Develop and use complex spreadsheets (Excel 2019)

This workbook supports BSBITU402 Develop and use complex spreadsheets in the BSB Business Services Training Package.

Author

Software Publications writing team

ISBN 978-1-921971-54-9

Software Publications Pty Ltd

ABN 75 078 026 150
Head Office - Sydney
Unit 3
25 Gibbes Street
Chatswood NSW 2067
www.softwarepublications.com.au

Published and printed in Australia on Australian made paper

BSBITU402 Develop and use complex spreadsheets

Application

This unit describes the skills and knowledge required to use spreadsheet software to complete business tasks and produce complex documents.

It applies to individuals employed in a range of work environments who require skills in creation of complex spreadsheets to store and retrieve data. They may work as individuals providing administrative support within an enterprise, or may be independently responsible for designing and working with spreadsheets relevant to their own work roles.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Elements and Performance Criteria

Element *Elements describe the essential outcomes.*	**Performance Criteria** *Performance criteria describe the performance needed to demonstrate achievement of the element.*	**Page reference**
1. Prepare to develop spreadsheet	1.1 Organise personal work environment in accordance with ergonomic requirements	9–16
	1.2 Analyse task and determine specifications for spreadsheets	20–22
	1.3 Identify organisational and task requirements of data entry, storage, output, reporting and presentation requirements	20–25
	1.4 Apply work organisation strategies and energy and resource conservation techniques to plan work activities	13–17
2. Develop a linked spreadsheet solution	2.1 Utilise spreadsheet design software functions and formulae to meet identified requirements	Throughout workbook
	2.2 Link spreadsheets in accordance with software procedures	120–126, 187–188, 198
	2.3 Format cells and use data attributes assigned with relative and/or absolute cell references, in accordance with task specifications	Throughout workbook
	2.4 Test formulae to confirm output meets task requirements	66–72
3. Automate and standardise spreadsheet operation	3.1 Evaluate tasks to identify those where automation would increase efficiency	120–126, 172–182, 187–188, 198
	3.2 Create, use and edit macros to fulfil requirements of task and automate spreadsheet operation	172–182, 189
	3.3 Develop, edit and use templates to ensure consistency of design and layout for forms and reports, in accordance with organisational requirements	183–186, 189–191, 194–196

Element *Elements describe the essential outcomes.*	**Performance Criteria** *Performance criteria describe the performance needed to demonstrate achievement of the element.*	**Page reference**
4. Use spreadsheets	4.1 Enter, check and amend data in accordance with organisational and task requirements	Throughout workbook
	4.2 Import and export data between compatible spreadsheets and adjust host documents, in accordance with software and system procedures	110–116, 120–126, 192–193
	4.3 Use manuals, user documentation and online help to overcome problems with spreadsheet design and production	53–55
	4.4 Preview, adjust and print spreadsheet in accordance with organisational and task requirements	60, 90, 117, 119, 132
	4.5 Name and store spreadsheet in accordance with organisational requirements and exit application without data loss or damage	Throughout workbook
5. Represent numerical data in graphic form	5.1 Determine style of graph to meet specified requirements and manipulate spreadsheet data if necessary to suit graph requirements	80–104, 196–198
	5.2 Create graphs with labels and titles from numerical data contained in a spreadsheet file	84–104, 196–198
	5.3 Save, view and print graph within designated timelines	19, 84–104, 196–198

Assessment for BSBITU402

This Unit is assessed by:

- demonstrating correct WHS practices
- using a manual or help facility
- creating and using spreadsheets.

Assessment Requirements v1.0

Performance Evidence

Evidence of the ability to:	**Page reference**

• follow organisational and safe work practices including:
  • ergonomic requirements
  • energy and resource conservation techniques
	9–17

• adhere to organisational requirements for: • ensuring consistency of style, design and layout	23–26
• saving and printing documents within designated timelines	Throughout workbook
• naming and storing documents	Throughout workbook

• adhere to identified or task requirements when producing documents including:
  • editing macros and automating some tasks
  • using appropriate templates
  • creating graphs to represent data
	Throughout workbook

• resolve issues by referring to user documentation and online help	53–55
• use appropriate data storage options	Throughout workbook
• evaluate tasks to improve efficiency	120–126, 172–182, 187–188, 198
• apply knowledge of functions and features of contemporary computer applications	Throughout workbook
• communicate with relevant personnel.	20–21, 158–159, 195

Knowledge Evidence

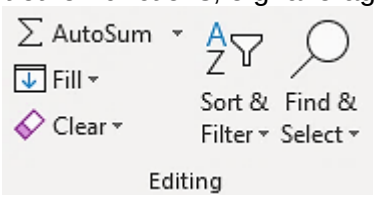
To complete the unit requirements safely and effectively, the individual must:	**Page reference**
• explain advanced functions of spreadsheet software applications	Throughout workbook
• describe impact of formatting and design on presentation and readability of data	23–26
• explain organisational requirements for ergonomics, work periods and breaks, and conservation techniques.	9–16

BSBTEC402 Design and produce complex spreadsheets

At the time of writing this workbook BSBITU402 Design and develop complex spreadsheets was under review and a draft BSBTEC402 Design and produce complex spreadsheets was circulated for industry feedback. This workbook has been written to include additional requirements in that draft.

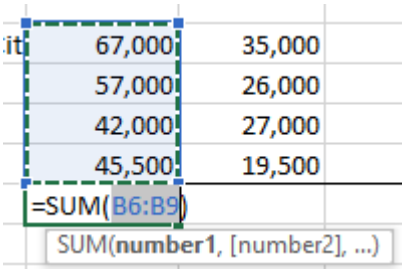
AutoSum button

The AutoSum button  is used to add values of multiple cells in a worksheet. It is located in the Editing Group on the Home Ribbon. The drop-down list button next to the AutoSum button is used to select other functions, e.g. average, maximum.

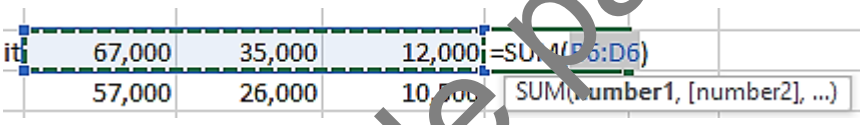


Before clicking on this button, check the active cell is where the result is to appear.

The AutoSum function will look upwards from the cursor position (in a column) to find cells to add.

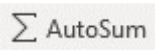


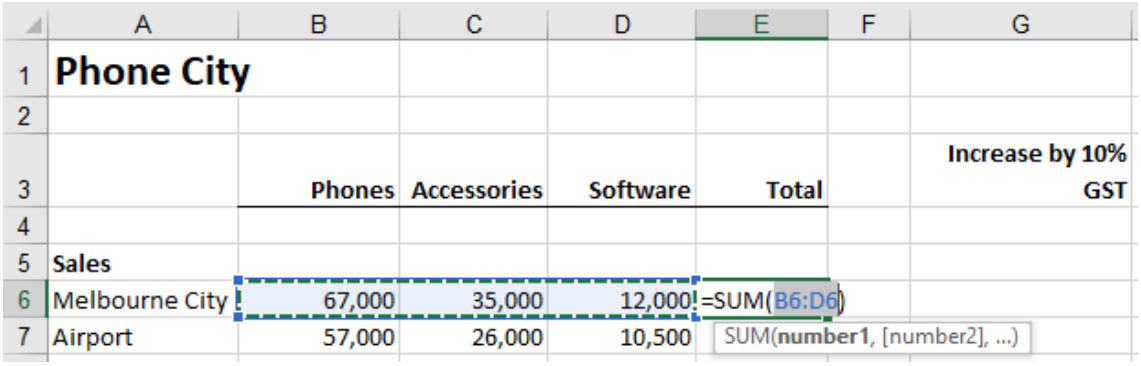
If cells above a total cell do not contain values, the AutoSum function will look to the left of the cursor position and select cells to add (across a row).



Exercise 11

1. Open the file **Phone City** from the *978-1-921971-54-9 BSBITU402 exercise files* folder. Enable editing if required.
2. Save As the file in your working folder following workbook procedures.
3. Click on cell E6.

Alt = 4. With the Home Ribbon displayed click on the AutoSum button  located in the Editing Group.



- The formula displays = (equal to) indicating the start of a formula.
- The SUM function adds the data in the cells indicated in the range.
- Brackets are used to display the range to be totalled (from cells B6 to cell D6).

5. Press Enter.

Formulas with brackets

The order of the calculations (also known as the order of operation) is important and brackets () must be used to separate the different equations. This is the same method called **BEDMAS** (or BODMAS) used in mathematics where the sum in brackets is calculated first.

B **B**rackets first

E **E**xponents (orders), i.e. powers and square roots

DM **D**ivision and **M**ultiplication (left to right)

AS **A**ddition and **S**ubtraction (left to right)

Examine the following equations:

3 x 5 + 2 = 17

3 x (5 + 2) = 21

The results will differ depending on the order in which the calculation is done or where the brackets have been placed.

Exercise 21

1. Using **Exercise 19…** click on the *Sales report* sheet tab.

Sales for power tools are shown in the worksheet for January 2019 and 2020. The manager of Hardware Haven would like to know the percentage difference between January sales for each product.

2. Click in cell F5. Type: **=(D5-E5)/E5**

   i.e. (2020 sales minus 2019 sales) divided by 2019 sales

3. Press Ctrl Enter. Copy the formula down the column.
4. Save and close the workbook.

Copying and moving data summary

Action	Instruction
Copying (using copy and paste)	1. Select the cells to be copied. 2. Click on the Copy button (Ctrl C). 3. Click on the destination cell(s) and press Enter OR Click on the Paste button (Ctrl V).
Copying (using drag and drop)	1. Select the cells to be copied. 2. Move the mouse to the edge of the cells (the mouse will be displayed as a pointer). 3. Hold down the Ctrl key and drag to the destination cell(s).
Copying (using the fill handle)	1. Select the cells to be copied. 2. Move the mouse pointer over the fill handle (as shown below). 3. Hold down the left mouse button and drag across cells you are copying to. 
Moving (using cut and paste)	1. Select the cells to be moved. 2. Click on the Cut button (Ctrl X). 3. Click on the destination cell(s) and press Enter OR Click on the Paste button (Ctrl V).
Moving (using drag and drop)	1. Select the cells to be moved. 2. Move the mouse to the edge of the cells (the mouse will be displayed as a pointer) and drag to the destination cell(s). 3. Use the Shift key to move rows/columns between existing rows/columns.
Moving/copying to another worksheet (using drag and drop)	1. Select the cells to be moved/copied. 2. Move the mouse to the edge of the cells (the mouse will be displayed as a pointer). 3. Hold down the Alt key (if you want to copy, also hold down the Ctrl key). 4. Click and drag down onto the sheet tab of the worksheet required. 5. Position on the worksheet then release the mouse button.

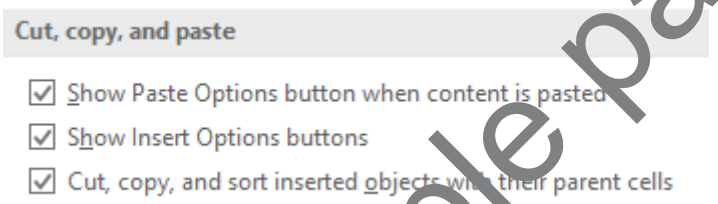
Option buttons

When certain data is entered or an option is used in Excel, symbols may appear.

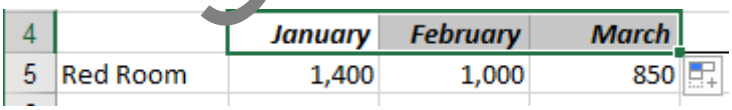
Button	Name	Description
	Paste Options	Actions data pasted into a worksheet.
	Insert Options	When rows/columns or cells are inserted into a worksheet different formatting options can be applied to inserts.
	Auto Fill Options	Used when filling cells with the fill handle. You can select the type of data series required.
	AutoCorrect Options	Actions text that can be corrected using AutoCorrect.

Exercise 36

1. Open the file **Westlake** from the *978-1-921971-54-9 BSBITU402 exercise files* folder.
2. Save As the file in your working folder following workbook procedures.
3. Click on File and select Options to display the Excel Options dialog box.
4. Select Advanced on the left.
5. Scroll down to the Cut, copy and paste section and check there is a tick in the three check boxes: *Show Paste Options button when content is pasted*, *Show Insert Options button* and *Cut, copy, and sort inserted objects with their parent cells*.

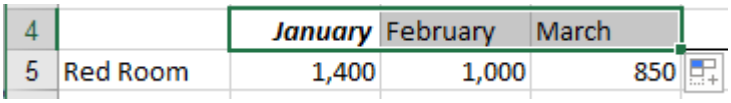


6. Click on OK.
7. In cell B4 type: **January**
8. Format cell B4 to right aligned, bold, italic and a bottom border.
9. With cell B4 selected drag the fill handle to cell D4. This will fill the cells with months of the year. The Auto Fill Options button will appear at the lower right of the last filled cell.



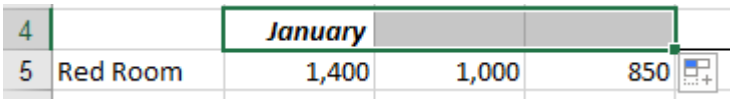
4		*January*	*February*	*March*
5	Red Room	1,400	1,000	850

10. Click on the Auto Fill Options button and select Fill Without Formatting. This will display the data without any formatting in cells C4 and D4.



4		*January*	February	March
5	Red Room	1,400	1,000	850

11. Click on and select Fill Formatting Only. The names of each month will not appear. Only formatting from cell B4 is applied to selected cells.



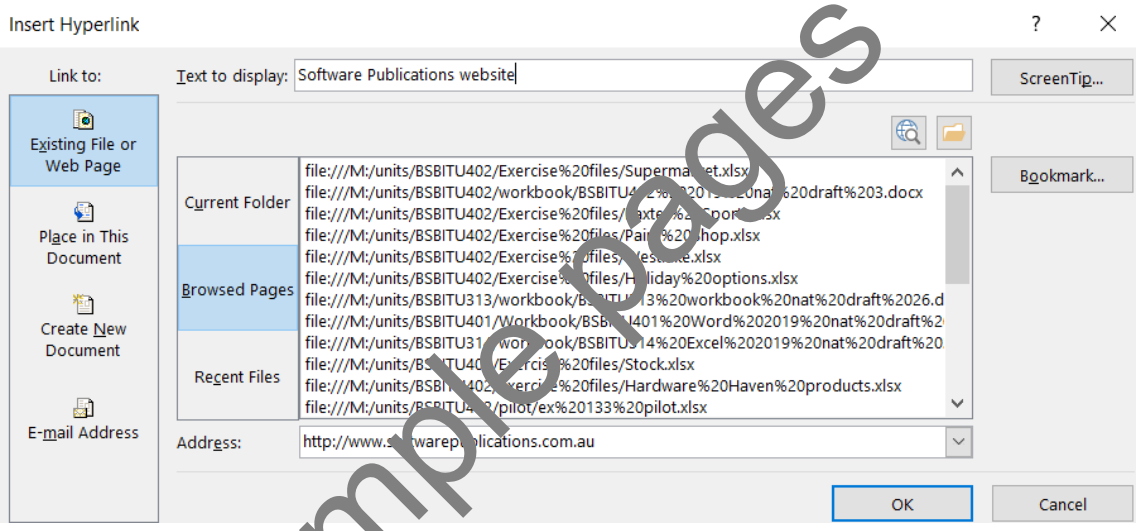
4		*January*		
5	Red Room	1,400	1,000	850

Hyperlinking to a website

Exercise 44

1. Using **Exercise 43…** check the *Front worksheet* is displayed and click in cell A8.
2. Click on Link.
3. Click on Existing File or Web Page and Browsed Pages.

   These are the web pages and system files that have been viewed recently and can be selected to link to. (The list displayed will vary depending on files that have recently be accessed.)
4. With the cursor in the *Address:* box, type: **www.softwarepublications.com.au** (http:// will automatically be inserted in the Address box as shown below).
5. Select the text in the *Text to display:* box and type: **Software Publications website**



6. Click on OK. The text Software Publications website will appear in the cell.
7. Click on the hyperlink in cell A8. The internet browser will open and display the Software Publications website.
8. Close the browser and check Excel is displayed.
9. Save the workbook and leave it open for the next exercise.

Changing a hyperlink to ordinary text

Hyperlinks can be changed to ordinary text.

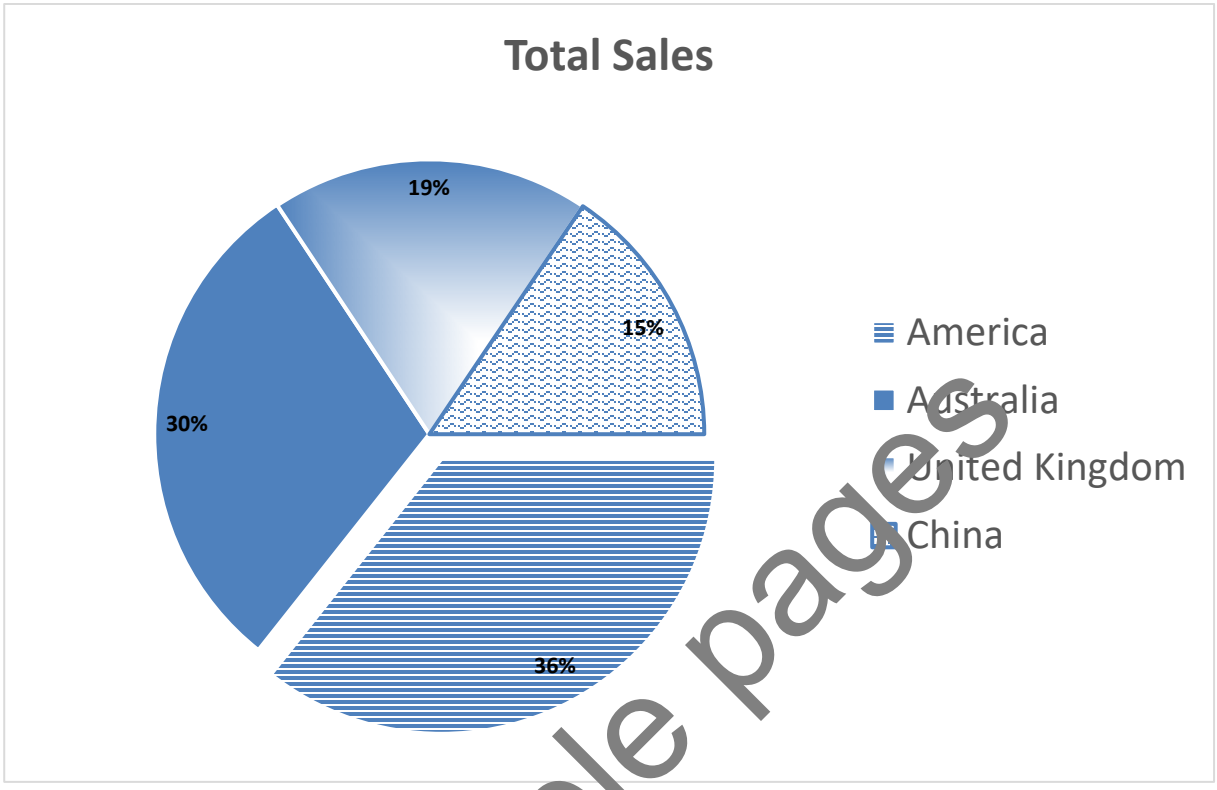
Exercise 45

1. Using **Exercise 43…** right click on the Software Publications website hyperlink in cell A8.
2. Select Remove Hyperlink. The hyperlink will be removed and the text will return to normal.
3. Close the workbook without saving.

Pie charts

Pie charts are used to display proportions comparing one portion of data against an entire group. You can only display one group of data (data series) at a time.

The following chart compares the proportion of total sales as a percentage as contributed by the different countries. It is easy to see straight away that America is contributing the highest amount to the total.



Charts Group

The Charts Group on the Insert Ribbon is used to create charts.

In traditional two-dimensional charts the primary horizontal axis is used to reflect categories and the primary vertical axis to reflect values. A feature of Excel is three-dimensional charts; a number of which will be used throughout this section. In a three-dimensional chart a third axis, known as the depth axis, is used which replaces the legend.

Charts and data

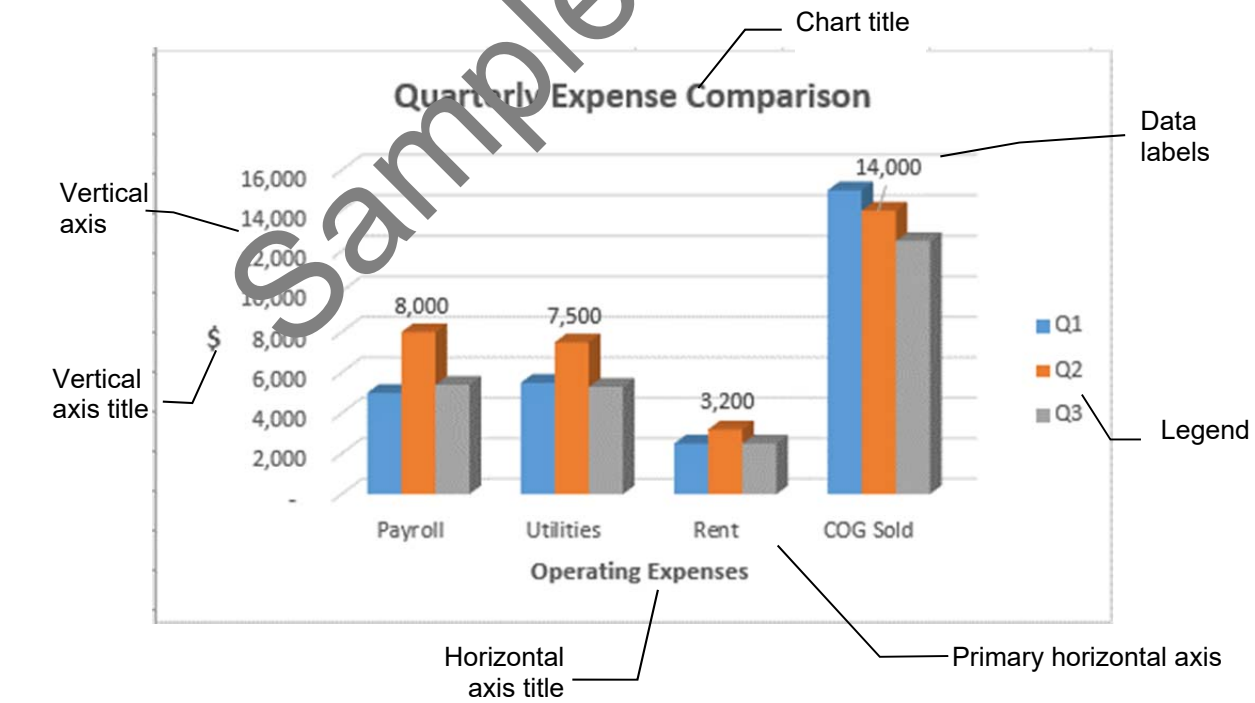
Charts can be embedded into your current worksheet or added as a new worksheet to a workbook file. Chart worksheets are displayed full screen and when printed do not include worksheet data. An example of a column chart is shown below along with the worksheet data used to create the chart.

	A	B	C	D	E
1	Income Statement				
2	Goodwind's Sports Supply				
3					
4		Q1	Q2	Q3	Total
5					
6	**Net Sales**	30,000	38,000	32,000	100,000
7					
8	**Operating Expenses**				
9	Payroll	5,000	8,000	5,400	18,400
10	Utilities	5,500	7,500	5,300	18,300
11	Rent	2,500	3,200	2,500	8,200
12	COG Sold	15,000	14,000	12,500	41,500
13					
14	**Total Operating Expenses**	28,000	32,700	25,700	86,400
15					
16	**Operating Income**	2,000	5,300	6,300	13,600

Legend data

Horizontal access data

Data to be graphed

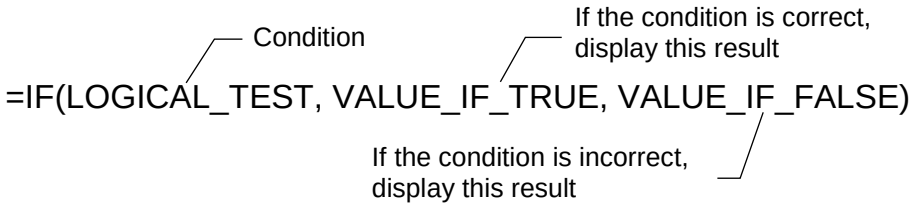


Functions

When using the wide range of functions in Excel, the Function Arguments dialog box automates the formula building process by giving step by step instructions.

IF function

The IF function is used to test the condition of a cell and return one result if the condition is true and another (different) result if it is false.



To apply the IF function to text instead of a number, e.g. if cell C12 = Auckland, you must surround the text with quotation marks:

IF(C12="Auckland",D12*25%,D12*20%)

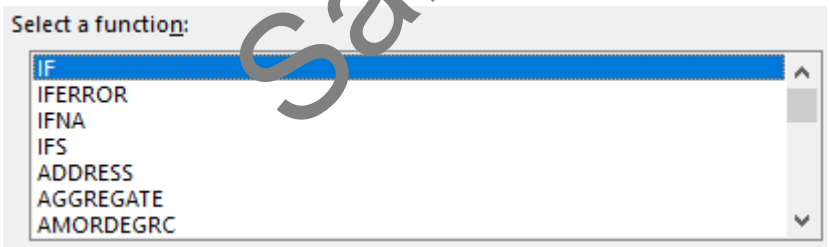
Notice that commas separate the different sections of the function.

Exercise 104

In this exercise you will use the IF function to determine the sale price for quantities exceeding the stock limit of 30, i.e.

> If the quantity in stock (E7) is greater than 30 multiply the retail price (C7) by 75% otherwise display the retail price. The formula will be =IF(E7>30,C7*75%,C7).

1. Open the file **Exercise 74…** from your working folder.
2. Click on cell G7.
3. Click on the Insert Function button at the left of the Formula Bar.
4. Click in the *Search for a function* box and type: **IF**
5. Click on Go. This will search for the IF function.



6. With IF selected in the *Select a function:* box click on OK.

   Once a function has been chosen, the Function Arguments dialog box appears. The cursor is positioned in the *Logical_test* box.

The Function Arguments dialog box can be moved around the screen by clicking and dragging on the Title bar.

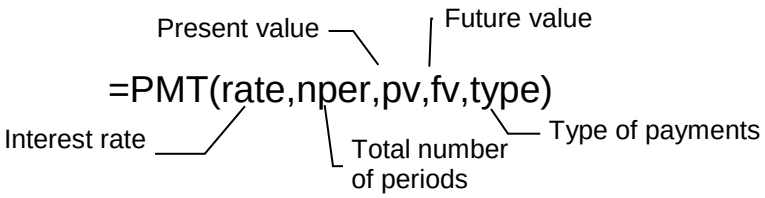
7. Drag the Function Arguments dialog box so that row 7 can be seen.

Cells can be selected or cell references typed into the text boxes of the Function Arguments dialog box.

8. Click on cell E7. Look at the Formula Bar to see the function build as you enter data.
9. Type: **>30** (greater than 30).

PMT function

The PMT function returns the payment for a loan based on periodic constant payments and constant interest rates. The function includes the following arguments:

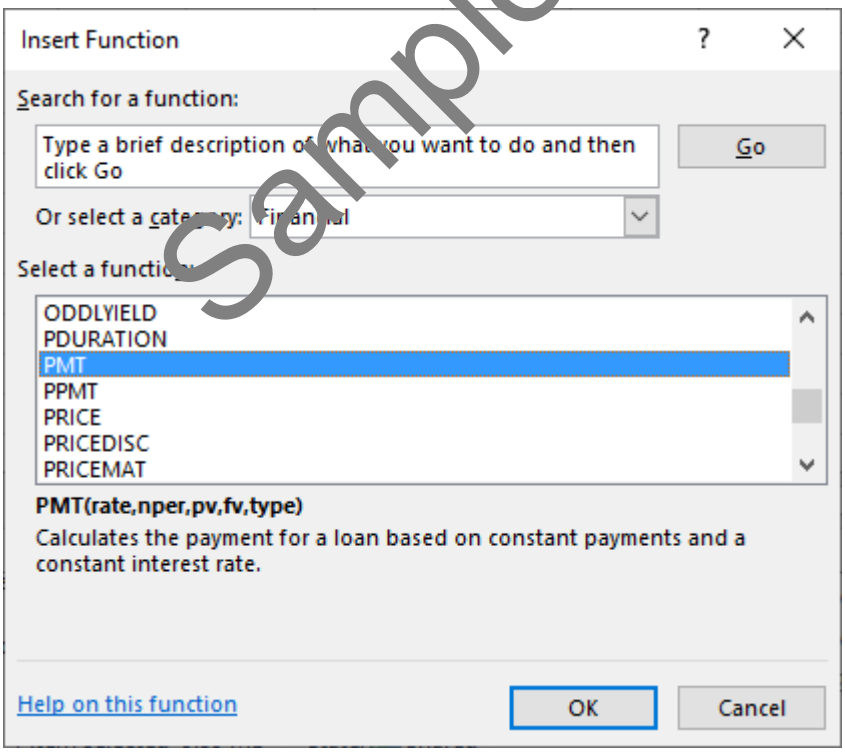


Exercise 111

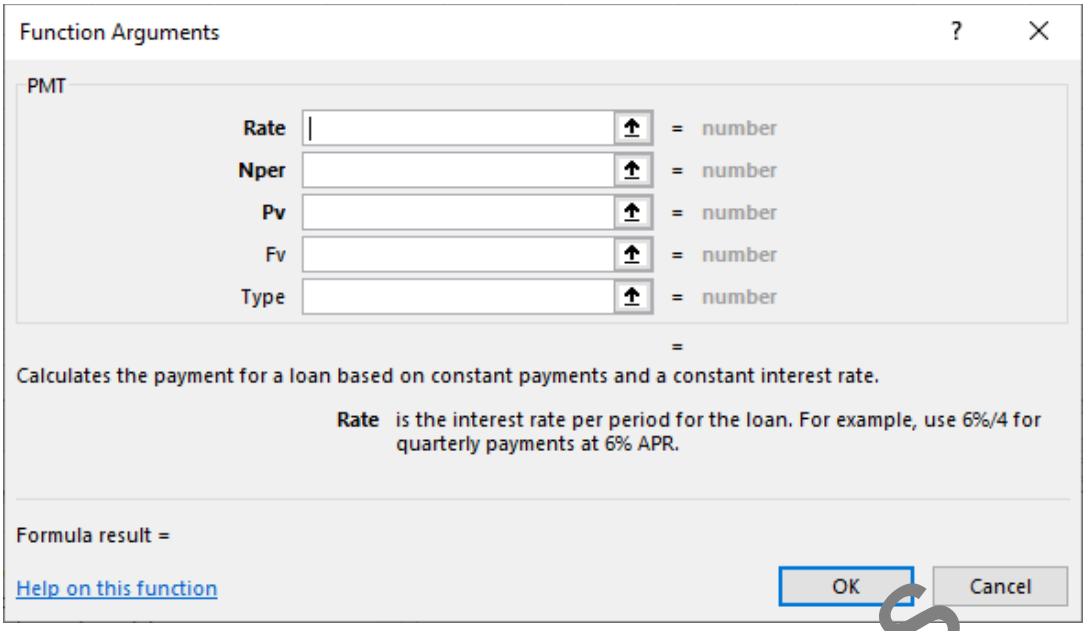
1. In a new file create the following:

	A	B	C	D
1				
2		Loan Calculator		
3				
4	Amount	Years	Interest	Payment
5	-10,000	5	7.00%	

2. Save the file in your working folder following workbook procedures.
3. Click in cell D5.
4. Click on the Insert Function button f_x.
5. Click on the *Or select a category:* and select Financial from the list.
6. Scroll down and select PMT from the *Select a function:* box.



7. Click on OK.



Rate	Interest rate for the period of the loan.
Nper	The total number of payments for the loan.
Pv	The present value of the loan.
Fv	The future value of the loan.
Type	When payments are due for the loan – at the beginning of each period or at the end of each period.

8. With the cursor in the *Rate* box click on and select cell C5.
9. Click on then type: ***/12***

   This will calculate the interest for one year.
10. Click in the *Nper* box then click on cell B5. Type: ****12***

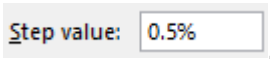
    This will calculate the number of payments over five years.
11. Click in the *Pv* box then click on cell A5. This is the amount that has been borrowed (negative balance).

12. Click on OK. The payment per month is $198.01.
13. Save the workbook and leave it open for the next exercise.

Exercise 112

1. Using **Exercise 111…** select cells A4 to D5 and copy to cell A7.
2. Alter the amount shown in A8 to **-20,000**. What is the monthly payment?
3. Select cells A7 to D8. On the Home Ribbon click on the Clear button Clear and select Clear All.
4. In cell C7 type: **Interest**

5. In cell D7 type: **Payment**
6. Select cells C7 to D7. Bold and right align the text.
7. Click in cell C8 and type: **0%**
8. Click in cell C9 and type: **5.0%**
9. Decrease the decimal points to one if necessary.
10. Select cells C9 to C23. On the Home Ribbon click on the Fill button 

and select Series.
11. In the *Step value:* box enter **0.5%** 

.
12. Click on OK.
13. Click in cell D8.
14. Calculate the payment based on 0% interest for the amount and years shown at the top of the worksheet, e.g. =PMT(C8/12,B5*12,A5). The monthly payment should be $166.67.
15. Double click on cell D8 to expand the formula.
16. Within the formula displayed click before the cell reference B5 and press F4. Click before the cell reference A5 and press F4.

    This will make the cell references B5 and A5 absolute as this formula is going to be copied down the column. The cell reference will display as follows:

    =PMT(C8/12,$B$5*12,$A$5)
17. Press Ctrl Enter. Using the fill handle copy the formula down the column to cell D23.

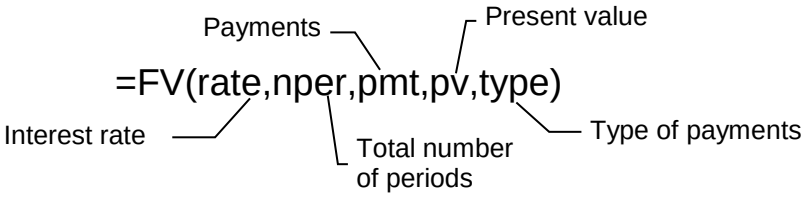
    The formula will automatically calculate the various payments based on the interest rate shown in column C.

			Interest	Payment
8			0%	$166.67
9			5.0%	$188.71
10			5.5%	$191.01
11			6.0%	$193.33
12			6.5%	$195.66
13			7.0%	$198.01
14			7.5%	$200.38
15			8.0%	$202.76
16			8.5%	$205.17
17			9.0%	$207.58
18			9.5%	$210.02
19			10.0%	$212.47
20			10.5%	$214.94
21			11.0%	$217.42
22			11.5%	$219.93
23			12.0%	$222.44

18. Save the workbook.
19. Change the amount in cell B5 from 5 years to 8 years and watch the *Payment* column reflect the changes.
20. Close the worksheet without saving.

FV function

The future value (FV) function calculates the future amount of an investment based on a constant interest rate and payment amount for a certain period of time. The function includes the following arguments:

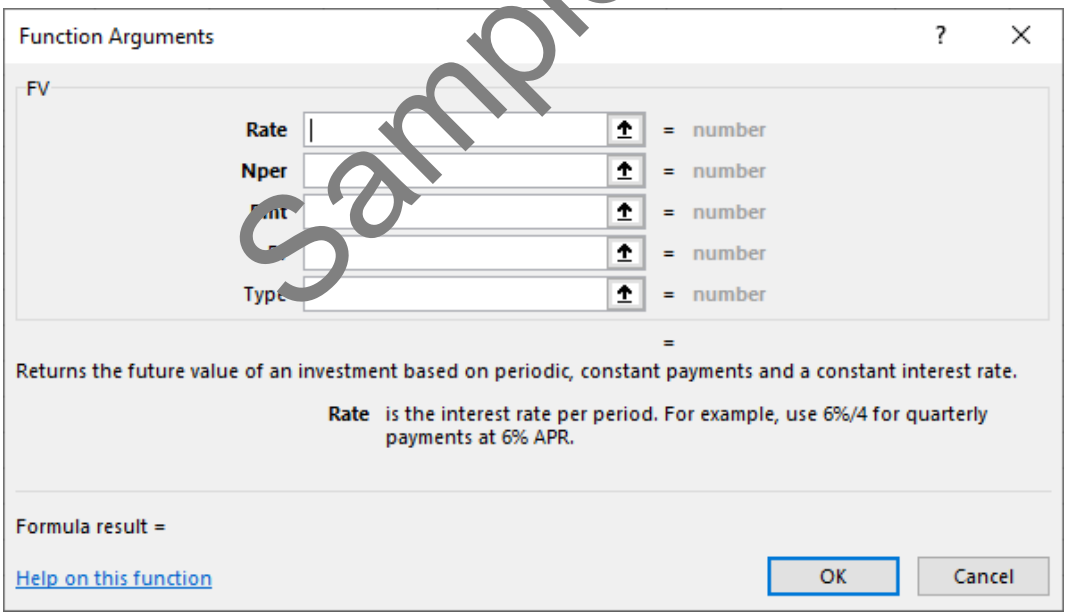


Exercise 113

1. In a new file create the following:

	A	B	C	D
1				
2	Investment Calculator			
3				
4	Payments	Years	Interest	Amount
5	-250	2	5.00%	

2. Save the file in your working folder following workbook procedures.
3. Click on cell D5.
4. Click on the Insert Function button f_x.
5. Click on the *Or select a category:* and select Financial.
6. Select FV from the *Select a function:* box.
7. Click on OK.

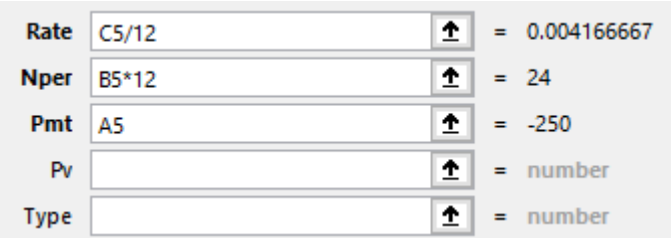


Rate	Interest rate for the period of the investment.
Nper	The total number of payments.
Pmt	Regular payment contribution to the investment.
Pv	The present value of the investment.
Type	When payments are due for the investment – at the beginning of each period or at the end of each period.

8. With the cursor in the *Rate* box click on  and select cell C5.
9. Click on  then type: ***/12***

   This will calculate the interest for one year.
10. Click in the *Nper* box then click on cell B5. Type: ***12**

    This will calculate the number of payments to be paid over two years.
11. Click in the *Pmt* box then click on cell A5. This is the amount that is being paid into the investment (negative balance).



12. Click on OK.

The total investment after two years at 5% is $6,296.48.

13. Format and enter data into cells C7 to C9 and D7 as shown below.

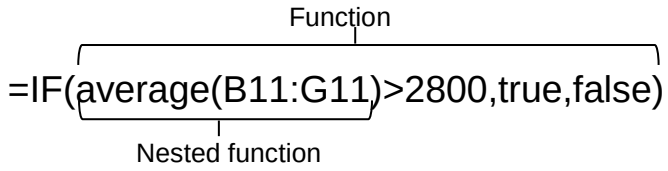
	A	B	C	D
1				
2	Investment Calculator			
3				
4	Payments	Years	Interest	Amount
5	-250	2	5.00%	$6,296.48
6				
7			Interest	Amount
8			0.00%	
9			4.50%	

14. Select cells C9 to C14.
15. On the Home Ribbon click on the Fill button  and select Series.
16. In the Step value: box enter **0.005**, check the *Linear* option is chosen and click on OK.
17. Click on cell D8.
18. Calculate the amount of the investment without any interest (based on cell C8), e.g.

    =FV(C8/12,B5*12,A5)
19. Double click on cell D8 and alter B5 and A5 cell references to absolute (because the formula is to be copied down column D). Only the cell reference for column C will change, i.e. =FV(C8/12,$B$5*12,$A$5)
20. Using the fill handle copy the formula in cell D8 down the column to D14.
21. Save and close the workbook.

Nested functions

A nested function is a function within another function. The example below inserts TRUE into a cell if the average of the specified range is greater than 2,800 and FALSE if not.

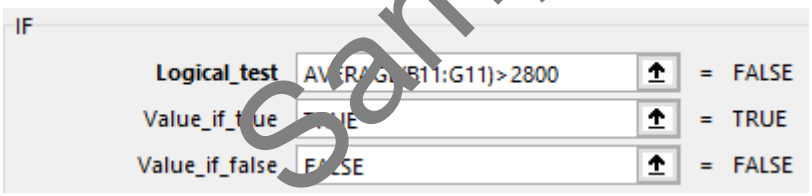


Nested functions are used in scenarios when there is more than one criteria, e.g. is the average price above $2800?

Exercise 114

This exercise shows how to create different nested functions.

1. Open the file **Day Tripper** from the *978-1-921971-54-9 BSBITU402 exercise files* folder.
2. Save As the file in your working folder following workbook procedures.
3. Click on cell B14.
4. Click on the Insert Function button f_x.
5. Select Logical from the *Or select a category:* box.
6. Select IF from the *Select a function:* box.
7. Click on OK.
8. With the cursor in the Logical_test box, type: **AVERAGE(**
9. Select cells B11 to G11.
10. Type: **)>2800**.
11. Click in the *Value_if_true* box and type: **TRUE**
12. Click in the *Value_if_false* box and type: **FALSE**



13. Click on OK.
14. Create the formula required for cell B15 using the Round and Median functions.

    Hints

    The Median function should be nested within the Round function.

    To check for the correct solutions click on the *Sheet2* sheet tab when finished.

15. Add the following new tours to the bottom of the worksheet, i.e. *Sheet1,* beneath *Brisbane at Night*.

Tours	April	May	June
Shop Till You Drop Tour	556	432	475
Garden Explorer	250	375	410

Array formulas

An array formula can be used to calculate specific information on two or more sets of values. These are known as **array arguments**. The same number of rows and columns must be used for each array argument. Array formulas are created in the same way as for other Excel formulas except that Ctrl Shift Enter is pressed to enter the formula.

Exercise 133

In this exercise the average sales of products for the Sydney area for 2020 will be calculated.

1. Open the file **Busy Bee Company** from the *978-1-921971-54-9 BSBITU402 exercise files* folder.
2. Save As the file in your working folder following workbook procedures.
3. Click on cell C19. The formula that has been inserted will display.

This formula identifies those figures in C that relate to Sydney and calculates their average. This is a good way of using two sets of figures in one formula.

5. Click on cell B19 and enter the formula below then press Ctrl Shift Enter (this is pressed for an array formula, if Enter is pressed #VALUE will be displayed):

   =AVERAGE(IF($A$5:$A$17="Sydney",$B$5:$B$17))

This will calculate the average of only Sydney figures in the range B5 to B17.

4. In cell A20 type: **Average Sales for Brisbane**
5. In cell A21 type: **Average Sales for Melbourne**
6. Widen column A.
7. Calculate formulas for cells B20 and B21 by copying the formula above and replacing Sydney with Brisbane then Melbourne. Press Ctrl Shift Enter to enter the formula.

	A	B	C	D
1	The Busy Bee Company			
2	Product Sales 2018-2020			
3				
4		2020	2019	2018
5	Brisbane	156,000	186,000	123,000
6	Sydney	75,000	115,000	98,500
7	Melbourne	56,000	95,000	88,000
8				
9				
10	Brisbane	166,500	155,500	145,000
11	Sydney	188,000	95,000	78,000
12	Melbourne	123,000	88,000	85,000
13				
14				
15	Brisbane	156,500	145,000	122,400
16	Sydney	195,500	98,000	85,000
17	Melbourne	144,000	95,000	75,000
18				
19	Average Sales for Sydney	152,833.33	102,666.67	87,166.67
20	Average Sales for Brisbane	159,666.67	162,166.67	130,133.33
21	Average Sales for Melbourne	107,666.67	92,666.67	82,666.67

8. Save and close the workbook.

Evidence guide

Elements and Performance Criteria

Element *Elements describe the essential outcomes.*	**Performance Criteria** *Performance criteria describe the performance needed to demonstrate achievement of the element.*	**Assessment tasks**
1. Prepare to develop spreadsheet	1.1 Organise personal work environment in accordance with ergonomic requirements	Task 1
	1.2 Analyse task and determine specifications for spreadsheets	Task 2, Task 6
	1.3 Identify organisational and task requirements of data entry, storage, output, reporting and presentation requirements	Task 2, Task 6
	1.4 Apply work organisation strategies and energy and resource conservation techniques to plan work activities	Task 1
2. Develop a linked spreadsheet solution	2.1 Utilise spreadsheet design software functions and formulae to meet identified requirements	Task 2, Task 6, Task 7
	2.2 Link spreadsheets in accordance with software procedures	Task 6
	2.3 Format cells and use data attributes assigned with relative and/or absolute cell references, in accordance with task specifications	Task 2, Task 6, Task 7
	2.4 Test formulae to confirm output meets task requirements	Task 2, Task 3, Task 5, Task 6, Task 7
3. Automate and standardise spreadsheet operation	3.1 Evaluate tasks to identify those where automation would increase efficiency	Task 2, Task 6, Task 7
	3.2 Create, use and edit macros to fulfil requirements of task and automate spreadsheet operation	Task 2, Task 3, Task 5
	3.3 Develop, edit and use templates to ensure consistency of design and layout for forms and reports, in accordance with organisational requirements	Task 2, Task 3, Task 5, Task 7

Element *Elements describe the essential outcomes.*	**Performance Criteria** *Performance criteria describe the performance needed to demonstrate achievement of the element.*	**Assessment tasks**
4. Use spreadsheets	4.1 Enter, check and amend data in accordance with organisational and task requirements	Task 3, Task 4, Task 6, Task 7
	4.2 Import and export data between compatible spreadsheets and adjust host documents, in accordance with software and system procedures	Task 6
	4.3 Use manuals, user documentation and online help to overcome problems with spreadsheet design and production	Task 7
	4.4 Preview, adjust and print spreadsheet in accordance with organisational and task requirements	Task 2, Task 3, Task 4, Task 6
	4.5 Name and store spreadsheet in accordance with organisational requirements and exit application without data loss or damage	Task 2, Task 3, Task 4, Task 6, Task 7
5. Represent numerical data in graphic form	5.1 Determine style of graph to meet specified requirements and manipulate spreadsheet data if necessary to suit graph requirements	Task 6
	5.2 Create graphs with labels and titles from numerical data contained in a spreadsheet file	Task 6
	5.3 Save, view and print graph within designated timelines	Task 6

Assessment Requirements v1.0

Performance Evidence

Evidence of the ability to:	**Assessment task**

• follow organisational and safe work practices including:
  • ergonomic requirements
  • energy and resource conservation techniques
	Task 1

• adhere to organisational requirements for:
  • ensuring consistency of style, design and layout
  • saving and printing documents within designated timelines
  • naming and storing documents
	Task 2, Task 3, Task 4, Task 6, Task 7

• adhere to identified or task requirements when producing documents including:
  • editing macros and automating some tasks
  • using appropriate templates
  • creating graphs to represent data
	Task 2, Task 3, Task 5, Task 6, Task 7

• resolve issues by referring to user documentation and online help	Task 7
• use appropriate data storage options	Task 2, Task 3, Task 4, Task 5, Task 6, Task 7
• evaluate tasks to improve efficiency	Task 2, Task 6, Task 7
• apply knowledge of functions and features of contemporary computer applications	Task 2, Task 3, Task 4, Task 5, Task 6, Task 7
• communicate with relevant personnel	Task 2, Task 6

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:	**Assessment task**
• explain advanced functions of spreadsheet software applications	Task 2, Task 3, Task 4, Task 5, Task 6, Task 7
• describe impact of formatting and design on presentation and readability of data	Task 2, Task 6, Task 7
• explain organisational requirements for ergonomics, work periods and breaks, and conservation techniques.	Task 1