
Contents

Before you begin	vii
Topic 1 Select and prepare resources	1
1A Use safe and efficient work practices	2
1B Identify and clarify spreadsheet task requirements	16
Summary	26
Learning checkpoint 1: Select and prepare resources	27
Topic 2 Create simple spreadsheets	33
2A Enter, check and amend data	34
2B Use software functions to format spreadsheets	42
2C Use and test formulas to confirm output meets task requirements	55
2D Overcome problems with spreadsheet design and production	65
Summary	69
Learning checkpoint 2: Create simple spreadsheets	70
Topic 3 Produce simple charts	75
3A Select a chart type and design to represent numerical data	76
3B Create charts	82
3C Use formatting features to modify the chart type and layout	86
Summary	91
Learning checkpoint 3: Produce simple charts	92
Topic 4 Finalise spreadsheets	95
4A Preview, adjust and print spreadsheets and accompanying charts	96
4B Ensure data meets time lines and requirements for speed and accuracy	99
4C Name and store spreadsheets, and exit applications safely	103
Summary	110
Learning checkpoint 4: Finalise spreadsheets	111



Topic 1

Select and prepare resources

Organisations use spreadsheets to store and calculate numerical data, such as financial statements and product pricing information.

When you are required to enter data into a spreadsheet for your organisation, you must first identify what kind of data it is and a suitable way to enter it. For example, a report mainly containing text would be correctly entered using a word-processing application, but data that has a lot of numbers should probably be entered into a spreadsheet. Once you have entered data, you will need to format it to suit your organisation's style and presentation requirements. A spreadsheet is easier to read when it has been formatted properly.

In this topic you will learn how to:

- 1A Use safe and efficient work practices
- 1B Identify and clarify spreadsheet task requirements

1A

Use safe and efficient work practices

Workplace safety is everyone's responsibility.

Both employers and employees must make an active contribution to ensuring their workplace is safe. Hazards need to be identified and risks assessed to reduce the risk of injury in the workplace. If you are working at a computer for an extended period of time each day, your workstation must be comfortable and designed to help you carry out your tasks efficiently. You will need to organise your work so that you are not doing a repetitive task for a long time. You should also take regular breaks to stand up and stretch.

Another consideration is to use resource conservation techniques to prevent wastage. Most organisations require staff to follow resource-saving procedures such as turning off lights in unused rooms and recycling paper. You need to be aware of any conservation efforts made by your organisation.



Health and safety legislative requirements

You must work in line with legislative requirements, regulations, Australian and industry standards, and the relevant codes of practice.

All health and safety legislation requires employers to provide a safe workplace and adequate training and supervision, while controlling workplace hazards and risks.

Health and safety regulations support the legislation by outlining specific health and safety requirements that must be addressed.

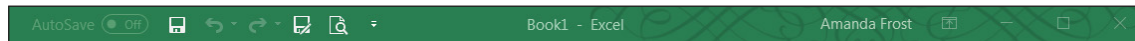
The Model Work Health and Safety (WHS) Regulations provide a framework that has been adopted by all Australian states and territories except for Victoria and Western Australia, which have their own legislation and regulations.

Health and safety legislation outlines legal requirements such as:

- managing risks to health and safety
- promoting and maintaining the health, safety and welfare of people at work
- protecting people at work from injury and illness, including psychological injury
- protecting the health and safety of the public in workplaces
- consulting workers and encouraging them to maintain health and safety
- providing rehabilitation and maximum recovery for injured workers.

If you look closely at this spreadsheet, you will notice there are a number of screen elements, as outlined below.

Title bar



The title bar includes the name of the workbook. It has the standard minimise, restore and close functions found in all Microsoft Office products.

Ribbon – button tools



In Microsoft Excel 2016, toolbars have changed significantly from earlier versions of the program. The program now operates by using a number of tabs available from the ribbon. These provide you with easy access to a wide variety of commonly used tools.

The ribbon has various tabs. You can easily switch between each tab to access tool buttons that you might need to use.

There are also other tools that are relevant to an action you are performing. For example, when you choose to insert a chart, additional sets of tools appear under the Design, Layout and Format tabs.

Each tab has groups of tools available. For example, under the Home tab, the groups are **Clipboard**, **Font**, **Alignment**, **Number**, **Styles**, **Cells** and **Editing**.

You will need to familiarise yourself with the various tools that are available in Excel 2016. However, the most common tabs you will use are **Home**, **Insert**, **Page Layout** and **View**.

To learn about the various tool buttons, rest your mouse pointer on the button. A bubble will appear that briefly describes the purpose of the tool button.

Formula bar



A worksheet is made up of cells. The Formula Bar displays the current cell reference and is used to view and edit a cell's contents. When entering data in a cell, you will see that cross and tick buttons appear on the Formula Bar.



Accept your entry by clicking on the tick (or simply press the **Enter** key on the keyboard), or cancel it by clicking on the cross.

Active sheet



Each new workbook you open in Excel contains three blank worksheets by default. It is possible to add or delete worksheets, and rename worksheets if you need to. For example, you may have a workbook that contains yearly sales data where each worksheet contains specific data (such as sales data for each quarter) and each worksheet is named appropriately; for example, Quarter 1, Quarter 2, Quarter 3, Quarter 4. It is possible to view and work with data contained in each worksheet by simply clicking on the sheet name.


You can rename a worksheet by right-clicking on the existing name (e.g. Sheet1) and selecting **Rename**. Type in the new name and press **Enter**.

Part B

Take the following steps to enter data in a spreadsheet:

1. Open Excel.
2. Highlight cells A2–E2 and select **Merge & Center**. Click inside the merged cells and type **Current Clothing Label**.
3. In the fourth row, enter the following in separate columns:
 - Month
 - Income
 - Expenses
 - Profit
 - Clear Profit

Look at the example below to help you.

4. Type January in cell A5 and select the cell. Use **Fill** to drag down and add the months until you reach December. Excel will automatically fill in the months for you.
5. Enter the values below under **Income** and **Expenses**. You will be using the values you enter in calculations later, so try to be accurate.
6. Click on the cell labelled 'Clear Profit'. This cell is now current.
7. Click on the Formula Bar to select it, or press the **F2** key on the keyboard. Change the word 'Clear' to 'End'.
8. Press **Enter** or select the tick  on the Formula Bar to confirm the change.
9. Select one of the numbers you have entered in the Income column. Press the **Delete** key to delete the information. Enter a new number.
10. Save your worksheet in a suitable location on your hard drive and name it 'Current Clothing'.

	A	B	C	D	E
1					
2	Current Clothing Label				
3					
4	Month	Income	Expenses	Profit	Clear Profit
5	January	5000	1222		
6	February	43543	500		
7	March	3454	324		
8	April	4500	400		
9	May	4500	300		
10	June	55000	3454		
11	July	43543	4322		
12	August	3454	543		
13	September	3453	2342		
14	October	32552	343		
15	November	39800	2234		
16	December	34000	100		



Practice task 13

Take the following steps to create an absolute reference.

1. Open the 'Current clothing' worksheet.
2. Select B18, which should be the 'Income' total.
3. In the formula bar you should see =SUM(B5:B17). Click in between the B and the 5. The formula will turn blue. Press the **F4** key.
4. The formula will now read =SUM(\$B\$5:B17).
5. Click in between the B and the 17 and press the **F4** key.
6. The formula will now read =SUM(\$B\$5:\$B\$17).
7. To confirm the formula, press the **Enter** key. The B18 reference is now absolute.
8. Repeat the absolute cell reference process with the C18, D18, E18 and F18 references.

Test your absolute reference creation by copying and pasting any of your absolute references into any empty cell. The value of the absolute reference you choose should remain the same wherever it is placed.

Test, adjust and confirm formulas

The formulas used in a spreadsheet must be appropriate for the data that needs to be produced, and need to be tracked for errors.

It is important that cell references are used to track any calculation errors in a report.

Excel has many features to assist you in identifying errors, including a green triangle symbol that appears in the top left corner of a cell if there is an inconsistency in a formula.

\$ 4,304.30
\$ 313.00
\$ 410.00

If you select the cell with the alert and hold your pointer over the green triangle, a help bubble will appear to explain the error that has been identified by Excel.

\$,778.00	\$ 377.80	\$ 3,400.20				
\$,04	\$ 4,304.30	\$ 38,738.70				
\$,130.0						
\$,100.00	\$ 410.00	\$ 3,500.00				

This helps you investigate and compare this formula to other similar formulas in the spreadsheet to find out where the problem might lie and ultimately fix the error.

Once you have investigated the error, you can choose the option to ignore the warning if there is no error. This will remove the green error flag from the spreadsheet.

2D

Overcome problems with spreadsheet design and production

You may need to access help when producing Excel spreadsheets to learn more about how an Excel function works or to help you operate a printer.

Whatever the problem, you need to have a plan in place for dealing with the unexpected. Organisations usually have a number of ways of dealing with software or hardware problems. They may have manuals or training booklets for you to look at or they may have an IT helpdesk for employees.

Here are some examples of possible problems.

Hardware

- Your monitor stops working.

Software

- Your software has been upgraded and you are unsure how to use it.

Formatting

- You want to add borders and colour shading to your spreadsheet, but are not sure how to.

Layout

- You want to change the orientation from portrait to landscape and need help doing this.

Formulas

- You want to know why a formula seems to be giving the incorrect answer.

Function

- You want to know how to use the **AVERAGE** function.

Printing

- You want to know how to print using the colour printer.



Summary

- Organisations use Excel spreadsheets to record numerical data and perform calculations.
- You may need to adjust the height and width of columns and rows to fit the data.
- Formulas and functions are used in Excel to perform calculations.
- When using formulas and functions, make sure the result is correct.
- You can change the appearance of your spreadsheet to suit your organisation's style and presentation requirements.
- Always check the data to make sure it is accurate.
- To solve problems when producing a spreadsheet, make sure you have access to online and offline materials to help you.
- You can access the help facility in Excel at any time by pressing the **F1** key.

Project C has two spreadsheets:

- ProjectC_time lines.xlsx
- ProjectC_research1.xlsx

The file path for retrieving a file starts at the server and ends when the correct file is located. For example, to reach ProjectC_time lines.xlsx, the file path to follow is C:\Group C\Projects\Project C\ProjectC_time lines.xlsx.

In Microsoft Excel 2016, the spreadsheet extension is .xlsx.

Document properties

It can be useful to use document properties to record common information about a file.

Document properties assist in describing or identifying a file and include details such as the title, author name, subject and keywords about the topic of the spreadsheet. The information contained in document properties can also be used when conducting a search for files on your computer.

To set document properties, select the **File** tab and ensure the **Info** tab is selected. Titles, tags and categories can be added under the Properties section. Any additional authors of the document can also be added under the Related People section.

Properties ▾	
Size	Not saved yet
Title	Add a title
Tags	Add a tag
Categories	Add a category

Back up files

Many organisations have set procedures for backing up files.

In many large organisations, this is administered through the IT department and is an automatic process. In this case, you simply need to ensure you have saved your files to the appropriate network drives and folders.

Backing up files is an important protocol. It helps to prevent the loss of documents and information, and is extremely useful when something happens to the network or computer system.

In smaller organisations, you may need to back up files yourself – this may be done on a daily or weekly basis. Check with your supervisor for back-up procedures, such as requirements to back up files to another disk drive.

The organisation should regularly delete old electronic files and folders to ensure an efficient use of server space. Always ask for authorisation before making any deletions.

USB memory sticks are also useful for storing and backing up information, especially when you require a portable copy of the information.



Summary

- Producing a spreadsheet means creating it and having it ready for viewing by your colleagues or manager.
- Working within a designated time line helps you to plan your work in order to meet deadlines.
- Make sure you have checked all formulas and functions, proofread and formatted your spreadsheet before printing it.
- You can either print a whole workbook, a whole worksheet or part of a worksheet, depending on what is required.
- A chart can be printed on its own or as part of a worksheet.
- You need to understand your organisation's policies and procedures about saving and storing spreadsheets.