

Produce Spreadsheets (Excel 2013)

Supporting BSBITU304A Produce Spreadsheets in the BSB07 Business Services Training Package.

© Software Publications Pty Ltd, June 2015

Software Publications writing team

ISBN 978-1-922241-17-7

Disclaimer

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, scanning, recording, or any information storage and retrieval system, without permission in writing from Millbank Investments Ltd, NZ or Software Publications Pty Ltd. No patent liability is assumed with respect to the use of the information contained herein. While every precaution has been taken in the preparation of this book, the publisher and authors assume no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein.

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

BSBITU304A

Produce spreadsheets

Unit descriptor

This unit describes the performance outcomes, skills and knowledge required to develop spreadsheets through the use of spreadsheet software. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of unit

This unit applies to individuals employed in a range of environments who require skills in the creation of spreadsheets that encompass formatting, formulae and charts. They tend to be personally responsible for designing and working with spreadsheets under minimal supervision.

Element	Performance Criteria	Page Reference
1	Select and prepare resources	
1.1	Adhere to <i>ergonomic, work organisation and occupational health and safety requirements</i> .	Software Publications WHS (included in exercise file download)
1.2	Use energy and resource <i>conservation techniques</i> to minimise wastage.	Software Publications WHS (included in exercise file download)
1.3	Identify spreadsheet task requirements in relation to data entry, storage, output and presentation.	18-21 and throughout workbook
2	Plan spreadsheet design.	
2.1	Ensure <i>spreadsheet design</i> suits the purpose, audience and information requirements of the task.	18-21, 52-53, 58, 90-91, 101, 154-158, 186-187, 210, 222-226 and throughout workbook
2.2	Ensure spreadsheet design enhances readability and appearance, and meets organisational and task requirements for style and layout.	19-20
2.3	Use style sheets and <i>automatic functions</i> to ensure <i>consistency of design and layout</i> .	2-3, 20, 31-34, 57-58, 67, 90-91, 120, 140-143, 148, 169-173

Element	Performance Criteria	Page Reference
3	Create spreadsheet.	
3.1	Ensure <i>data</i> is entered, <i>checked</i> and amended to maintain consistency of design and layout, in accordance with organisational and task requirements.	76, 79, 133-135 and throughout workbook
3.2	<i>Format</i> spreadsheet using <i>software functions</i> to adjust page and cell layout to meet information requirements, in accordance with organisational style and presentation requirements.	31, 52-53, 53-55, 58, 64-64, 74-74, 90-91, 148, 214-222
3.3	Ensure <i>formulae</i> are tested and used to confirm output meets task requirements, in consultation with appropriate personnel as required.	52-54, 55, 59, 64-66, 86 and throughout workbook
3.4	Use manuals, user documentation and online help to overcome problems with spreadsheet design and production.	206-207
4	Produce simple charts.	
4.1	Select chart type and design that enables valid representation of numerical data, and meets organisational and task requirements.	154-158
4.2	Create charts using appropriate data range in the spreadsheet.	159, 162, 164, 166
4.3	Modify chart type and layout using formatting features.	160-166
5	Finalise spreadsheets.	
5.1	Preview, adjust and <i>print</i> spreadsheet and any accompanying charts, in accordance with task requirements.	58, 91, 93-94, 112, 162 and throughout workbook
5.2	Ensure data input meets <i>designated time lines</i> and organisational requirements for speed and accuracy.	5
5.3	<i>Name and store spreadsheet</i> in accordance with organisational requirements and exit the application without data loss/damage.	45, 48, 113, 194-202

Skills and Knowledge

Required skills

- communication skills to clarify requirements of spreadsheet
- editing and proofreading skills to check own work for accuracy against original
- keyboarding skills to enter text and numerical data
- literacy skills to read and understand organisational procedures, and to use basic models to produce a range of spreadsheets
- mathematical and statistical skills to use spreadsheet functions such as sum, counts and averages.

Required knowledge

- formatting requirements of workplace documents
- organisational guidelines on spreadsheet design and use
- organisational requirements for ergonomic standards, work periods and breaks, and conservation techniques.

Range Statement

The Range Statement contextualises the unit of competency and provides a focus for assessment. The information provided is intended to define the scope of assessment and to assist assessors define the performance to be achieved by an individual in the workplace. The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. *Italicised* wording in the Performance Criteria is detailed as follows.

Variable	Scope	Page References
Ergonomic requirements may include:	avoiding radiation from computer screens	Software Publications WHS (included in exercise file download)
	chair height, seat and back adjustment	
	document holder	
	footrest	
	keyboard and mouse position	
	lighting	
	noise minimisation	
	posture	
	screen position	
	workstation height and layout	
Work organisation requirements may include:	exercise breaks	
	mix of repetitive and other activities	
	rest periods	
<i>Occupational health and safety requirements may include:</i>	inspections	
	organisational procedures regarding incidents, accidents, fire and emergencies	
	workplace meetings	
	workplace safety procedures	
	other consultative activities	
Conservation requirements may include:	double-sided paper use	
	recycling used and shredded paper	
	re-using paper for rough drafts (observing confidentiality requirements)	
	utilising power-save options for equipment	
<i>Spreadsheet design may include:</i>	appropriateness to required tasks	Throughout workbook
	basic analysis	18-21 and throughout workbook
	charts	154-159 and throughout workbook
	formatting and reformatting	Throughout workbook
	formulae	Throughout workbook
	functions	52-53, 67-71 101-106
	headers and footers	58, 90-91, 148
	headings	Throughout workbook

Variable	Scope	Page References
	headings and labels	Throughout workbook
	identification and parameters	Throughout workbook
	import and export of data	210-211 (import only)
	labels	Throughout book
	macros	214-222
	multi-page documents	184-189
	split screen operation	186-187
Automatic functions may include:	auto date	67
	auto correct	120-121
	auto format	n/a
	auto text	n/a
	default settings	Throughout workbook
	headers and footers	58, 90-91, 148
	page numbering	90 and throughout workbook
	styles	57
	table headings	140-141
Consistency of design and layout may include:	borders	55 and throughout workbook
	bullet/number lists	169-173
	captions	172
	consistency with other business documents	2-3, 20
	page numbers	91 and throughout workbook
	spacings	171
	typeface styles and point size	31-32
Data may include:	numbers	Throughout workbook
	text	
Checking may include:	accuracy of data	133-135
	accuracy of formulae with calculator	76
	ensuring instructions with regard to content and format have been followed	Throughout workbook
	proofreading	Throughout workbook
	spelling, electronically and manually	79
Formatting may include:	alignment on page	58
	efficiency of formulae	n/a
	enhancements to format - borders, patterns and colours	31, 55
	enhancements to text	31, 55
	headers/footers	n/a
	use of absolute and relative cell addresses	64, 74-74

Variable	Scope	Page References
	use of cell addresses in formulae	Throughout workbook
<i>Software functions may include:</i>	adding/deleting columns/rows	49-50
	formatting cells	54-55
	formatting text	55-57
	headers/footers	58, 90-91, 148
	sizing columns/rows	51
	using macros	214-222
	utilising shortcuts	Throughout workbook
<i>Formulae may include:</i>	average	59, 64
	division	87
	multiplication	54
	percentage	54
	subtraction	55
	sum	55
	combinations of above	Throughout workbook
<i>Printing may include:</i>	charts	154-166
	entire workbooks	183
	selected data within a worksheet	93
	worksheets	90 and throughout workbook
<i>Designated time lines may include:</i>	organisational time line e.g. financial requirements	5
	time line agreed with internal/external client	
	time line agreed with supervisor/person requiring spreadsheet	
<i>Naming and storing spreadsheet may include:</i>	authorised access	195-202
	file naming conventions	45
	filing locations	195
	organisational policy for backing up files	194
	organisational policy for filing hard copies of spreadsheets	194
	security	194
	storage in electronic folders/sub-folders	Throughout workbook
	storage on CD-ROM, USB, tape back-up, server	194

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none">• designing spreadsheets that address a range of data and organisational requirements• using software functions, graphics and support materials to create spreadsheets• knowledge of formatting requirements of workplace documents.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none">• access to office equipment and resources• access to samples of data for inclusion in spreadsheets.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none">• direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate• review of energy and resource conservation techniques used to minimise wastage• demonstration of techniques• oral or written questioning to assess knowledge of spreadsheet software functions• review of spreadsheets produced.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none">• other IT use units.

Employability Skills Mapping

Employability Skills for BSB30107: Certificate III in Business

Employability Skill	Industry/enterprise requirements for this qualification include	How this Employability Skill is covered
Communication	<ul style="list-style-type: none"> communicating verbally with others in negotiation, training and questioning writing a range of simple documentation and communications 	Throughout this book, a wide range of spreadsheets are created, communicating varied information.
Teamwork	<ul style="list-style-type: none"> completing individual tasks to support team goals conveying workplace procedures and work instructions to team members 	n/a
Problem solving	<ul style="list-style-type: none"> resolving issues and conflicts with team members using manuals and other documentation to overcome problems with information technology or other office equipment 	Pages 206-207 discuss types of help available and cover the use of the Excel Help facility.
Initiative and enterprise	<ul style="list-style-type: none"> demonstrating individual responsibility for completing tasks suggesting improvements to support the development of improved work practices and team effectiveness 	All tasks in this workbook are completed by the individual, demonstrating the ability to create an accurate spreadsheet single-handedly.
Planning and organising	<ul style="list-style-type: none"> contributing to planning processes with team members to meet expected outcomes gathering, organising and applying workplace information for the organisation's work processes and information systems 	<p>Pages 18-21 contain information about spreadsheet planning, including determining organisational requirements.</p> <p>Spreadsheet plans are created as part of Practical Activity 5 and the BSBITU304A Final Assessment.</p>
Self management	<ul style="list-style-type: none"> identifying development needs and seeking training to fill needs monitoring and recording the performance of own work area 	n/a

Employability Skill	Industry/enterprise requirements for this qualification include	How this Employability Skill is covered
Learning	<ul style="list-style-type: none"> • developing a comprehensive knowledge and understanding of products and services • identifying priorities and pursuing personal work goals in accordance with organisational objectives 	By working through this workbook the learner will develop comprehensive knowledge on how to create spreadsheets in a business environment.
Technology	<ul style="list-style-type: none"> • using information communication technology to communicate with team members or clients • using word processing packages, spreadsheets and/or databases to produce written correspondence and reports 	The whole workbook requires the learner to operate a PC running a Windows operating system and the Microsoft Excel 2013 application.

Numeracy Skills

Numeracy skills are important when working with spreadsheets. You should also Ensure you have a calculator to check the results. You need to know which type of operator is appropriate to perform a calculation and understand the purpose of the function being used.

Whole numbers	1 2 3 4 5 ...
Even numbers	2 4 6 8 10 ...
Odd numbers	1 3 5 7 9 ...
Decimal numbers	0.5 1.5 2.5 ...
Percentages	0.5 = 50% 0.05 = 5% 0.1 = 10% 1.05 = 105%
Fractions	5 1/3 will display as 5.333333 in a spreadsheet. Note Fractions are another method of writing decimals. You would usually type 5.33 in a simple spreadsheet and not use fractions.
Less than	< e.g. A6<90 means the amount in the cell A6 is less than 90
Greater than	> e.g. A6>90 means the amount in the cell A6 is greater than 90
Rounding* (Swedish)	If the number after the decimal is 5 or higher, then the number is usually rounded up. 99.8 is usually rounded up to 100, but 99.3 would be rounded down to 99. * check company policies for rounding
Average (Mean)	The average is calculated by creating a sum of all the numbers and then dividing the answer by the number of values 10+20+20+30 = 80 80/4 = 20 (there are four numbers being added) The average is 20

Operators

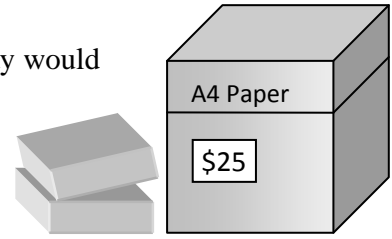
Formulas use **operators** (like a calculator) to work out answers. Operators include:

- + addition (plus)
- subtraction (minus)
- * multiplication (times)
- / division (divide by)
- % percentage

Multiply

Jay buys **3 boxes** of paper @ **\$25.00** a box. To calculate the total cost, Jay would *multiply* **Quantity x Value**

- $= 3 \times \$25$ (3 times \$25 = \$75)



Divide

Each box contains 5 reams of paper. To calculate the price of each ream:

- **Box price ÷ Reams per box** = $\$25/5$ (\$25 divided by 5 = \$5)

Working with GST

Goods and Services Tax (GST) is a 10% tax that is applied on most goods, services and some other items sold and used in Australia. Taxable sales include items such as:

- sale of goods
- hire of equipment
- services, such as obtaining advice from lawyers, accountants etc.
- leasing property

Calculating GST

Advertised prices for goods must include GST. To calculate the price inclusive of GST you add 10% onto the price of the goods.

- If the price of the goods is \$100 before GST (Exclusive amount)
- $\$100 \times 10\% = \10.00 GST
- $\$100 + \$10.00 = \$110.00$

OR

- $\$100 \times 1.10 = \110

To calculate the net price of the goods from a GST inclusive price:

- If the sale price of the goods is \$110 including GST (Inclusive amount):
- $\$110 \div 1.1 = \100
- $\$110 - \$10 = \$100$

Activity 2



1. Identify at least three uses for a spreadsheet in a business.

.....

.....

.....

.....

2. What is a **cell address**? Include an example in your answer.

.....

.....

.....

.....

3. List at least three things that you need to identify when creating a spreadsheet.

.....

.....

.....

.....

4. What is a formula? Include an example in your answer

.....

.....

.....

.....

5. What symbol is always used in front of a formula?

.....

Data Types

Excel uses two types of data in a cell, *Constants* and *Formulas*.

Constants

Constants include:

- text
- numbers (numeric values)
- date/time

Text

Text values include letters and characters, or combinations of letters, characters and numbers. Text is automatically left aligned in a cell.

Sales
J Hammerhead
A Gibson
P Jamieson
Total Sales

Numbers

Numeric values can be entered and formatted in various ways in Excel. Numeric values include:

12345
1.2345
\$123.45
1.23%
1.00E+06

Numbers are usually right aligned in the cell.

Date/Time

Dates and Times can be entered to record information as well as calculate Date/Time data (Date/Time format). Dates can be used to record the date an item was purchased and time values can be used to calculate the number of hours worked on a project.

Dates and times can be displayed in a variety of formats including:

	A	B
1	22/04/2013	10:15
2	22-Apr	10:15 AM
3	Monday, 22 April 2013	22:15

Date/Time values are automatically right aligned in a cell.

Activity 3



- Write the names of the operators that are used to perform calculations in Excel. The first one has been done for you.

%	Percentage	/
+		*
-		

- Write down the equation for the following values: (the first one has been done for you)

B7 is less than 120

B7<120

A6 is greater than 10

3 is multiplied by 5

120 is divided by 4

- List at least three things to which GST is applied.

.....

.....

.....

.....

- Write down how you would calculate the GST amount to reach a total sale price that is *inclusive* of GST.

.....

.....

.....

.....

- Write down *two* data types that are used in Excel. Give one example of each type.

.....

.....

Logical Functions

If Function =IF()

There is a range of Logical Functions included in Excel. This includes the IF Function which uses 'conditional logic' to test one value against another, with the results being 'true' or 'false'.

The IF function tests if something is true, or false. If it is true, a result (either a number or text) appears in the cell and if it is not true (i.e. false), a different result appears in the cell.

For example, a store that is using a spreadsheet to evaluate stock levels can use the IF Function to remind the purchaser to order goods when stock reaches a specified level. The text 'Order' or 'No' is applied to make the result more meaningful than 'true' or 'false'.

	A	B	C	D	E	F
1	Code	Description	Quantity	Cost Price	Stock Value	Order Stock
2	A1254	Black Picture Frame L	8	\$ 99.59	\$ 796.72	No
3	A1255	White Picture Frame L	3	\$ 99.59	\$ 298.77	Order
4	A1256	Red Picture Frame M	12	\$ 59.82	\$ 717.84	No
5	A1257	Blue Gallery Frame L	4	\$ 120.00	\$ 480.00	Order
6	A1258	Black Gallery Frame M	8	\$ 90.25	\$ 722.00	No

=IF(C2<5,"Order","No")

Examine the formula above.

IF (Quantity in cell C2 *is less than 5*, **then** "Order", otherwise "No").

The IF function uses three parts (Logical test of a cell contents, result if True, result if False):

Logical test: the value in cell C5 is being tested to see if the stock quantity is less than 5.

True result: "Order"

False result: "No" (text is always entered in a formula with double inverted commas "")



When the value in cell C2 is less than 5, C2<5 is true when it is greater than 5 it is false.

Insert Function Feature (Using the Function Wizard)

This is a built-in feature to help you insert the correct formula and arguments into a worksheet.




Logical

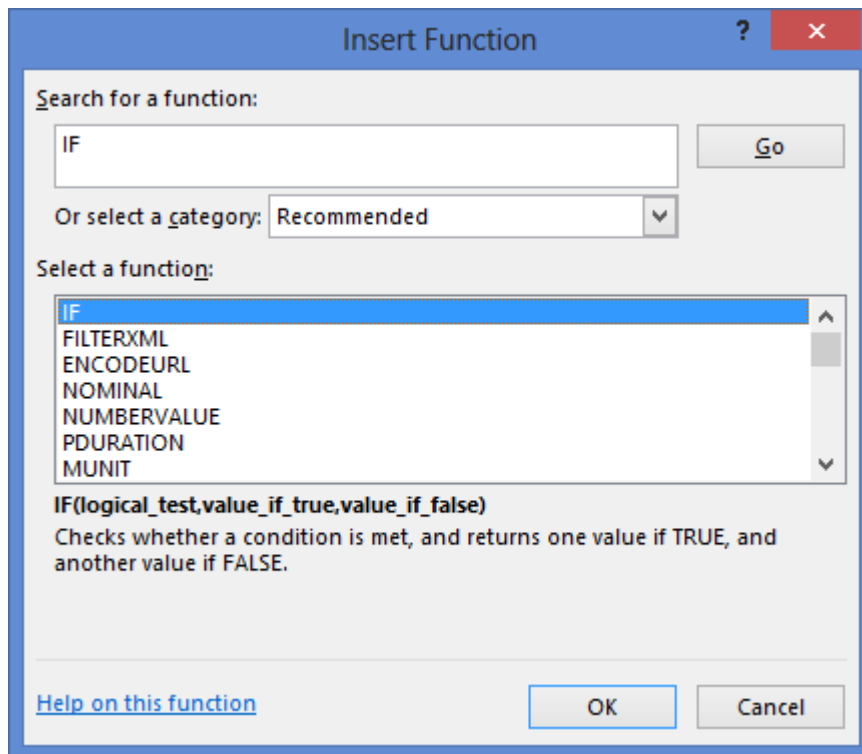
The Function Wizard may be accessed two ways: via the  button on the Formula Tab or via the Insert Function button  on the Formula bar.

Exercise 74, =IF Function

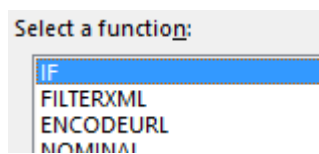
The IF Function will be used to calculate the Tax Rates. Salaries **less than or equal to \$35000** will be **19%**, otherwise **35%**.

1. Open the supplied file **Tax Rates** and save as **Staff Tax Rates**.
2. Click in cell **D5**.
3. Click on the  (Insert Function button) next to the Formula Bar.

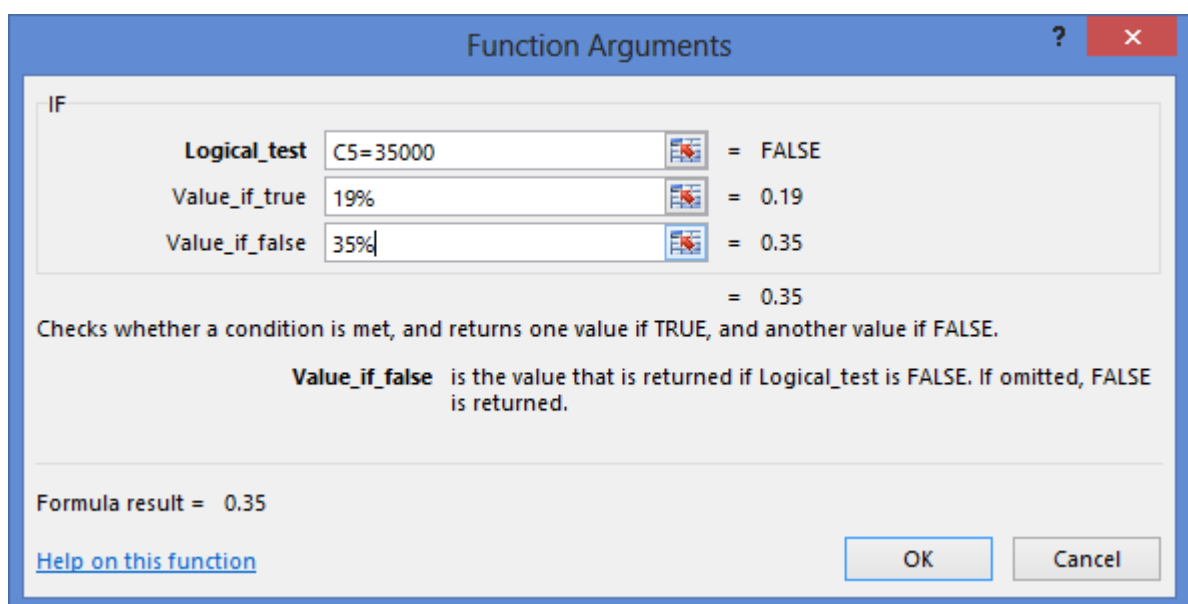
4. In the Search for a function: box, type: **IF** and click on the **Go** button.



5. From the Select a function: list ensure **IF** is selected



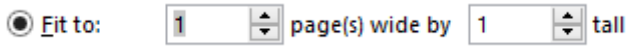
6. Click on **OK** to open the Function Arguments dialog box.
8. Click in the first text box, Logical_test: and type: **C5<=35000** (<= less than or equal to)
9. Click in the Value_if_true: box and type: **19%**
10. Click in the Value_if_false: box and type: **35%**



11. Click on **OK** and copy the formula down.

Note

If the results are not showing as a % click on the % button in the Number group on the Home tab.


12. Create a column for **Annual Tax** and calculate the tax to be paid by each employee.
13. Check your results using a calculator.
14. Show Formulas (CTRL+`).
15. Preview the worksheet and from Page Setup, select:
16.  to print on one page only.
17. Set the page up so that the gridlines will print (Sheet tab).
18. Add your name to the footer.
19. Print the spreadsheet with the formulas showing.
20. Turn the formulas off (same Keyboard Shortcut as show formulas).
21. Save and close the workbook.

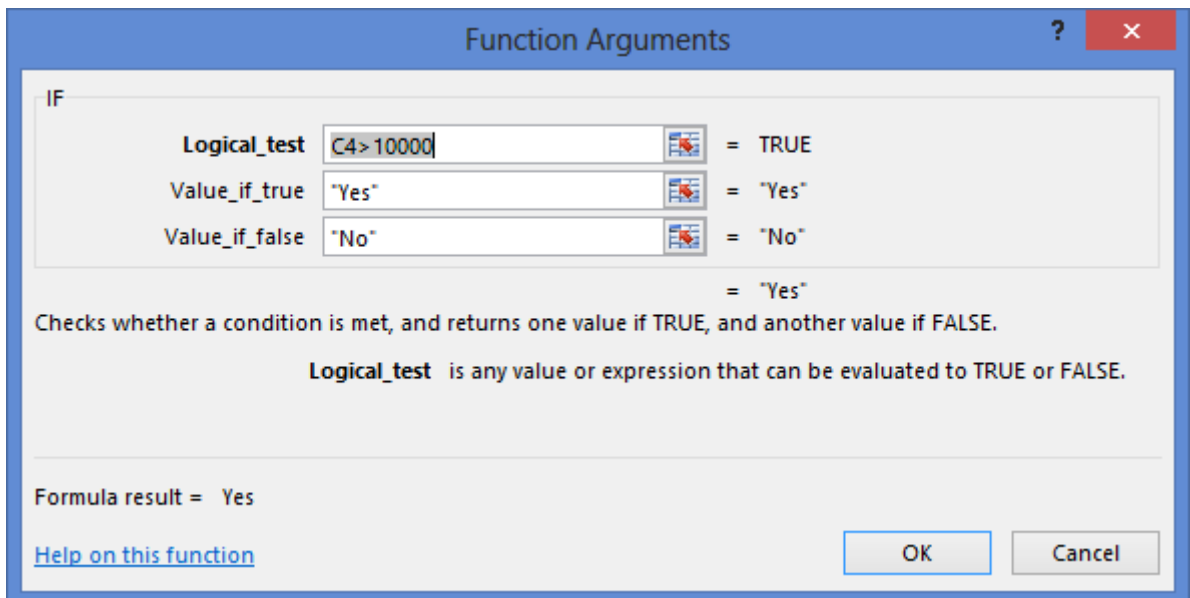
Exercise 75, Create an IF statement

1. Open the supplied file **Commission Earned** and save as **October Sales Commission**.



Logical

2. Click in cell **D4** and in the **Formulas** tab click on  and click on IF
3. Click in the first text box, Logical_test: and type: **C4>10000** (> greater than)
4. Click in the Value_if_true: box and type: **Yes**
5. Click in the Value_if_false: box and type: **No**



Function Arguments

IF

Logical_test	C4>10000	= TRUE
Value_if_true	"Yes"	= "Yes"
Value_if_false	"No"	= "No"

= "Yes"

Checks whether a condition is met, and returns one value if TRUE, and another value if FALSE.

Logical_test is any value or expression that can be evaluated to TRUE or FALSE.

Formula result = Yes

[Help on this function](#)

OK Cancel

6. Notice that inverted commas have been put around the text in the resulting formula:
=IF(C4>10000,"Yes","No")

- Practice typing the formula in yourself down the rest of the column. Right align the text. Save the workbook.

3	First Name	Last Name	Sales	Commission
4	Hedley	Jackson	\$12,500.00	Yes
5	Jenna	Kent	\$10,250.00	Yes
6	Lee	Te'Atu	\$8,064.00	No
7	Mica	Vogel	\$12,648.00	Yes
8	Jo	Wong	\$9,506.00	No
9	Rita	De Klerk	\$11,208.00	Yes

- Click in cell **E3** and type: **Training**.
- Add an IF Function to cell **E4** to establish if training is needed for Sales less than **9000**.

Hint

If sales are < 9000 then “Training” otherwise “No”.

- Fill the formula down the rest of column **E** and right align the text.
- Change the Sales Value in **C7** to **7950**. The Commission status will change to No and the Training cell will change to **Training**.
- Press CTRL + Z to undo the changed value in C7.
- Save and leave the workbook open.

Exercise 76, Calculate a Commission Percentage using an IF statement

In the next column, you are going to calculate a commission percentage based on whether or not the **Commission** Column says **Yes** or **No**.

If the formula had to be written out in text language, it would read:

If (D4 equals “yes” then calculate C4 *multiplied by 5%*, otherwise **Zero**).

- Using **October Sales Commission**, click in cell **F3** and type: **Bonus** and press the Enter key.
- In cell **F4** enter the following formula (reminder: use the mouse to enter cell references):
`=IF(D4=“Yes”,C4*5%,0)`
- Practice the formula down the column.
- Format all cells in **Column F** to Currency.
- Save and close the workbook.

	A	B	C	D	E	F
1	Sales October					
2						
3	First Name	Last Name	Sales	Commission	Training	Bonus
4	Hedley	Jackson	\$12,500.00	Yes	No	\$625.00
5	Jenna	Kent	\$10,250.00	Yes	No	\$512.50
6	Lee	Te'Atu	\$8,064.00	No	Training	\$0.00
7	Mica	Vogel	\$12,648.00	Yes	No	\$632.40
8	Jo	Wong	\$9,506.00	No	No	\$0.00
9	Rita	De Klerk	\$11,208.00	Yes	No	\$560.40

Exercise 77, Use the IF function

1. Open the supplied file **Commission Nov** and save as **Bonus November**.
2. In **Column D** use the IF Function to find out which Sales staff members qualify for commission. Their sales must be higher than **\$10300**.

Note

Do not use the \$ symbol in your formulas – just the number.

3. In **Column E** find out if any sales staff members should be attending a training session. Management suggest staff members with sales below **\$8000** should attend training.
4. Edit the data for Jo Wong. A customer returned some goods and sales are only **\$7995**.
5. In **Column F**, calculate a 7% Bonus for staff members that earned more than **\$7500**.
6. Hint
7. The true result part of the formula is the sales amount multiplied by 7% (C4*7%)
8. Check the data and the formulas and save the workbook.
9. Add your name to the footer and print the worksheet
10. Save and close the workbook.

Exercise 78, Use the IF function

1. Design a worksheet to calculate the scores earned by the students in their international language exams for French. Save the workbook as **Language Test**.
2. Create an overall **Total** for each Student.
3. Insert an **Average** score for each part of the test e.g. Reading, Writing etc.
4. Create a **Result** column that shows if the Total scores are **greater than or equal to 15**, then show a result of Excellence otherwise Merit (Hint: >=15).

Last Name	First Name	Reading	Writing	Speaking	Listening
McVey	JoAnne	4	4	4.5	4
Thomas	Lisl	3	4	4.5	3.5
Randell	Vivienne	4	3.5	3.5	4
Landsberg	Jack	4.5	4	4	4.5
Bell	James	4	4.5	4	5
Von Ash	Erica	3	4	3.5	4.5
Stills	Peta	3.5	3	4	4
Stewart	Mere	4	4	4	4.5

5. Check your data.
6. Add your name and the file name to the footer.
7. Change the orientation to Landscape then print the worksheet.
8. Save and close the workbook.

Exercise 79, Use the IF function

1. Open the supplied workbook **Ratings** and save as **Star Award Ratings**.
2. Total each Company's overall scores in **Column G**.
3. Calculate an **Average Score** rating for each appliance (Row 9).
4. Use the Overall Total of appliances tested in **H2**, i.e. **50**, to create a **% of the Total**.

Note

H2 must be set up as an Absolute Reference: $=Total / H2 (Absolute) * 100$

Multiplying by 100 converts the percentage into a whole number. The formatting of the cell must remain a whole number format or it will read 8000%.

5. Insert an **IF** statement into **Column I**, that shows if a Company scored more than **73** per cent then they receive an Award, otherwise None.
6. Check your results, save and leave the workbook open.

`=IF(H4>73,"Award","None")`

Percentage Total

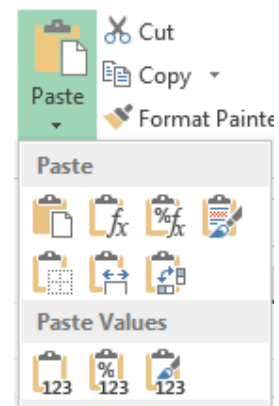
This calculation can be used to find out the percentage an amount makes up of a sum of values. For example, the value 10 is 20% of the sum of numbers that totals 50.

Exercise 80, Show a Percentage Total

1. Using **Star Award Ratings**, copy cells **A3:A8** and paste cells in **A15**
2. To copy the Totals to cell B15 as numbers rather than a formula we need to use a Paste Option. First copy cells **G3:G8** and click in cell **B15**. Then click on the Paste down arrow in the Home tab and select

Paste Values 

3. Right align and bold **Total**.
4. Type: **Total** in **A21**
5. Insert a formula to add the totals above in **B21**.
6. Type: **% Total** in cell **C15** and right align and bold.
7. Click in cell **C16** and type the following formula (remember to enter cell references by clicking the mouse on that cell): $=B16/B21$ making **B21** an **Absolute Reference** $=B16/\$B\21 .
8. Press CTRL + Enter to remain in the cell but complete the formula.
9. Click on the **%** button in the Number group to Format the cells to a percentage.
10. Copy the formula down using the Fill Handle (The Total should read 100%).
11. Save and close the workbook.
12. For practice, return to your document created in Practical Activity 5, on page 82, and complete the **% of Sales** column.



Practical Activity 7



1. **Design and create** a new workbook for Auto Supplies Limited and save as **Loyalty Discounts Given**. The worksheet will be used to calculate discounts given in the month of **July** for work done on account (that is, they haven't paid yet and will be invoiced). The data required for the spreadsheet is provided on the following page.
2. **Create your plan** on the table below. You must show your **formulas** in the plan.
 - Include a **Heading** and **Sub-heading**.
 - Create column headings for each column.
 - Create a column for each customer's **name** and **total amount spent** for the month.
 - Create a column for the **Discount %**.
 - Use an **IF Function** (try the Wizard) to calculate discounts: where customers have spent 4000 or less, they get 5% discount otherwise 10%.
 - Create a column for the **Discount Amount**
 - Create a column for the **Final Amount Owing** after discount.

	A	B	C	D	E	F
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						

Evidence Guide

Elements and Performance Criteria

The elements and performance criteria are covered during assessment in the following ways.

Element	Performance Criteria	Tasks
1	Select and prepare resources	
1.1	Adhere to <i>ergonomic, work organisation and occupational health and safety requirements</i>	Observation task Written theory
1.2	Use energy and resource <i>conservation techniques</i> to minimise wastage	Observation task Written theory
1.3	Identify spreadsheet task requirements in relation to data entry, storage, output and presentation	Practical assessment tasks 1–4
2	Plan spreadsheet design	
2.1	Ensure <i>spreadsheet design</i> suits the purpose, audience and information requirements of the task	Practical assessment – all tasks
2.2	Ensure spreadsheet design enhances readability and appearance, and meets organisational and task requirements for style and layout	Practical assessment tasks 1, 4 and 5
2.3	Use style sheets and <i>automatic functions</i> to ensure <i>consistency of design and layout</i>	Practical assessment tasks 1, 2, 4, 5 and 6
3	Create spreadsheet	
3.1	Ensure <i>data</i> is entered, <i>checked</i> and amended to maintain consistency of design and layout, in accordance with organisational and task requirements	Practical assessment tasks 2–6
3.2	<i>Format</i> spreadsheet using <i>software functions</i> to adjust page and cell layout to meet information requirements, in accordance with organisational style and presentation requirements	Practical assessment task 2 and tasks 4–6
3.3	Ensure <i>formulae</i> are tested and used to confirm output meets task requirements, in consultation with appropriate personnel as required	Practical assessment tasks 2–5
3.4	Use manuals, user documentation and online help to overcome problems with spreadsheet design and production	Practical assessment task 7
4	Produce simple charts	
4.1	Select chart type and design that enables valid representation of numerical data, and meets organisational and task requirements	Practical assessment task 5

Element	Performance Criteria	Tasks
4.2	Create charts using appropriate data range in the spreadsheet	Practical assessment task 5
4.3	Modify chart type and layout using formatting features	Practical assessment task 5
5	Finalise spreadsheets	
5.1	Preview, adjust and <i>print</i> spreadsheet and any accompanying charts, in accordance with task requirements	Practical assessment tasks 2–7
5.2	Ensure data input meets <i>designated time lines</i> and organisational requirements for speed and accuracy	Practical assessment – all tasks
5.3	<i>Name and store spreadsheet</i> in accordance with organisational requirements and exit the application without data loss/damage	Practical assessment – all tasks

Requirements and Knowledge

The requirements and knowledge are covered during assessment in the following ways.

Required skills	Assessment tasks
communication skills to clarify requirements of spreadsheet	Practical assessment task 1
editing and proofreading skills to check own work for accuracy against original	Practical assessment tasks 2 and 3
keyboarding skills to enter text and numerical data	Practical assessment tasks 2–7
literacy skills to read and understand organisational procedures, and to use basic models to produce a range of spreadsheets	Practical assessment all tasks
mathematical and statistical skills to use spreadsheet functions such as sum, counts and averages.	Practical assessment tasks 1, 2, 4 and 5
Required knowledge	Assessment Tasks
formatting requirements of workplace documents	Practical assessment tasks 1, 2, 4 and 5
organisational guidelines on spreadsheet design and use	Practical assessment tasks 1, 2 4 and 5
organisational requirements for ergonomic standards, work periods and breaks, and conservation techniques.	Observation task

Employability Skills BSB30112 Certificate III in Business

Employability skills for BSB30112 Certificate III in Business are assessed in the following assessment tasks.

Employability Skill	Industry/Enterprise Requirements for this Qualification Include:	Task
Communication	<ul style="list-style-type: none"> communicating verbally with others in negotiation, training and questioning writing a range of simple documentation and communications 	n/a
Teamwork	<ul style="list-style-type: none"> completing individual tasks to support team goals conveying workplace procedures and work instructions to team members 	n/a
Problem-solving	<ul style="list-style-type: none"> resolving issues and conflicts with team members using manuals and other documentation to overcome problems with information technology or other office equipment 	Task 7
Initiative and enterprise	<ul style="list-style-type: none"> demonstrating individual responsibility for completing tasks suggesting improvements to support the development of improved work practices and team effectiveness 	All assessment tasks are completed individually
Planning and organising	<ul style="list-style-type: none"> contributing to planning processes with team members to meet expected outcomes gathering, organising and applying workplace information for the organisation's work processes and information systems 	n/a
Self-management	<ul style="list-style-type: none"> identifying development needs and seeking training to fill needs monitoring and recording the performance of own work area 	n/a
Learning	<ul style="list-style-type: none"> developing a comprehensive knowledge and understanding of products and services identifying priorities and pursuing personal work goals in accordance with organisational objectives 	n/a
Technology	<ul style="list-style-type: none"> using information communication technology to communicate with team members or clients using word processing packages, spreadsheets and/or databases to produce written correspondence and reports 	Technology is used throughout assessment

BSB Business Services Training Package Supplement

This workbook can be used by learners completing a qualification in the BSB Business Services Training Package.

BSBITU304 Produce spreadsheets

Application

This unit describes the skills and knowledge required to develop spreadsheets through the use of spreadsheet software.

It applies to individuals employed in a range of environments who tend to be personally responsible for designing and working with spreadsheets under minimal supervision.

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

Elements and Performance Criteria

Element <i>Elements describe the essential outcomes.</i>	Performance Criteria <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>	Workbook page reference	Assessment Tasks
1. Select and prepare resources	1.1 Adhere to ergonomic, work organisation and occupational health and safety requirements	Software Publications WHS (included in exercise file download)	Observation task Written theory
	1.2 Use energy and resource conservation techniques to minimise wastage	Software Publications WHS	Observation task Written theory
	1.3 Identify spreadsheet task requirements in relation to data entry, storage, output and presentation	18-21 and throughout workbook	Practical assessment tasks 1–4
2. Plan spreadsheet design	2.1 Ensure spreadsheet design suits purpose, audience and information requirements of task	18-21, 52-53, 58, 90-91, 101, 154-158, 186-187, 210, 222-226 and throughout workbook	Practical assessment – all tasks
	2.2 Ensure spreadsheet design enhances readability and appearance, and meets organisational and task requirements for style and layout	19-20	Practical assessment tasks 1, 4 and 5
	2.3 Use style sheets and automatic functions to ensure consistency of design and layout	2-3, 20, 31-34, 57-58, 67, 90-91, 120, 140-143, 148, 169-173	Practical assessment tasks 1, 2, 4, 5 and 6

Element <i>Elements describe the essential outcomes.</i>	Performance Criteria <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>	Workbook page reference	Assessment Tasks
3. Create spreadsheet	3.1 Ensure data is entered, checked and amended to maintain consistency of design and layout, in accordance with organisational and task requirements	76, 79, 133-135 and throughout workbook	Practical assessment tasks 2–6
	3.2 Format spreadsheet using software functions to adjust page and cell layout to meet information requirements, in accordance with organisational style and presentation requirements	31, 52-53, 53-55, 58, 64-64, 74-74, 90-91, 148, 214-222	Practical assessment task 2 and tasks 4–6
	3.3 Ensure formulae are tested and used to confirm output meets task requirements, in consultation with appropriate personnel as required	52-54, 55, 59, 64-66, 86 and throughout workbook	Practical assessment tasks 2–5
	3.4 Use manuals, user documentation and online help to overcome problems with spreadsheet design and production	206-207	Practical assessment task 7
4. Produce simple charts	4.1 Select chart type and design that enables valid representation of numerical data, and meets organisational and task requirements	154-158	Practical assessment task 5
	4.2 Create charts using appropriate data range in the spreadsheet	159, 162, 164, 166	Practical assessment task 5
	4.3 Modify chart type and layout using formatting features	160-166	Practical assessment task 5
5 Finalise spreadsheets	5.1 Preview, adjust and print spreadsheet and any accompanying charts, in accordance with task requirements	58, 91, 93-94, 112, 162 and throughout workbook	Practical assessment tasks 2–7
	5.2 Ensure data input meets designated timelines and organisational requirements for speed and accuracy	5	Practical assessment – all tasks
	5.3 Name and store spreadsheet in accordance with organisational requirements and exit the application without data loss/damage	45, 48, 113, 194-202	Practical assessment – all tasks

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description	Workbook page reference
Reading	2.2, 3.1-3.4, 5.1	<ul style="list-style-type: none"> Recognises and interprets numerical and textual information to determine organisational and task requirements 	Throughout workbook
Writing	2.1, 3.1-3.3, 4.2, 4.3, 5.1-5.3	<ul style="list-style-type: none"> Inputs numerical and key reporting information when creating and finalising spreadsheets and uses format, layout, style guides and standard naming conventions to organise data according to purpose and audience 	Throughout workbook
Oral Communication	3.3	<ul style="list-style-type: none"> Participates in exchange of information to determine whether formulae utilised produce result required 	Exercise solutions can be discussed with trainer as required
Numeracy	4.1, 4.2	<ul style="list-style-type: none"> Uses mathematical equations to create simple formulae and validate numerical data 	Throughout workbook
Navigate the world of work	1.1-1.3, 2.1-2.3, 3.1-3.3, 4.1, 5.1-5.3	<ul style="list-style-type: none"> Recognises and follows explicit and implicit protocols and meets expectations associated with own role 	Throughout workbook and Software Publications WHS
Interact with others	3.3	<ul style="list-style-type: none"> Collaborates with others to achieve joint outcomes 	Workbook exercises can be discussed with classmates or workmates
Get the work done	2.1-2.3, 3.1-3.4, 4.1-4.3, 5.1-5.3	<ul style="list-style-type: none"> Uses advanced features within applications to address routine and complex work tasks 	Throughout workbook

Assessment Requirements v1.0

Performance Evidence

Evidence of the ability to:	Assessment task
<ul style="list-style-type: none">design spreadsheets that address a range of data and organisational requirements	Practical assessment tasks 1–2 Practical assessment tasks 4–6
<ul style="list-style-type: none">use software functions, graphics and support materials to create spreadsheets	Practical assessment task 2, tasks 4–7
<ul style="list-style-type: none">apply knowledge of formatting requirements for workplace documents	Practical assessment tasks 1–2 Practical assessment tasks 4–6

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:	Assessment task
<ul style="list-style-type: none">describe formatting requirements of workplace documents	Practical assessment tasks 1–2 Practical assessment tasks 4–6
<ul style="list-style-type: none">identify organisational guidelines on spreadsheet design and use	Practical assessment tasks 1–2 Practical assessment tasks 4–6
<ul style="list-style-type: none">explain organisational requirements for ergonomic standards, work periods and breaks, and conservation techniques	Observation task