO. In this way the user of the spreadsheet can simply click on the shape (button) to run the MACRO.

Using a Simple Discount Table

To see how MACROS and BUTTONS work a simple discount system for a retail store will be set up. It offers discounts of 5%, 10% or no discount at all depending on the time of year.

A   Opening a Sample File

1   Load Microsoft Excel or close the current file.

2   Click on the OPEN icon in the QUICK ACCESS TOOLBAR or from within the FILE tab or menu, access the CHAPTER 16 folder of the EXCEL 2019 SUPPORT FILES, load the file:

<p align="center">Macros</p>

and select YES to the READ-ONLY dialogue box.

B   Setting a 5% Discount Macro

The first macro will add 5% discount in the DISCOUNT ALLOWED column.
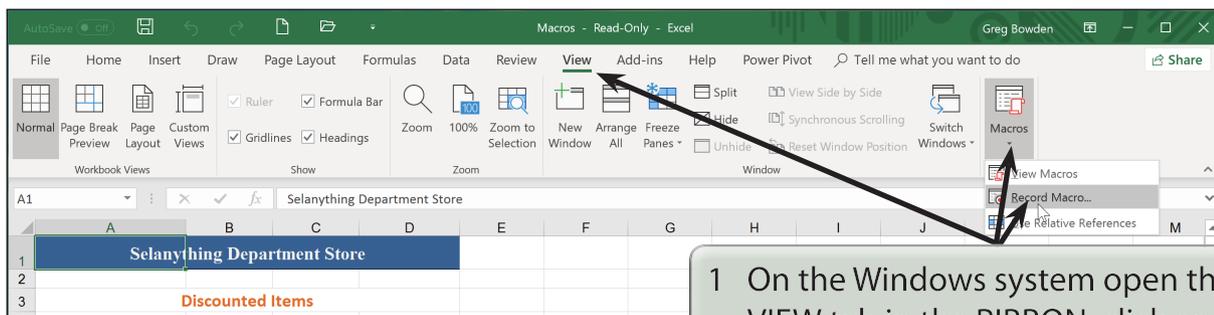
1   On the Windows system open the VIEW tab in the RIBBON, click on the arrow at the base of the MACROS icon and select RECORD MACRO.

2   On the Macintosh system open the VIEW tab and click on the RECORD MACRO icon.
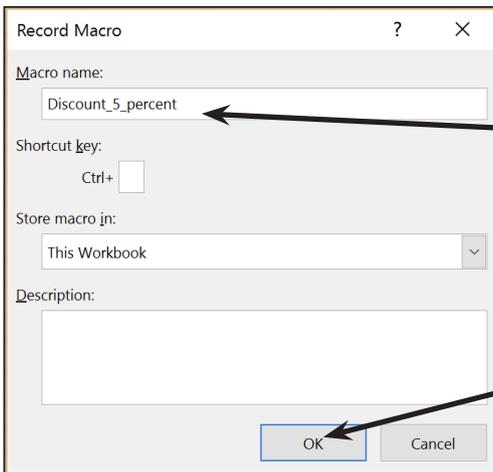
3 In the MACRO NAME box of the RECORD MACRO dialogue box enter:

Discount_5_percent

4 Click on OK and the recording will commence.

NOTE: MACRO names cannot have spaces or contain mathematical symbols such as %, *, etc.
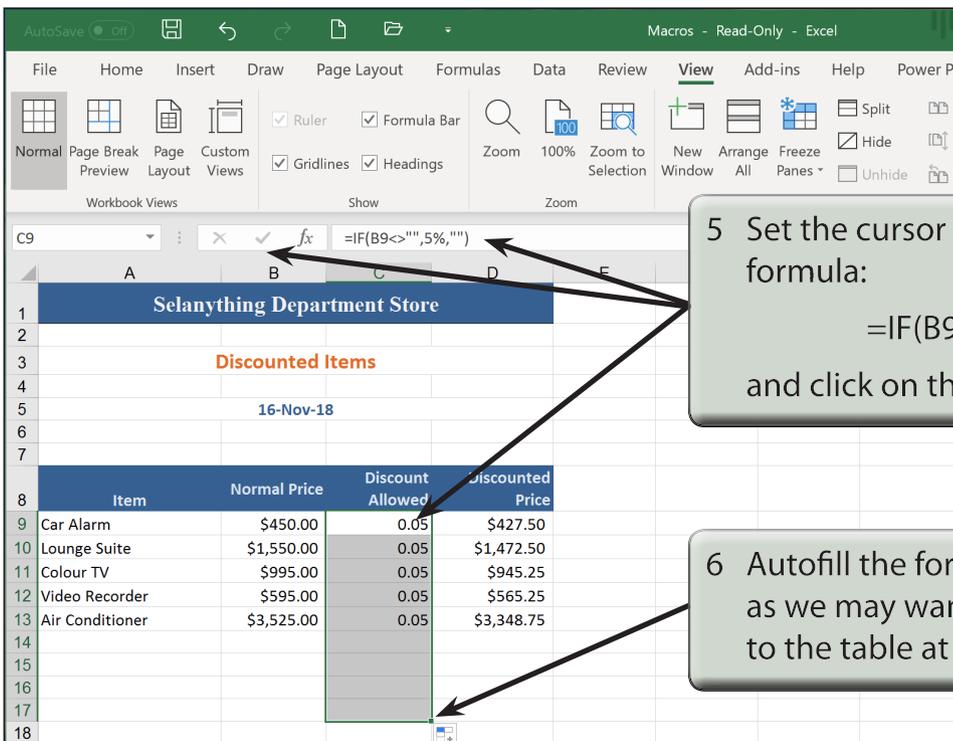
5 Set the cursor at cell C9, enter the formula:

=IF(B9<>"",5%,"")

and click on the ENTER button.

6 Autofill the formula down to cell C17 as we may want to add more items to the table at a later date.

NOTE: The formula looks to see if there is an entry in the cell to the left of the DISCOUNT ALLOWED column. If there is, 5% is entered, otherwise a blank space is inserted.
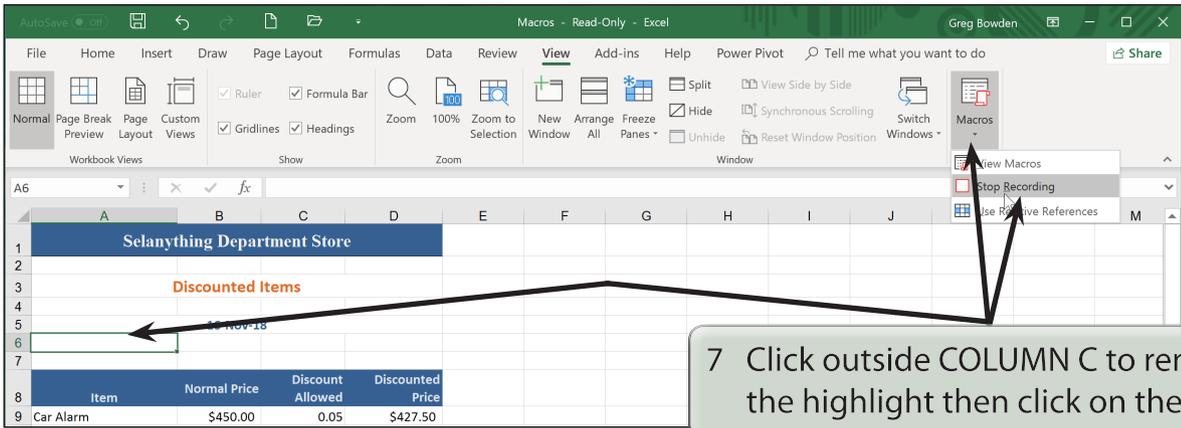
7 Click outside COLUMN C to remove the highlight then click on the MACROS icon arrow in the RIBBON and select STOP RECORDING.

NOTE: On the Macintosh system a STOP RECORDING button is added to the VIEW tab of the RIBBON.
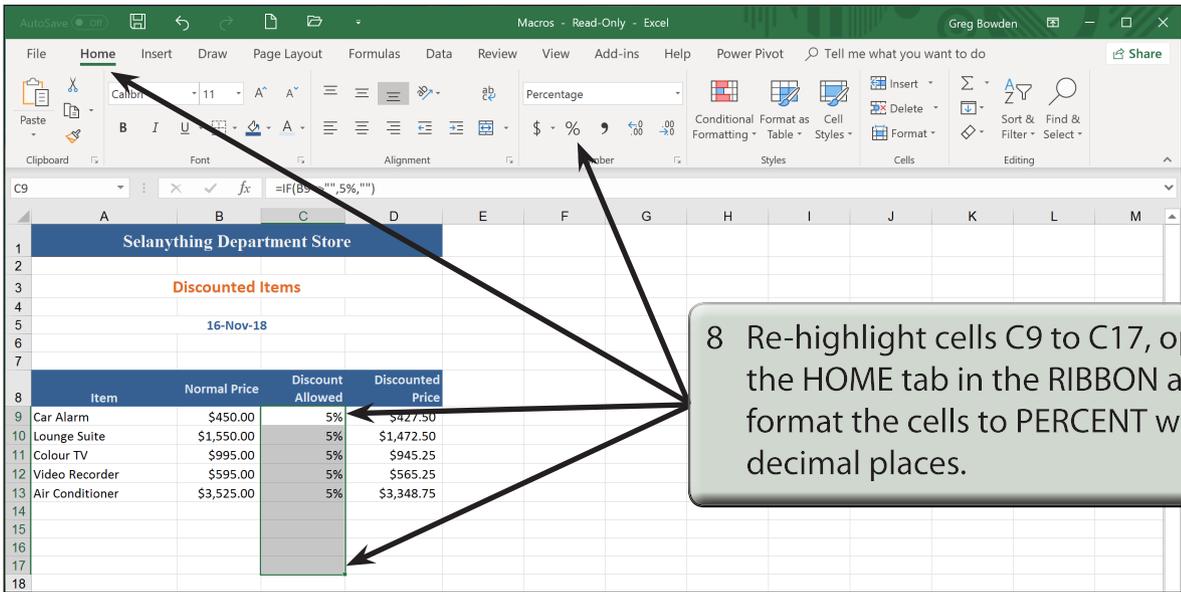
8 Re-highlight cells C9 to C17, open the HOME tab in the RIBBON and format the cells to PERCENT with no decimal places.

C   Setting a 10% Discount Macro

A second macro to set a discount of 10% will be created in the same way to the previous macro.

1   Position the cursor at any cell other than cell C9.

2   Open the VIEW tab in the RIBBON, click in the arrow at the base of the MACROS icon and select RECORD MACRO (or click on the RECORD MACRO button).
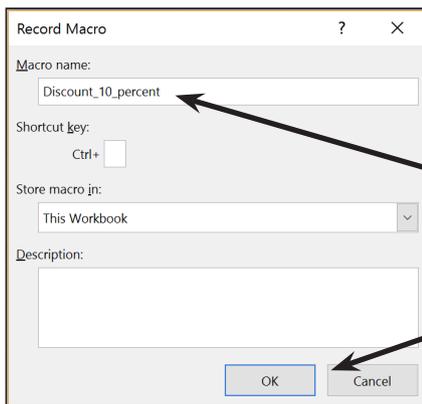
3   Name the macro:

    Discount_10_percent

    and select OK to commence the recording.
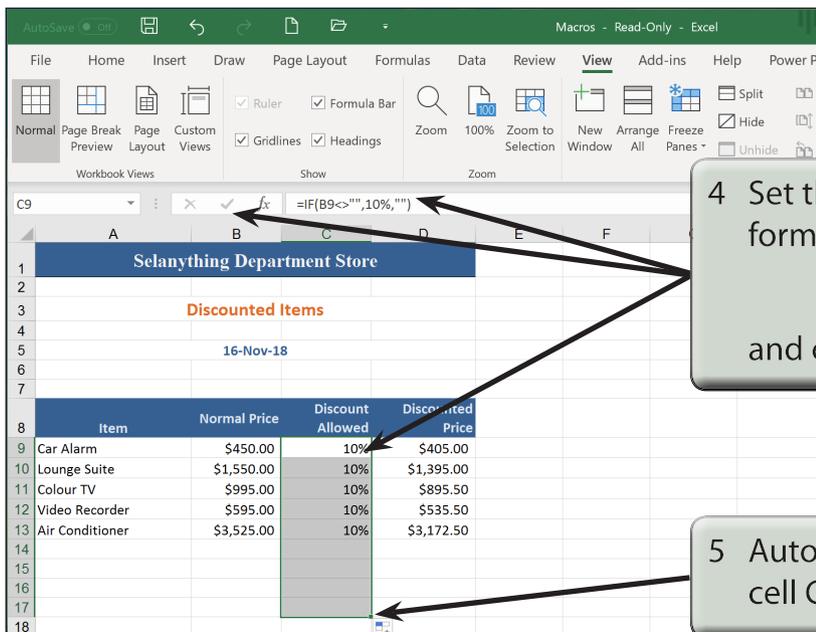
4   Set the cursor at cell C9, enter the formula:

    =IF(B9<>"",10%,"")

    and click on the ENTER button.

5   Autofill the formula from cell C9 to cell C17.

NOTE: A discount of 10% should now be applied to all the items.

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Payroll Systems

Companies can use Microsoft Excel to keep pay details. In this activity you will create a company payroll table and pay advice slips for the individual employees. The data for the payroll system has been prepared for you, your task will be to complete the formulas.

## Loading the Payroll Template

1   Load Microsoft Excel or close the current file.

2   Click on the OPEN icon in the QUICK ACCESS TOOLBAR or from within the FILE tab or FILE menu. Access the CHAPTER 17 folder of the EXCEL 2019 SUPPORT FILES and load the template:

Payroll

Selecting YES to the READ-ONLY dialogue box.

3   There are two worksheets in the workbook. Look over the PAYROLL sheet which will show the pay details for all employees. Click on the PAY ADVICE sheet. It will display the pay details for an individual employee. The employee would receive the PAY ADVICE printout when they receive their pay.

4   Save the workbook in your STORAGE folder under the file name:

Evesalon Payroll

Remembering to turn off the READ-ONLY RECOMMENDED option.

Completing the Payroll Worksheet

The first sheet is the payroll sheet showing the pay details for all the employees of the company.

1   Ensure that the PAYROLL worksheet is on the screen.

2   Position the cursor at cell G12. We need to calculate the OVERTIME RATE OF PAY which is 1.5 times the NORMAL PAY RATE.

3 In cell G12 enter the formula:

$$= E12 * 1.5$$

4 Autofill the formula down for the other employees.

5 The GROSS PAY is the total weekly pay earned before deductions are taken out. The NORMAL HOURS needs to be multiplied by the NORMAL PAY RATE and the OVERTIME HOURS by the OVERTIME RATE then the two results added together.

6 Move the cursor to cell H12 and enter:

$$= (D12*E12) + (F12*G12)$$

7 Autofill the formula down for the other employees.

NOTE: The brackets in the GROSS PAY formula are not really necessary, but they help to separate the two calculation sections and make the formula easier to understand.

8   The SUPERANNUATION is the amount contributed by employees each week to a retirement fund. It is usually a percentage of the employee's Gross Pay. We will use a rate of 5% here.

9 Set the cursor at cell I12 and enter:

= H12 * 5%

then autofill the formula down for the other employees.

The Tax Calculation

Normally the TAX is calculated through a series of lookups which you did in an earlier chapter. This could be done at the right of the payroll and set not to print when the payroll is printed. To make things a little easier we will use a base tax rate of 25%.

Set the cursor at cell J12 and enter:

= H12 * 25%

then autofill the formula down for the other employees.

Calculating the Net Pay

The NET PAY is the GROSS PAY minus the deductions (superannuation and tax).

Set the cursor at cell K12 and enter:

= H12 - I12 - J12

then autofill the formula down for the other employees.

Printing the Payroll

The print area needs to be checked so that the whole payroll fits on one page and the ORIENTATION needs to be set to LANDSCAPE.

1 In the PAGE LAYOUT tab of the RIBBON set the ORIENTATION icon to LANDSCAPE and the SIZE icon to your printer's paper size (it is probably A4).

Financial Applications

This chapter looks at some of the ways banks make use of spreadsheets. It will include an personal banking sheet, a home loan simulator and a calculation of compound interest.

Personal Banking

A spreadsheet can be used to allow a person to keep an accurate record of their financial dealings. It might be from a bank debit card, a cheque account, etc.

A   Opening the Prepared Template

1   Load Microsoft Excel or close the current file.

2   Click on the OPEN icon in the QUICK ACCESS TOOLBAR or from within the FILE tab or FILE menu. Access the CHAPTER 18 folder of the EXCEL 2019 SUPPORT FILES and load the file:

Personal Banking

Selecting YES to the READ-ONLY dialogue box.

B   Completing the Formulas

We need a formula that looks to see whether a deposit or withdrawal has been entered. If either has, then the deposit must be added to the balance or the withdrawal subtracted from the balance.

1 Enter the following formula in cell E8:

= IF(OR(C8<>"",D8<>""),E7 + C8 - D8,0)

> **NOTE:** This formula says: "If either a deposit is entered in this row, OR a withdrawal is entered in this row, then display the previous balance (one row up) plus the deposit in this row minus the withdrawal in this row, otherwise display zero."

2   Zero values need to be turned off. On the Windows system click on the FILE tab and select OPTIONS. On the Macintosh system display the EXCEL menu and select PREFERENCES.

3   On the Windows system open the ADVANCED option, scroll to the DISPLAY OPTIONS FOR THIS WORKSHEET section, turn off SHOW A ZERO IN CELLS THAT HAVE ZERO VALUE and select OK.

4   On the Macintosh system click on the VIEW icon, turn off ZERO VALUES and close the PREFERENCES window.

5   Autofill the formula down from cell E8 to cell E22. There will be nothing displayed at this stage as there are no deposits or withdrawals.

C Using the Personal Finances File

Now you are ready to use the account.

1   Enter the following labels and values into your worksheet (there is 1 deposit and 4 withdrawals):

Date	Item	Deposit	Withdrawal
15 Sep	Supermarket		$39.50
21 Sep	Electricity Bill		$86.80
21 Sep	Rent		$475.00
24 Sep	Pay Day	$870.00	
25 Sep	New Dress From Katie's		$125.00

E12 =IF(OR(C12<>"",D12<>""),E11+C12-D12,0)

Amy's Bank Details

17-Nov-18

DATE	ITEM	DEPOSIT	WITHDRAWL	BALANCE
14-Sep	Initial Balance			$1,000.00
15-Sep	Supermarket		$39.50	$960.50
21-Sep	Electricity Bill		$86.80	$873.70
21-Sep	Rent		$475.00	$398.70
24-Sep	Pay Day	$870.00		$1,268.70
25-Sep	New Dress From Katie's		$125.00	$1,143.70
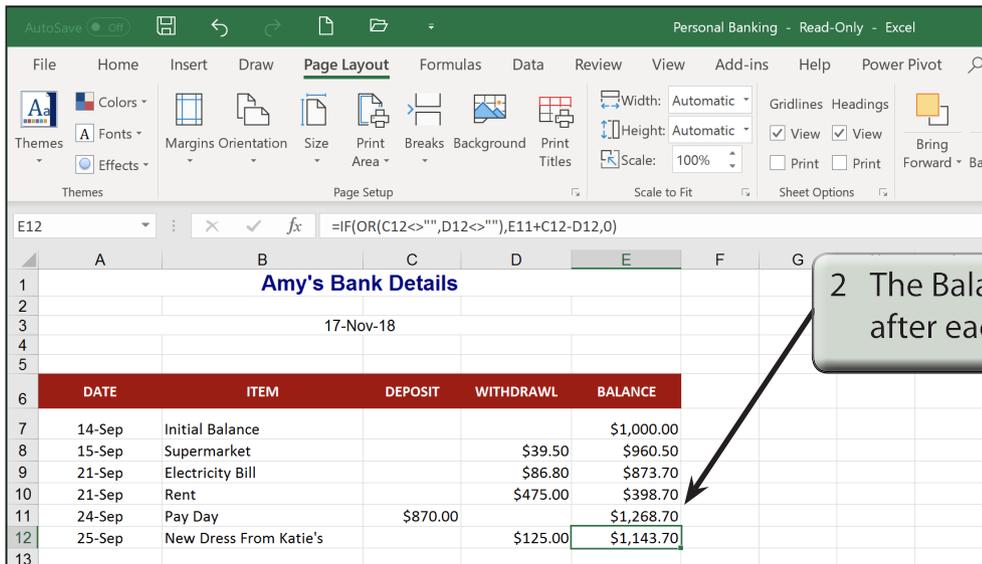
2 The Balance should adjust after each entry.

3   Try adding some more withdrawals and deposits of your own.

4   Save your workbook and print a copy if your teacher requires you to.

The Home Loan Simulator

Many banks have home loan tables set up so that prospective borrowers can be shown what their repayments will be. We can use Microsoft Excel to set up a loan simulator of our own. Such tables are called LOAN AMORTIZATION tables. For simplicity we will just create a table for monthly repayments.

A   Opening the Prepared Template

1   Close the current file and click on the OPEN icon in the QUICK ACCESS TOOLBAR or from within the FILE tab or FILE menu.

2   Access the CHAPTER 18 folder of the EXCEL 2019 SUPPORT FILES and load the file:

Home Loan

Selecting YES to the READ-ONLY dialogue box.

B   Entering the Initial Values

The values in the PRINCIPAL, INTEREST RATE and YEARS OF LOAN section control the spreadsheet. They are the only values that need to be entered and the table will be set up so that when different values are entered the table automatically adjusts.

NOTE: For simplicity we will use a 2-year loan. Normally a home loan would be for a much higher Principal than this and be paid back over many more years.

Date Calculations

In this chapter you will look at some spreadsheet applications that involve doing calculations on dates. It will involve more detailed IF statements. You will complete prepared templates for a library book overdues system and a debt collection company.

Creating a Library Book Overdue System

A school library needs a simple overdue books table. It should calculate automatically the return date and any overdue fees that need to be charged on borrowed books. Three weeks is the borrowing period after which 5 cents is charged for each day the book is overdue. All the librarian should need to do is enter the Borrow Date, the book's Accession Number and the student's name, after which the overdue list should complete itself.

Opening the Prepared Template

1   Load Microsoft Excel or close the current file.

2   Click on the OPEN icon in the QUICK ACCESS TOOLBAR or from within the FILE tab or FILE menu. Access the CHAPTER 19 folder of the EXCEL 2019 SUPPORT FILES and load the file:

Library Overdues

Selecting YES to the READ-ONLY dialogue box.

3   The template has two worksheets:

- the OVERDUES sheet, which will keep track of which books are overdue.

- The BOOK LIST sheet, which is a list of the books that the school has.

4   Look at both worksheets.

Naming the Book List

To make the formulas easier to understand the Book List should be named.

1 Open the BOOK LIST sheet, highlight cells A7 to C16, click in the NAME BOX, enter:

Books

and press <enter> or <return> to complete the name.

2 Click in one of the BOOK ACCESS NO cells then click on the SORT & FILTER icon in the HOME tab and select SORT A TO Z to sort the cells into BOOK ACCESS No. order so that lookup formulas can be used on the table.
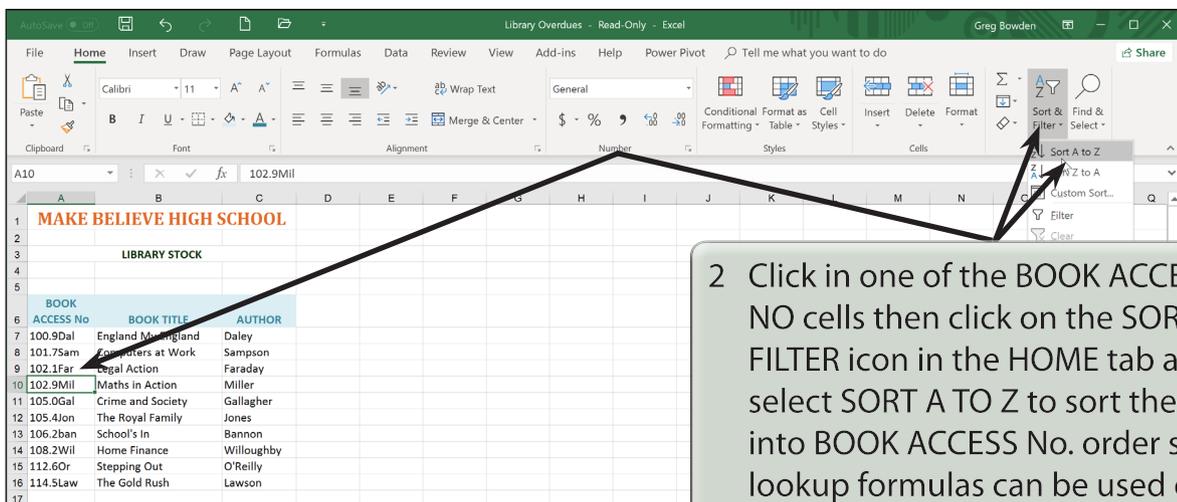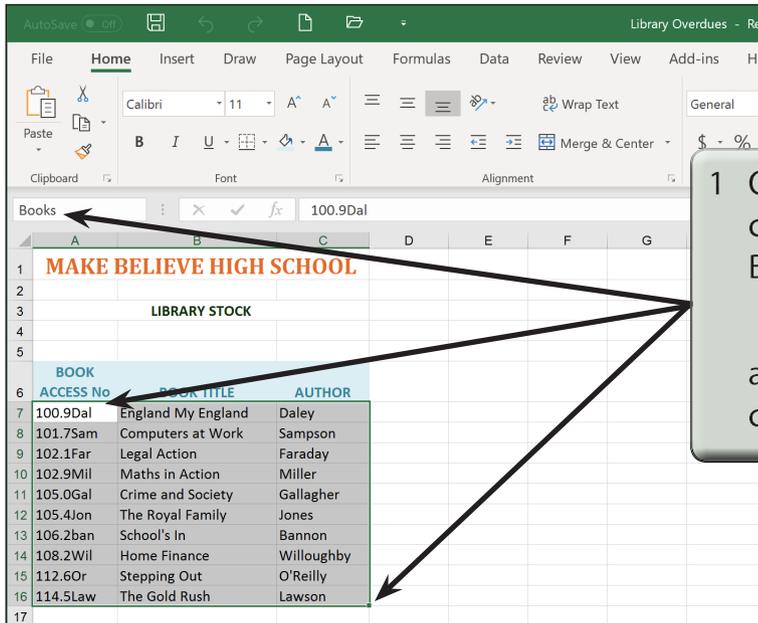
3 Save the file in your STORAGE folder as:

Library Overdues

Remembering to turn off READ-ONLY RECOMMENDED.

Pivot Tables

Pivot Tables allow spreadsheet data to be summarised into reports similar to those created in database programs such as Microsoft Access and FileMaker Pro. Within the spreadsheet data the columns become the fields of the database and the rows become the individual records.

There are three types of fields (columns) in a Pivot Table:

Category Fields   which contain data that can be grouped together, for example, Departments of a business.

Data Fields   which contain numerical data on which calculations such as sum or average can be applied.

Arbitrary Fields   which contain general data that cannot be grouped or have calculations applied to it, for example, a person's first name.

Loading the Prepared Data

The sales data for a month for an online store that sells products over the internet has been prepared for you and summaries of the data are required.

1   Load Microsoft Excel or close the current file.

2   Click on the OPEN icon in the QUICK ACCESS TOOLBAR or from within the FILE tab or FILE menu.

3   Access the CHAPTER 20 folder of the EXCEL 2019 SUPPORT FILES and load the file:

Selanything Sales

Selecting YES to the READ-ONLY dialogue box.

4   Look through the data to familiarise yourself with it. There are three Branches and, within each branch, there are 4 Departments with sections within each Department. The figures show the total sales for a month for each section.

Creating a Pivot Table

A Pivot Table will be used to summarize the sales for the month.

A   Setting Up the Pivot Table
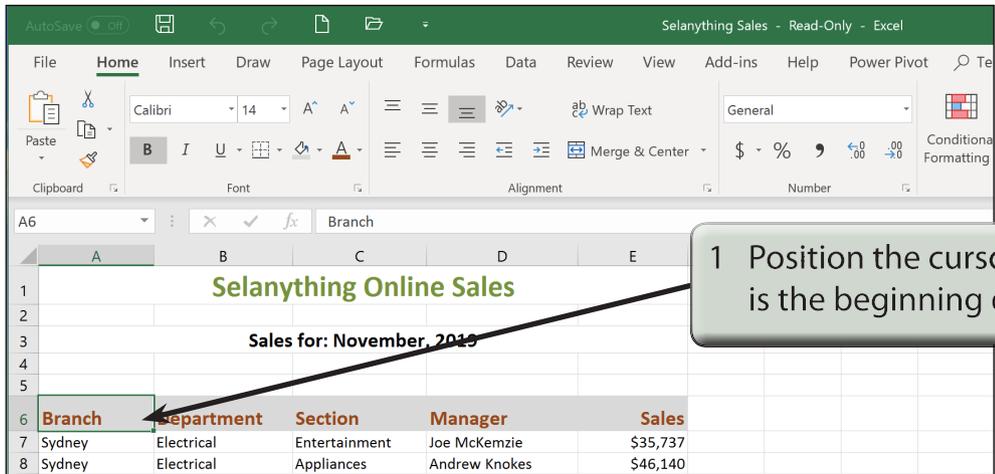
1   Position the cursor at cell A6 which is the beginning of the table.
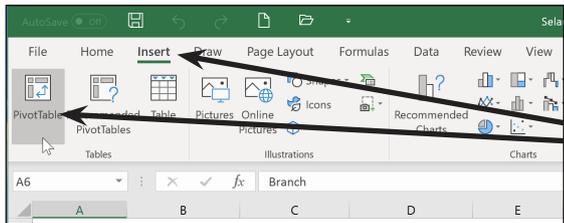
2   Open the INSERT tab of the RIBBON and click on the PIVOT TABLE icon.
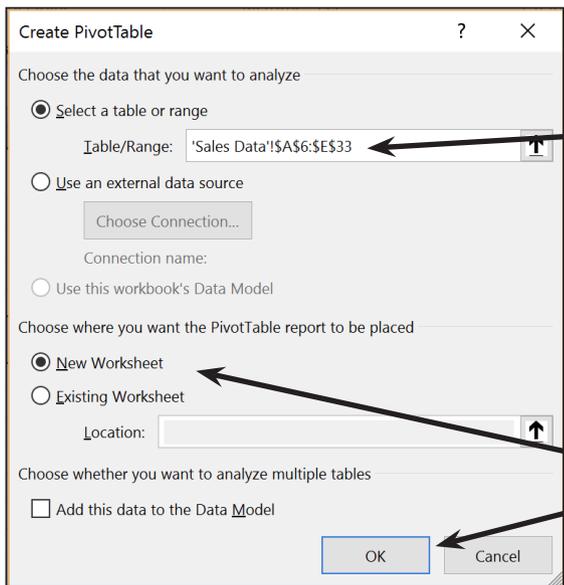
3   The CREATE PIVOT TABLE dialogue box is opened and the spreadsheet data starting from the selected cell is inserted in the TABLE RANGE box.

4   Check that NEW WORKSHEET is selected and click on OK to create the Pivot Table in a separate worksheet.

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NOTE: When setting up a spreadsheet that will have Pivot Tables created from it, it is best to have no blank rows or columns. If there are blank rows or columns, the Pivot Table wizard will only select the data up to the blank row or column.
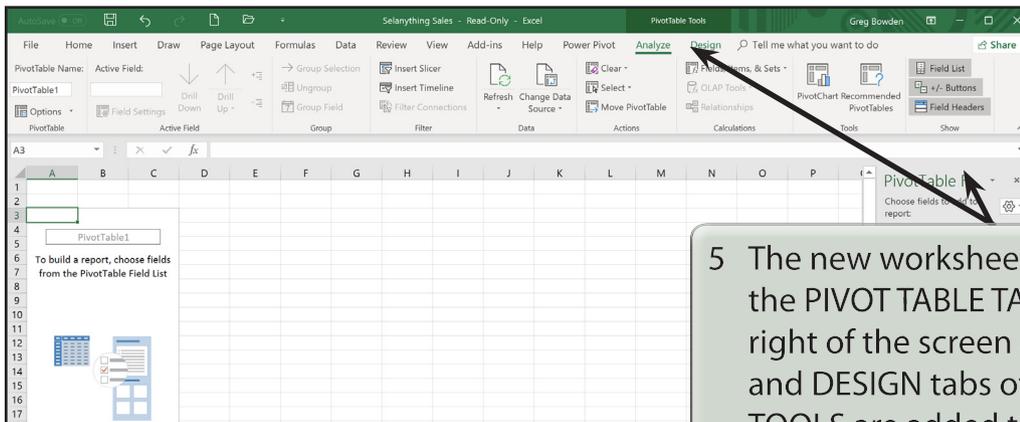
5 The new worksheet is created with the PIVOT TABLE TASK PANE at the right of the screen and the ANALYZE and DESIGN tabs of the PIVOT TABLE TOOLS are added to the RIBBON.

B   Inserting the Rows, Columns and Data

The Pivot Table is created by placing fields in the frames at the base of the PIVOT TABLE FIELDS pane. Let's set the Departments to be down the left of the report, the Branches across the top and the Sales to be the data within the Pivot Table.
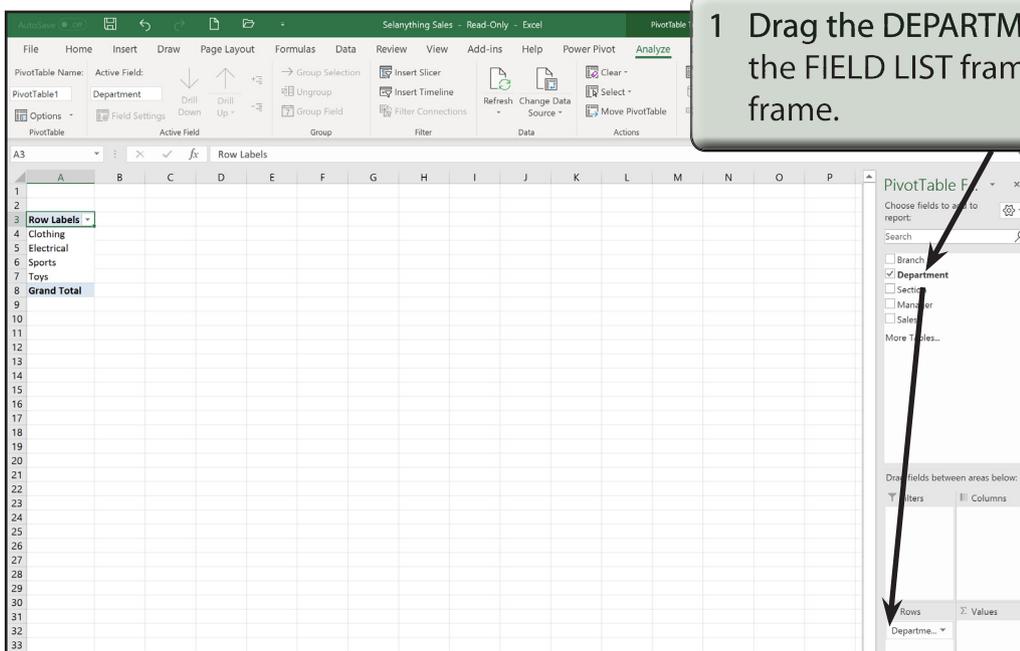
1 Drag the DEPARTMENT field from the FIELD LIST frame into the ROWS frame.

2 Drag the BRANCH field from the FIELD LIST frame into the COLUMNS frame.

3 Drag the SALES field from the FIELD LIST frame into the VALUES frame.

4 The summary table is created showing the sales for each Department within each Branch and Grand Totals are provided for the DEPARTMENT and BRANCH sales.

Useful Tools

Microsoft Excel has a number of useful tools that help support the spreadsheet's operations. This chapter will look at a few of them. There will be no Assignment at the end of the chapter, instead there is a project that can be attempted to practice your spreadsheet skills.

The Save Options

The SAVE OPTIONS can be used to instruct Excel to make a backup copy of the file each time it is saved, or to add password protection to the file.

1   Load Microsoft Excel or close the current document and start a new BLANK WORKBOOK.

2   Enter a few labels and values into a worksheet.

3   Click on the FILE tab or menu, select SAVE AS and access your STORAGE folder.
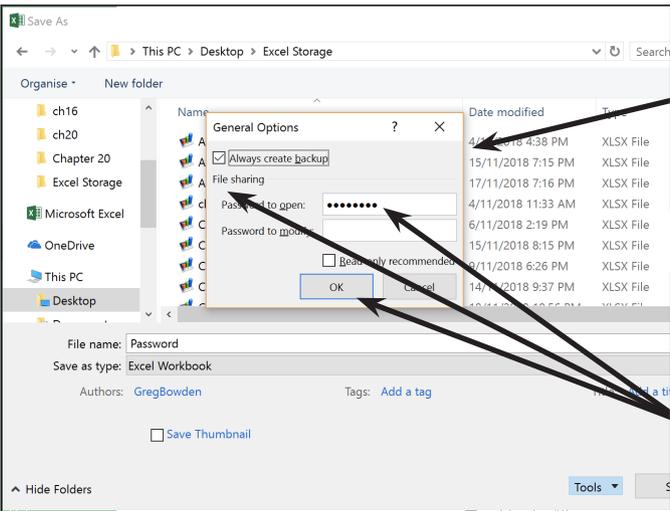
4   In the SAVE AS dialogue box click on the TOOLS button and select GENERAL OPTIONS (or select OPTIONS on the Macintosh) to open the GENERAL OPTIONS dialogue box.

5   On the Windows system click on the ALWAYS CREATE BACKUP check box then on both systems click in the PASSWORD TO OPEN box, enter:

security

and select OK.

NOTE: i   The password will be displayed as bullets so that no-one else can see your entry.

ii   You can also set a password to modify the file. In that case no-one would be able to change the file unless the password was entered.

Confirm Password

Reenter password to proceed.

••••••••

Caution: If you lose or forget the password, it cannot be recovered. It is advisable to keep a list of passwords and their corresponding workbook and sheet names in a safe place. (Remember that passwords are case-sensitive.)

OK   Cancel
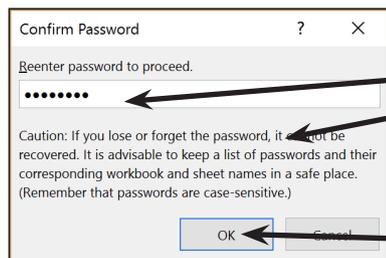
6 Read the important note about passwords then re-enter the password to ensure that you have entered it correctly.

7 Click on OK to return to the SAVE AS dialogue box.

8 Enter the file name: PASSWORD   and save the file in your STORAGE folder.

9 Close the file then re-open it. You will be asked to enter the password.

Password

'Password.xlsx' is protected.

Password: ••••••••

OK   Cancel
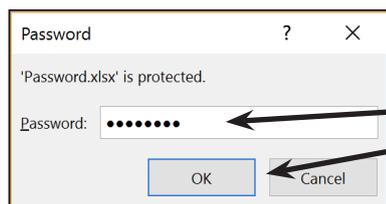
10 Enter: security and click on OK.

11 On the Windows system add some more labels or values to your worksheet and click on the SAVE button in the QUICK ACCESS TOOLBAR to update the file.

Open

Users > GregBowden > Desktop > Excel Storage   Search Excel Sto

Organise ·   New folder

This PC

Desktop

Documents

Downloads

Music

Name	Date Modified
Password	19/11/2018 11:00 PM
Backup of Password	19/11/2018 10:59 PM
Pivot Charts	18/11/2018 11:24 PM
Library Overdues	18/11/2018 6:32 PM
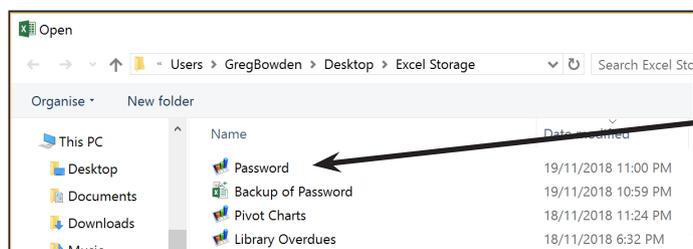
12 Click on the FILE tab and select OPEN. Access your STORAGE folder and you now have two copies of the file, PASSWORD and BACKUP OF PASSWORD.

NOTE: You can sort your STORAGE folder into DATA MODIFIED order to view the latest files next to each other.

13 Open the BACKUP OF PASSWORD file. On the Macintosh system proceed to the note about passwords on the next page.

Microsoft Excel

⚠ The file format and extension of 'Backup of Password.xlk' don't match. The file could be corrupted or u...

Yes   No   Help

14 Re-enter the password, select OK and select YES to the different file type warning.
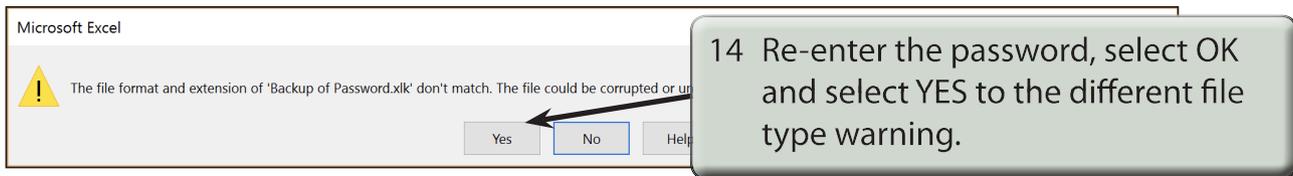
15   A copy of the file before your last update will be opened. Excel has kept a backup copy of your previously saved file before updating the file with new data. Both files have passwords.

NOTE: **i**   **Passwords are case sensitive so if you use a mixture of upper and lowercase letters in the password you will need to remember where they have been used.**

   ii   **Always use a password that you will be able to remember. If you forget the password you will not be able to open the file again. It is a good idea to keep a record of a password in a safe place.**

   iii   **You can set the FILE SHARING to be READ-ONLY RECOMMENDED so that when the file is opened a dialogue box is displayed recommending the user to open the file as a READ-ONLY file. To save the file the user needs to select SAVE AS and enter a different name.**

   iv   **If you enter the password incorrectly you will receive a warning dialogue box. You will not gain access to the file until the password is entered correctly.**

Conditional Formatting

You looked briefly at Conditional Formatting in an earlier chapter, but there are many more applications of it that you may wish to pursue. We will look at a two more Condition Formatting options here.

A   Data Bars

Data Bars allow you to quickly represent numbers in cells in graphical form.
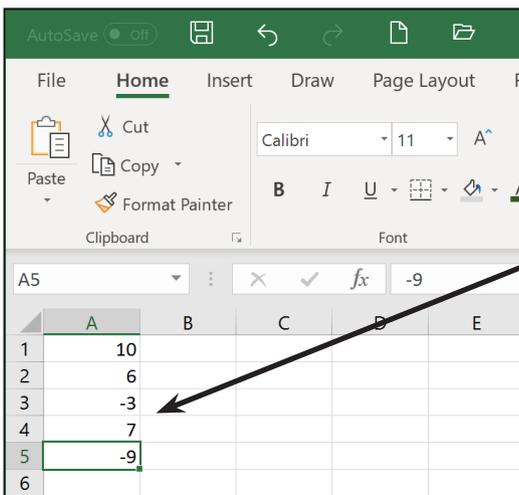
1 Start a new BLANK WORKBOOK and enter the positive and negative numbers shown in cells A1 to A5.
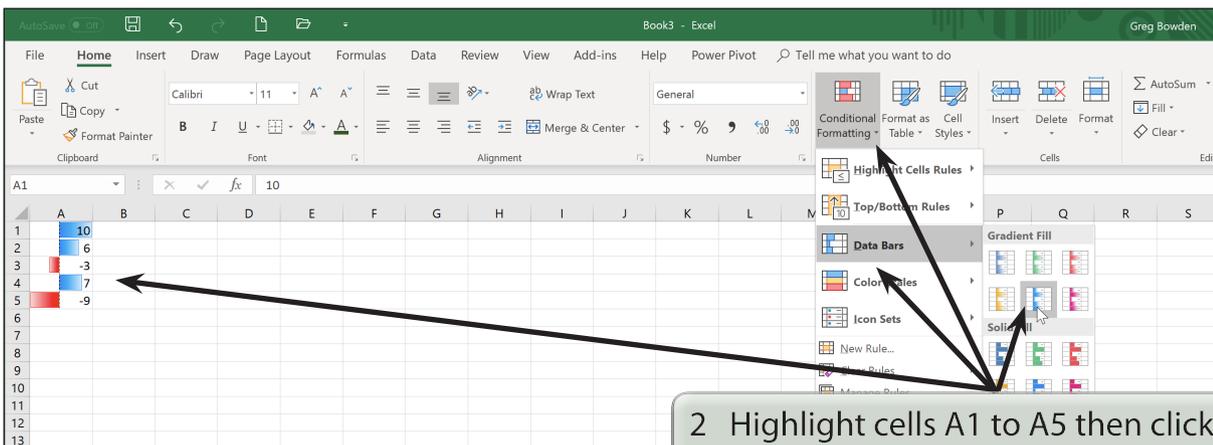
2 Highlight cells A1 to A5 then click on the CONDITIONAL FORMATTING icon in the HOME tab, highlight DATA BARS and select a fill pattern to graph the numbers.

3   Try COLOUR SCALES and ICON SETS from the CONDITIONAL FORMATTING icon.