Hardware and Networking Service

Level-I

Based on March 2021, Curriculum Version 1



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Acknowledgment

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Acronym

PC -Personal computer

RAM -Random-access memory

Gb –Gigabyte

USB -universal serial bus

Introduction to module

This module describes the performance outcomes, skills and knowledge required to operate spreadsheet applications and perform basic operations, including creating and formatting spreadsheet data, incorporating charts and objects, and customizing and printing Spreadsheet.

This module is designed to meet the industry requirement under create and use spreadsheet occupational standard, particularly for the unit of competency: **Create and use spreadsheet**

This module covers the units:

- Select and prepare resources
- Introduction to spreadsheets
- Produce simple charts
- Finalize spreadsheets

Learning Objective of the Module

- Select and prepare resources
- Create simple spreadsheets
- Produce simple charts
- Finalize spreadsheets

Module Instruction

For effective use this module, trainees are expected to read the following module instruction shown below:

1. Read the information written in each unit
2. Accomplish the Self-checks at the end of each unit
3. Perform Operation Sheets which were provided at the end of units
4. Do the “LAP test” giver at the end of each unit and

5. Read the identified reference book for Examples and exercise

Unit one: Select and prepare resources

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- **Energy and Resource Conservation**
- **Spreadsheet Requirements**

This guide will also assist you to attain the module above in the cover page. Specifically, upon completion of this module, you will be able to:

- **Apply Energy and Resource Conservation technics**
- **Identify Spreadsheet Requirements**

1.1. Energy and Resource Conservation

With an increasing focus on the environment, terms such as Climate Change, Greenhouse Emissions, Global Warming and Carbon Neutral have become common in workplaces and everyday life. We are all encouraged to move towards a "green office‟ where conservation and recycling practices are standard, and following the "**Three Rs**" - **Reduce, Reuse and Recycle** - is normal everyday practice.

Reduce Reuse Recycle



Reduce: finding ways to minimize resources and energy consumption in our daily tasks.

Reuse: using a product again without it having to go through a form of processing to be used again. For example using plastic shopping bags as garbage bags.

Recycle: the process of converting waste into new products which reduces landfill. Paper is one of the common products to be recycled.

I. Reduce Resources and Energy

There are many ways in which we can reduce wastage in the office. Let’s have a look at some ways which we can contribute.

Paper

- Use duplex printing (printing on both sides)
- Print draft copies in low resolution mode to use up less ink.
- Avoid printing unnecessarily. Use "print preview" to preview your work and check for errors rather than printing multiple copies. Rather than sending letters or print material use email and send electronic copies.
- Keep a tray near the printer for paper that has been printed on side only and can be used for note paper.
- Keep a recycling bin near the printer to recycle paper.

- Confidential printed material should be shredded. Shredded paper can be used for packing fragile goods or donated to pet stores for bedding.

Printing Supplies

- Conserve toner in laser printer and photocopiers by printing in draft mode.
- Avoid using thick borders and graphics.
- Empty ink and toner cartridges can be recycled through the Cartridges 4 Planet Ark program.

II. Conserve energy

Saving Energy

- Turn the office lights and air conditioning off at the end of the day or set timers. Sensor lights can be used in dark areas such as stairwells.
- Photocopiers and printers have energy saving options. Make sure these options are activated so that the equipment will go into a "sleep" mode during prolonged period of inactivity.
- Shut down your computer and monitor at the end of the day. Don't just log off.
- Computers also have energy saving options. The power options can be managed using the Power Option Properties from the Control Panel.

Standby switches your computer to a low power state. It is useful if you are leaving your computer for a short period of time. It does not save your desktop state.

Hibernate should be used if you will be away from your computer for more than 1 hour. It saves what is in memory onto disk, turns off your screen and turns off your computer.

Case Study

It's any exciting time for EZtronics! In recent years, success of the organization’s internet search engine has seen the company grow exponentially. The company is very environmentally conscious and wants to introduce ways and

means of minimizing energy and resource usage, in an effort to reduce the company's carbon footprint.

EZtronics' Office Manager asked employee Georgia Ryan to investigate and make recommendations as to what could be done in the office environment.

Minimizing energy and resource usage

Georgia divides her tasks into a number of steps:

1. Determine which sources of energy and resources have the highest usage and/or wastage in her office environment
2. Investigate what can be done to reduce the consumption or wastage.
3. Report back to her supervisor.



To determine which sources of energy and resources had the highest usage and/or wastage in the office, Georgia spoke to a number of different people in each of the sections to determine what resources they used to do their job. She also obtained copies of the organization's water and electricity bills. At the end of each day she observed the different types of rubbish which was being thrown away.

After a week, Georgia determined that the highest usage and/or wastage came from paper waste and energy usage.

The task of investigating what could be done to reduce the consumption or wastage was a little bit harder. Georgia searched the Internet and utilised her network of colleagues to determine some examples of what other businesses had implemented.

Georgia found the following ideas for minimizing paper wastage:

1. Configure the photocopier so that it prints on both sides of the sheet of paper. Put a notice near the photocopier to remind everyone. For paper which has been used on both sides, save the paper for recycling.
2. Place a cardboard box beside your desk to collect paper.
3. Paper that has only been printed on one side can be reused. (Be sure to remove anything confidential first!).
4. Staple the sheets together to form a note pad, and then write on the blank side.
5. Give the paper to preschools and day care centers
6. Instead of using plastic bubble wrap, shred the used paper for packaging
7. Use email to send and read documents electronically rather than printing documents and putting them into in-trays.
8. If you HAVE to print something, check and proofread the document for errors on screen before printing.
9. Don't store files as hardcopy documents if they can be saved electronically on disk.
10. Reuse folders and envelopes rather than throwing them away.
11. Purchase recycled paper for printing and stationery.

Georgia found the following ideas for conserving energy:

1. Use power save options for equipment which is not being used.
2. Turn off your monitor - it is one of the biggest energy consuming devices of your PC
3. Turn off hard disk
4. Enable system standby for short breaks - shutting down monitor and hard disk, no work is lost
5. Enable system hibernations - a longer version of standby where the machine almost shuts down, no work is lost.
6. Turn the heating system down just one degree, and wear an extra layer of clothes!
7. Change to more efficient light bulbs
8. Install sensor lighting in less frequently used work areas
9. Turn off lights that are not being used.
10. Only have ONE fridge in the lunchroom - do you really need two?

Georgia was happy with the ideas she had found and carefully documented these as a report for her supervisor. Of course she emailed it, rather than printing it!

1.2. Identifying Spreadsheet Requirements

Before you can create a spreadsheet you need to determine the purpose and any special requirements in relation to how it will be used, stored and accessed. Some spreadsheets contain confidential information that should only be accessed by authorized staff. Activities usually have a specific guidelines including timelines and organizational standards. You also need to ensure data security as required.

Key issues to consider

- **Data entry**

There are a number of methods of data entry. When creating a spreadsheet document from scratch you can start with a blank document and create your own spreadsheet from the keyboard. Alternatively, you can import data from an existing spreadsheet or from other software application. Accounting programs such as MYOB can export data and reports into a spreadsheet. You can even export data from websites.

Many internet banking websites allow you to export your bank statement into a spreadsheet.
Many organizations use templates which is a previously created document that has been formatted according to approved company colors, logos and design elements. They save a lot of time as they do not have to be recreated and ensure consistency across all documents.

Usually an organization's Policy and Procedures Manual contains references to templates and style guides. A style guide is a document which lists the basic principles for creating documents including spreadsheet. It specifies features such as font, color, size, placement of charts and other objects in document. A template that has been created will adhere to the style guide.

- **Storage**

Your documents or files can be saved electronically in a number of different places.
You could save them on a USB memory stick, the hard disk on your PC or in a location on your organization's network. You should implement a system for naming your files so they can be easily located.
Your organization may also wish to save the file as a hardcopy, or printout. These could be kept in folders and filed appropriately in filing cabinets.

Whether on disk or in the form of a paper document, the data needs to be stored in a secure location. If the data is stored on a CD, it could be stored in a rack or storage cabinet. If it is stored as a document in a filing cabinet, the cabinet should be locked, particularly if the data is confidential.

If the data is stored electronically, it should be backed up on a regular basis. This is good practice in the event that our PC has hardware problems or is infected by a virus. Similarly we would want a backup in the event that we accidentally deleted the file!

- **Output**

There are a number of different options for to be considered regarding the output of your spreadsheet. Your spreadsheet may be:

- Included within the text of a report
- Added as an attachment at the end of a report
- Included in an electronic presentation, such as MS PowerPoint
- Printed onto an overhead transparency, or
- Sent as part of an email.

Whichever form of output is utilized you need to ensure that the spreadsheet can be easily read (details not too big or too small) and that the spreadsheet will fit neatly onto a page or screen.
Always test to ensure your spreadsheet will output as expected, and then adjust accordingly.

Reporting and presentation requirements

Each company will have standards which all spreadsheets should follow. This could include: company details and logos, size and style of fonts, header and footer requirements, and formats for numbers, paper sizes, standard margins, and saving conventions. As mentioned above this may be documented in a Style Guide which forms part of an organization's Policies and Procedures.

Example of organization's spreadsheet requirements

It is important to liaise with relevant personnel to clarify the spreadsheet requirements and to ensure that documents you create meet the purpose for which they are intended.

Following, you will find an example of spreadsheet design standards or a style guide.

.

Company details	Jack's Videoland 89 Moviewatch Street MOVIEWORLD QLD Phone 082 678234 Email: donaldduck@videoworld.net.au
Company logo	Size of company logo should not be altered Logo to be placed in top right hand corner of spreadsheet.
Standard Font Main Headings 1st level 2nd level Header/footer	Comic Sans MS 10 pt. Comic Sans MS 16 pt. Comic Sans MS 14 pt. Comic Sans MS 12 pt. Helvetica or Arial 8pt
Header to include	Title of worksheet, date.
Footer to include	Page number, author, filename.
Paper Size	A4, Portrait or Landscape to be used dependent on size of worksheet. Worksheet to be centred horizontally and vertically on the page.
Margins	Top and bottom 1.5 cm. Left and right 2 cm
Number Formats	All dollar figures to have dollar sign. No decimal places to be used. Totals and important result figures to be highlighted using shading 20% and bold.
Saving Conventions	All filenames to display abbreviation of company name (Jacks) and identify purpose of workbook, try to use no more than 20 characters. Files to be saved in an appropriately named folder. Make sure a back-up copy is kept of all files in case of corruption to the original file.

Research your own organization to determine the organizational requirements for spreadsheets.

If you do not have a suitable work environment, develop your own ideal spreadsheets requirements for an organization.

Self-check-1

Test-I Matching

Instruction: select the correct answer for the give choice. You have given 1 Minute for each question. Each question carries 2 Point.

A	B
---------1. Reduce	A. converting waste into new products
---------2. Recycle	B. minimize resources and energy consumption
---------3. Reuse	C. converting new product into waste
	D. use a product again

Test II: short Answer writing

Instruction: write short answer for the given question. You are provided 3 minute for each question and each point has 5Points.

1. Write at list two ways of conserving energy?
2. Write at list three methods reduce wastage of paper in the office?
3. What is the difference between setting your computer to hibernate and Standby?
4. Write at list three key issues to consider to identify spreadsheet requirements?

Operation sheet 1.1 Energy and resources conservation

- **Operation Title:** change power option
- **Purpose:** Changing the power options of your computer
- **Instruction:** Follow the instructions below to change power option
- **Tools and requirement:**
    1. This operation sheet
    2. Learning guides,
    3. Personal computer
- **Precautions:**
- **Procedures in doing the task**.

Step 1. Open the Control Panel.
Step 2. Select Power Options.
Step 3. Have a look at the different options and plans available. Select a plan/options which will conserve energy.
Step 4. Close the Power Options Window.

Operation sheet 1.2 Energy and resources conservation

- **Operation Title:** How to Set our computer to Hibernate or Standby
- **Purpose:** Set our computer to Hibernate or Standby
- **Instruction:**
- **Tools and requirement:**
    1. This operation sheet
    2. Learning guides,
    3. Personal computer
- **Precautions:**
- **Procedures in doing the task**.

Step 1. Click on the Start Menu.
Step 2. Select Shut Down.
Step 3. A Dialog box will appear with a drop down list. Select from the drop down list Hibernate or Standby.

Unit Two: Create spreadsheet

This unit to provide you the necessary information regarding the following content coverage and topics:

- Introduction to spreadsheet
- Use a worksheet
- Formula and Basic Functions
- Access help function on spreadsheet

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- know spreadsheet concept
- Know Basic format
- Identify basic formula and function
- Access help function on spreadsheet

2.1. Introduction to spreadsheet

What is a spreadsheet?

A spreadsheet is a computer program that is used in business to calculate profit and loss (as well as many other things) using columns and rows. It allows easy entry and manipulation of text and figures, and can be applied to simple budgeting, or complex accounting and financial planning.

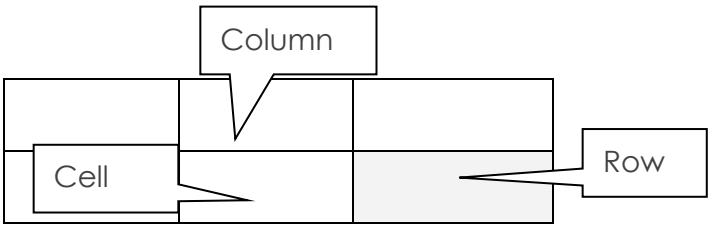
Spreadsheet software

What are some spreadsheet programs? Microsoft Excel is the software most widely used in business and education, but there are a number of other spreadsheet programs, including **Lotus**, **Microsoft Works** and **Corel.**

Terminology

Spreadsheet is a word used to describe the program, but is also used to describe a sheet with columns and rows. Excel uses the word **worksheet** to describe a single sheet and the word **workbook** to describe collection on one or more individual worksheets which form a 'book'. You can add hundreds of worksheets to a single workbook but Excel opens with only three. A workbook is saved as one file.

Cell is the word used to describe the intersection between a column and a row. They are referenced by the column heading and the row number eg the **cell reference** for Column A and Row 1 would be A1.



Relative cell reference: a cell reference in formulas that change when excel copies them to another location

Active cells: the cell in which you are currently working

Active sheet: a sheet that is selected

Function: a built-in or pre-recorded formula that provides a shortcut for complex calculations.

Range of cell: one or more cells that form a rectangular group

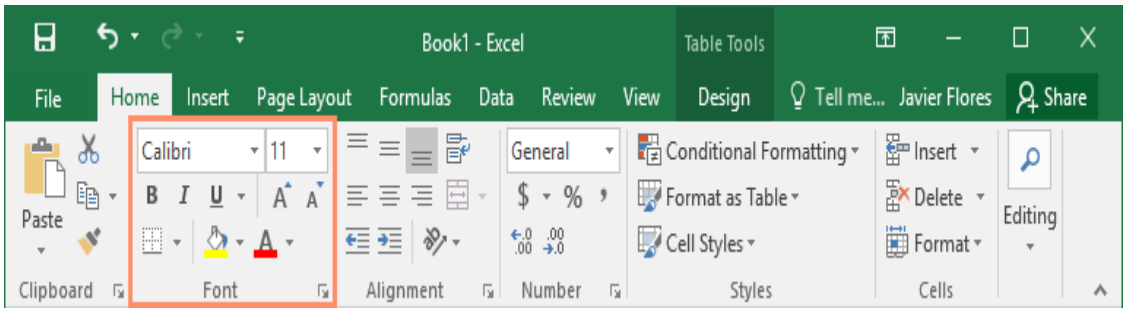
The new interface

The Ribbon and Quick Access Toolbar are where you will find the commands to perform common tasks in Excel. The Backstage view gives you various options for saving, opening a file, printing, and sharing your document.

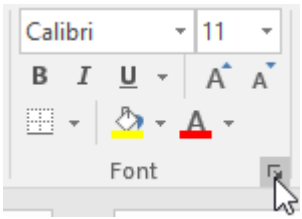
The Ribbon

Excel 2016 uses a tabbed Ribbon system instead of traditional menus. The Ribbon contains multiple tabs, each with several groups of commands. You will use these tabs to perform the most common tasks in Excel.

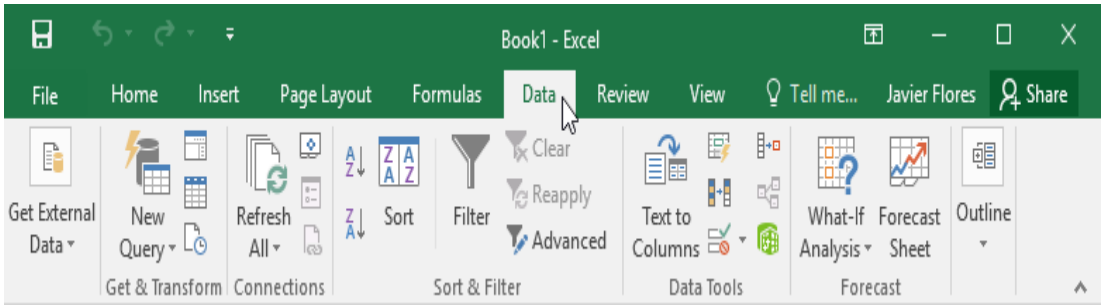
- Each tab will have one or more groups.



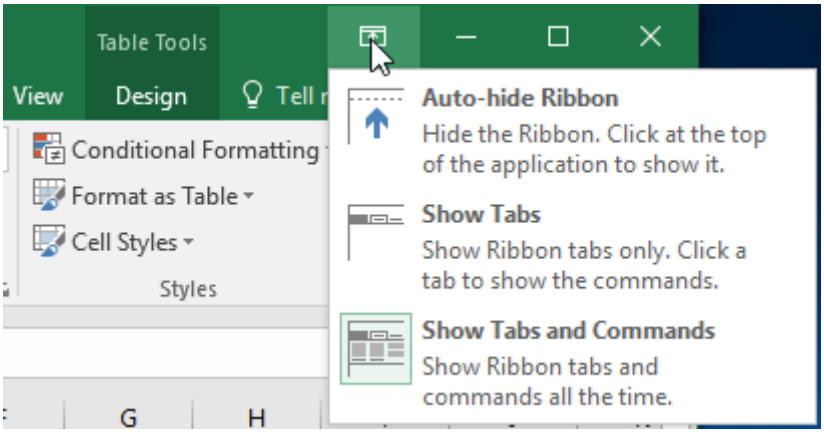
- Some groups will have an arrow you can click for more options.



- Click a tab to see more commands.



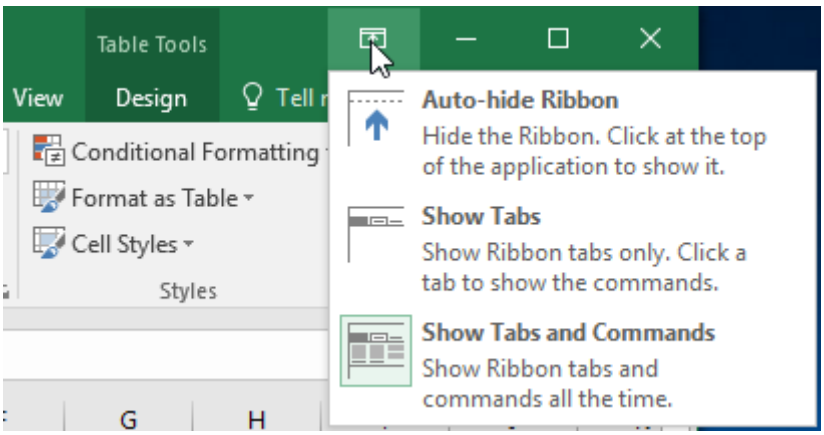
- You can adjust how the Ribbon is displayed with the Ribbon Display Options.



Certain programs, such as Adobe Acrobat Reader, may install additional tabs to the Ribbon. These tabs are called add-ins.

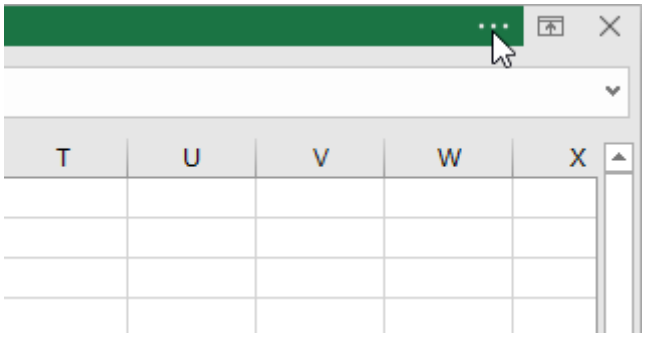
Ribbon Display Options:

The Ribbon is designed to respond to your current task, but you can choose to minimize it if you find that it takes up too much screen space. Click the Ribbon Display Options arrow in the upper-right corner of the Ribbon to display the drop-down menu.

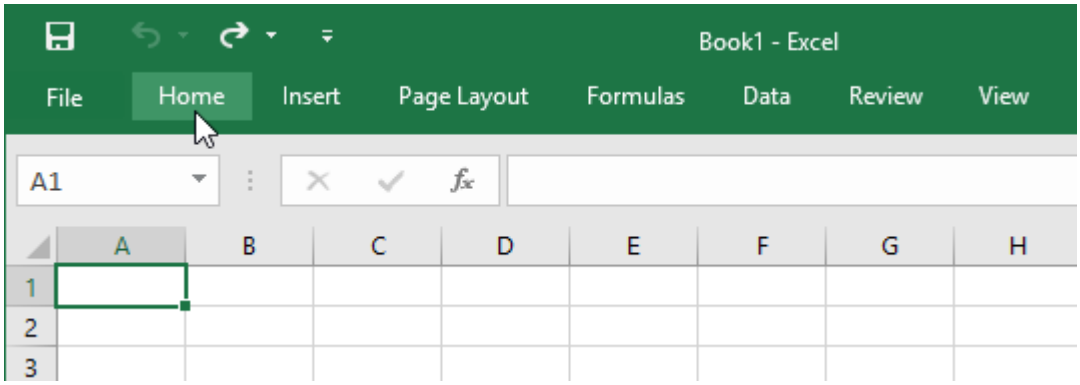


There are three modes in the Ribbon Display Options menu:

- **Auto-hide Ribbon:** Auto-hide displays your workbook in full-screen mode and completely hides the Ribbon. To show the Ribbon, click the Expand Ribbon command at the top of screen.



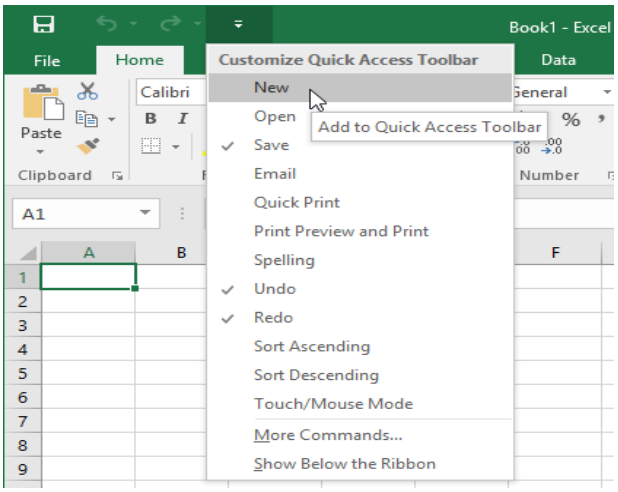
- **Show Tabs:** This option hides all command groups when they're not in use, but tabs will remain visible. To show the **Ribbon**, simply click a **tab**.



- **Show Tabs and Commands:** This option maximizes the Ribbon. All of the tabs and commands will be visible. This option is selected by default when you open Excel for the first time.

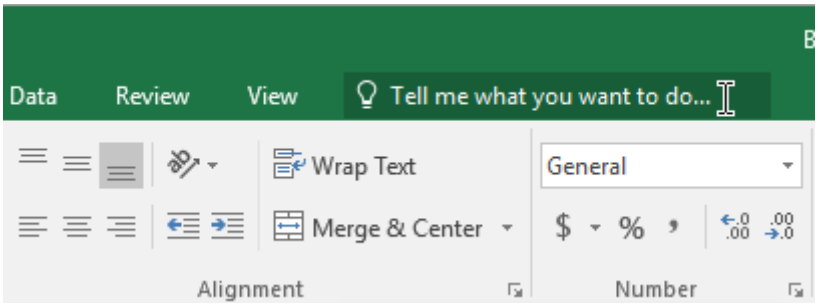
The Quick Access Toolbar

Located just above the Ribbon, the Quick Access Toolbar lets you access common commands no matter which tab is selected. By default, it includes the Save, Undo, and Repeat commands. You can add other commands depending on your preference.



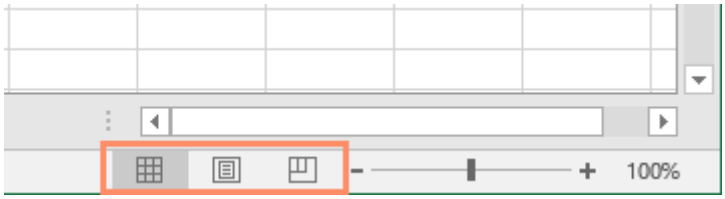
Tell me:

The **Tell me box** works like a search bar to help you quickly find tools or commands you want to use.



Worksheet views

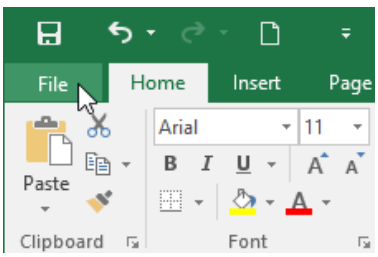
Excel 2016 has a variety of viewing options that change how your workbook is displayed. These views can be useful for various tasks, especially if you're planning to print the spreadsheet. To change worksheet views, locate the commands in the bottom-right corner of the Excel window and select Normal view, Page Layout view, or Page Break view.



- **Normal view** is the default view for all worksheets in Excel.
- **Page Layout view** displays how your worksheets will appear when printed. You can also add headers and footers in this view.
- **Page Break view** allows you to change the location of page breaks, which is especially helpful when printing a lot of data from Excel.

Backstage view

Backstage view gives you various options for saving, opening a file, printing, and sharing your workbooks.to access backstage view click on file backstage view will appear.



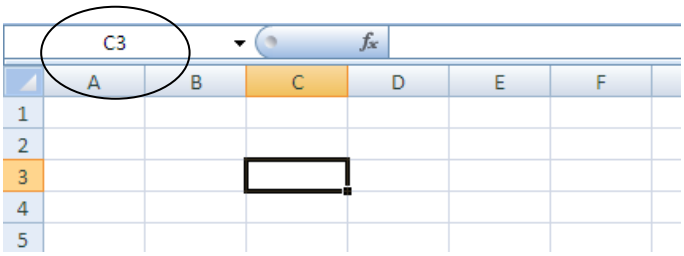
2.1.1. Navigating around a spreadsheet

You can see the navigating bars to the right of the screen and at the bottom of the screen. When there is data in the sheet, you can move the sheet to show data which is out of sight. Here are some basic methods for navigating around a worksheet.

	Keyboard	**Mouse**
A column at a time	→ or ← or Tab key	Move mouse and click
A row at a time	↑ or ↓ or Enter key	Move mouse and click
Cell A1	Ctrl Home	Point and drag vertical scroll box up
Bottom right corner cell of data	Ctrl End	Point and drag vertical scroll box down

Practice to selecting cell

When a cell is selected the name of the cell (also known as cell reference) appears at the extreme left of the Formula Bar. Can you see it? Notice that there is a black border around the cell you have selected.



Resize columns and rows

When you do further work with spreadsheets you will sometimes need to resize the columns and rows of your worksheet to fit the data.

Helpful Hints

if you see hashes **###** appear in a column, it means that the column is not wide enough to hold the data. Widen the column until the data shows clearly.

Toolbars and tool buttons

The conventional way of selecting an action (for example, to open an existing file) is to use the menu bar at the top of the screen (in this case, to click File/Open).

Using the tool buttons is faster. These are the little buttons with symbols on them that are lined up on a toolbar. They may look confusing at first, but are great once you learn what they do. Some programs can have as many as 20 toolbars that display a variety of tools. Usually the default toolbars are the Standard and Formatting toolbars. These have the tools you'll use most at first.

- To display another toolbar, go to View/Toolbars. This will display a list of the toolbars available in the program. The toolbars already displayed will have a tick against them.
- To display another toolbar, just click on it in that list (ie 'select' it).
- To make a toolbar invisible again, click on it again in the list.

Toolbars can usually be placed anywhere on the screen ('floating' toolbars) or 'docked' at the top, bottom or side of the screen. The program will 'remember' which toolbars you had displayed and where they were next time you start it.

Note: Don't have too many toolbars displayed at any one time. It can be very confusing and will reduce the size of your on-screen workspace. This will allow you to create a new toolbar and put your most-used tools on it.

Right-click on any visible toolbar to see the list of available toolbars. This allows you to bypass the menus.

Keyboard shortcuts

We saw in the previous section that some actions can be carried out using **shortcut keys.** These are a combination of two or more key strokes that perform an action. Over the years, software developers have assigned the same shortcut keys to most programs, so that if you know what Ctrl + A does in one program, you can use it to perform the same action in many others.

Listed below are some keyboard shortcuts for some of the more frequently used spreadsheet program commands.

To use one of these combinations, hold down the Ctrl key and press the letter key shown.

Those actions marked 'toggle' will switch that formatting either on or off, depending on its current state.

Shortcut	Action
Ctrl + A	Selects all data on the active worksheet.
Ctrl + B	Toggle. Formats selected data in bold.
Ctrl + C	Copies the selection to the clipboard.
Ctrl + F	Allows you to find specified data (numbers or text) in the active document.
Ctrl + I	Toggle. Formats selected data in italics.
Ctrl + N	Opens a new workbook.
Ctrl + O	Allows you to open a previously saved workbook.
Ctrl + P	Prints the active worksheet.
Ctrl + S	Saves the active workbook.
Ctrl + U	Toggle. Formats selected data as underlined.
Ctrl + V	Pastes the contents of the clipboard into the active cell.
Ctrl + W	Closes the active window, but does not exit the program.
Ctrl + X	Cuts the selected data and places it on the clipboard.
Ctrl + Y	Redoes the previous action.
Ctrl + Z	Undoes the last action.
Alt + F4	Closes the program.

2.2. Using a worksheet

Data entry into a worksheet

Each cell of the spreadsheet can hold figures, text and formulas. The data in each cell is held in that cell alone. Always put the data only in the cell that has to hold it.

To enter data, put your cursor into the selected cell and click. Type the data and press Enter. This moves you to another cell.

NOTE: You can also use the Tab key and your arrows keys to move around the sheet.

The data appears in the cell as well as in the formula bar.

Saving a workbook

After keying in your data, it is a good idea to save your file on your computer, before you continue to format it. You must do two things when saving a file for future use – you must tell your computer where you want to save your file and what you want to name it. Much the same as you would file a phone bill in a folder called Accounts in the drawer labelled Household in your filing cabinet, you must enter which drive and/or folder you want your file to be saved in and enter in a filename for your spreadsheet.

2.3. Formulas and Functions

Entering simple formula

Formulas involve making calculations similar to any business document, but using cell references instead of the actual amounts. Look at the spreadsheet on your screen. It is clear that you must multiply the Quantity with the Price in order to produce the Cost. Normally we would write such a calculation as 36 x 25.99**.**

In Excel you must use the = sign, the multiplication sign *, and cell references to calculate this formula in your spreadsheet. All formulas must begin with the = sign.

AutoSum key

You can achieve the same result as above by using the **shortcut AutoSum button** on the Home tab Ribbon.



Percentages

Using percentages is one of the most important calculations in Excel.

Averages

Normally, to create an average, you add up the amounts that you want to calculate the average of and divide them by the number of entries you have, eg 2+4+6+3+5=20. There are five entries so the average is 20 divided by 5 = 4

Excel makes it very easy – it gives us a FUNCTION =AVERAGE.

Auto Fill

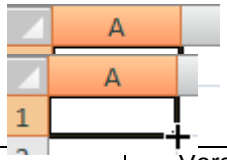
Up till now you have been typing formulas in each cell, and this has been good practice.

As you noticed in the previous Activity, it was necessary for you to enter in formulas for all of the Totals and Averages. This is really good practice, however the more times you have to enter data, the more likely you are to make a mistake. To overcome this there is a function called **Fill Handle** that removes the need for repetitive work.

The **fill handle** is used to copy down the contents from one cell to other cells, whether they are formulas or other data.

The fill handle is the small black square in the bottom right hand corner of a selected cell.

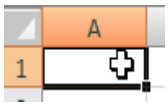
When you put your cursor on this small black square, the



pointer changes to a black cross. To copy contents to cells below the cell or to fill in a series, such as dates, **drag the fill handle** while it is in the shape of the cross.

To display a shortcut menu that contains fill options, hold down the right mouse button as you drag the fill handle.

Be careful not to confuse the fill handle with the white selection cross or with the moving cross. The **white selection cross** appears when you rest your mouse on a cell without clicking. This is used to **select** a cell or a number of cells.



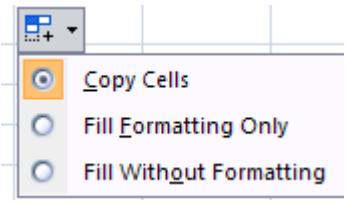
The **moving cross** appears when you move to the edge of a cell and four arrows appear. This arrowed cross is used to move the **contents** of a cell to another cell.

To get the **black cross**, you must click on a cell border and then **rest your mouse pointer on the small black square** in the bottom right hand corner of the cell.

The fill handle is not only used to copy formulas, but also to copy a series across cells, such as numbers that go up by increments, days of the week, months and so on.

Auto Fill Options

When you are filling, a small **options button** will appear called Auto Fill Options, click on the down arrow on this button if you want to use any of the options.



Cell Addresses / Referencing

A cell address or reference identifies a cell or a range of cells in a worksheet. These include the following:

Types of cell addresses

- **Relative cell referencing**

The structure of the formula remains the same when it is copied to other cells but the cells change relative to the position of the formula.

E.g. Consider the formula =A1+B1 entered in C1. What happens when it is copied into B2 through B10?

- **Absolute cell referencing**

When a formula is copied to other cells, the cell references remain unchanged. A dollar sign is placed before the column and the row

e.g. B20

- **Mixed cell referencing**

Either the column or the row is absolutely referenced but not both

e.g. $B20, B$20

Summary of Formulas and Functions

Simple Formulas

Add two cells	=A2+B2	Adds cell A2 and B2
Multiply two cells	=A2*C2	Multiplies cell A2 by cell C2
Divide one cell by another	=A2/D2	Divides cell A2 by cell D2
Subtract one cell from another	=A2 – A3	Subtracts cell A3 from cell A2

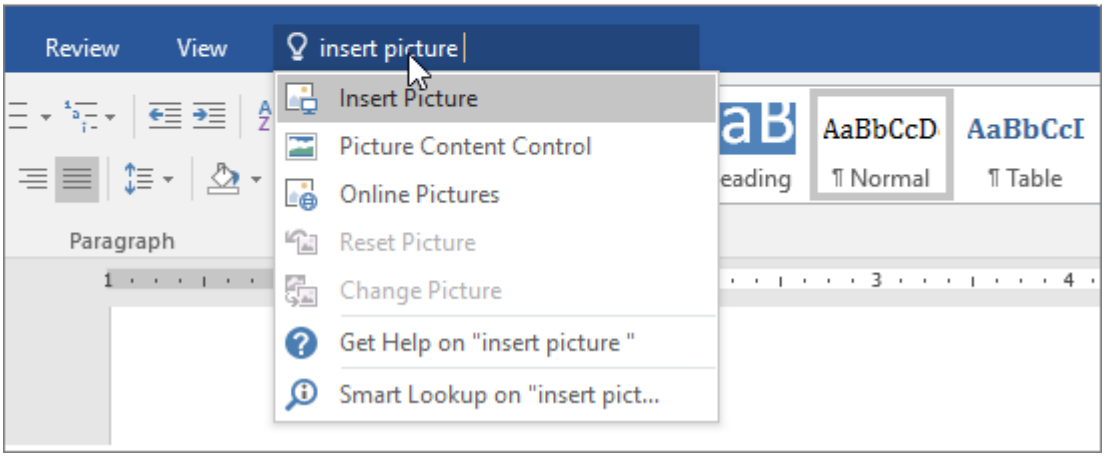
Functions

Adding more than two cells	=SUM(B5:B10)	Adds all cells between B5 and B10
Finding the average of a groups of cells	=AVERAGE(B5:B10)	Finds the average of Cells B5 to B10
Maximum	=MAX(B5:B10)	Finds the largest amount between cells B5:B10
Minimum	=MIN(B5:B10)	Finds the smallest amount between cells B5:B10
Percentage	=15%*A4 OR =A4*0.15 =115%*A4 OR =A4+(15%*A4) =85%*A4 OR =A4 -(15%*A4)	Finds what is 15% of the contents of cell A4 Produces an amount with an increase of 15% of the original amount. Produces an amount with a decrease of 15% of the original amount.
Count	=COUNT(B5:B10)	Finds out how many Numbers there are between cells B5 and B10
Today	=TODAY()	Shows today’s date
Now	=NOW()	Shows today’s date and time

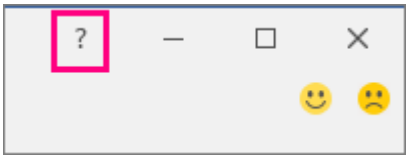
2.4. Accessing Help in spreadsheet

- Just type your query in the Tell me what you want to do box. From the search results, you can quickly get to features you want to use or actions you want to perform. For help content on your search phrase, click the option Get Help on "search phrase".





- You can also access Help from the File menu. In any Office app, **Click File** and in the top right corner, click the familiar? Button.



- Or use the **F1 function key** anytime to open the Help Viewer window for the Office app you are working on.

  By default Excel Help loads in a browse format which gives you a range of topics you can choose from by the click of a button.

  The first two buttons across the top of the help screen allow you to move back and forward through your result pages.

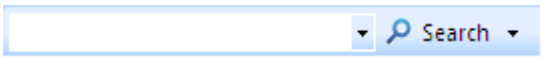


  The next two are there to help when you are working on-line.

The Home button will take you back to the beginning screen you see when you load Help.

The next group of buttons, across the top of the help screen, allow you to print, change your font size, show the table of contents and keep the Help screen on top. It is interesting to note that you can work in Excel with the help screen open which is helpful for following the instructions in Help.

To search for a specific topic, click in the search box.



At the bottom right hand corner of the Help screen you will be notified if you are working Off-Line or On-Line. If you are working off-line you have access to the built in help topics. If you are working on-line then you will have access to the full help of Microsoft Office.

Self-check-1

Test-I Multiple choose

1. What is the name of the feature that saves copies of your files at specified intervals?
   A. Protect Sheet
   B. Track Changes
   C. Auto Recover
   D. Document Recovery
2. Which of the following is a selected cell?
   A. current command
   B. default option
   C. active cell
   D. default cell
3. Which is a small green square in the lower-right corner of a selected cell or range that you can use to copy one cell to adjacent cells or to create a series?
   A. Fill handle
   B. Column marker
   C. Cell pointer
   D. Formula bar
4. How many worksheets does a new Excel 2016 workbook open with?
   A. three
   B. one
   C. two
   D. four
5. Which function in Excel tells how many numeric entries are there?
   A. NUM
   B. COUNT
   C. SUM
   D. CHKNUM
6. Which of the following is the intersection of a row and column?
   A. Range
   B. tab
   C. bar chart
   D. cell
7. Which tab of the ribbon should you go to for removing gridlines on a worksheet?
   A. Formula
   B. View
   C. review
   D. developer
8. Which of the following is an example of a mixed cell reference?
   A. A9$
   B. A9:E9
   C. A$9
   D. A$9
9. Which of the following is where you can save, select a template, change document properties, and close or exit Excel?
   A. Backstage
   B. Print
   C. Edit
   D. Window
10. Out of the following alternatives a valid formula on excel
    A. B2+C2
    B. A1*B1
    C. =C2+D2
    D. E1/F1

Test-II Matching

Instruction: select the correct answer for the give choice. You have given 1 Minute for each question. Each question carries 2 Point.

A	**B**
---------1. Normal view	A. a search bar help to quickly find tools or commands
---------2. Page Layout view	B. the cell references remain unchanged
---------3. Tell me	C. the default view of worksheets
---------4. Page Break view	D. Identifies a cell or a range of cells in a worksheet.
---------5. cell address	E. Displays how your worksheets will appear when printed.
	F. To change the location of page breaks

Test-III Fill in the blank

Instruction: Fill the correct answer for the give blank space. You have given 1 Minute for each question. Each question carries 2 Point.

1. _____ is used to copy down the contents from one cell to other cells
2. Columns and rows are defined by _____ and _____ respectively.
3. Cells are defined by the _____ and _____ at which they intersect.
4. _____ is a working area that you can store, manipulate, calculate, and analyze data.
5. _____are defined by the column and row at which they intersect

Operation sheet 2.1 Use a worksheet

- **Operation Title:** Customize worksheets
- **Purpose:** To create, rename, delete, copy/move worksheet
- **Instruction:** Follow the procedures below
- **Tools and requirement:**
    1. This operation sheet
    2. Resource files
    3. a computer with spreadsheet software
- **Precautions:**
- **Procedures in doing the task**.

Step 1. **Open** your spreadsheet program.

Step 2. Go to **File/New**, then in the dialogue box select '**Blank workbook'**.

Step 3. The bottom of the screen shows three tabs for the three worksheets this blank workbook contains. (**By default**, a **new workbook** usually has **one worksheets**, but you can add more or delete some.)

Step 4. **Right-click** on the Sheet1 tab and select '**Rename**' from the pop-up menu. Type '**January**' and **press Enter**.

Step 5. The first sheet should now be named **January**.

Step 6. **Right-click** on the **Sheet1 tab** and select '**Insert'** from the pop-up menu. **Select** '**Worksheet**' from the dialogue box and **press OK**.

Step 7. An **extra worksheet** should have been **added** to the workbook.

Step 8. **Rename** the **second sheet 'Feb'**, the **third 'Mar'** and the **fourth 'Apr'.**

Step 9. **Right-click** on the **'Mar' tab** and select '**Delete** from the pop-up menu. '**Mar'** Tab should have been **deleted** from workbook.

Step 10. **Right-click** on the **'Apr' tab** and select '**Move or Copy'** from the pop-up menu. Select '**Feb'** Tab. Then where you want to place the copied worksheet. Tick **Check** the box for the **Create a copy** option at bottom of pop-up menu, then click **OK**.

Step 11. You are found **copy Apr** on workbook

Step 12. **Save** the **workbook** by selecting File/Save As and giving it the **filename 'Wages'**. Make sure you save the file to your '**Projects**' **folder** on **my document** or your **USB thumb drive**.

Step 13. **Close the file** (File/Close).



Operation sheet 2.2 Use a worksheet

- **Operation Title:** Text formatting
- **Purpose:** To formatting data on worksheet
- **Instruction:** Follow the procedures below
- **Tools and requirement:**
    1. This operation sheet
    2. Resource files
    3. a computer with spreadsheet software
- **Precautions:**
- **Procedures in doing the task**.

Step 1. Open the file formatting.

Step 2. Select cells A4 to D4. Click the Bold button on the Formatting toolbar.

Step 3. Repeat for cells A19 to D19 and cells C27 to D27.

Step 4. Select cells C17 to D17. Click the Italics button on the Formatting toolbar.

Step 5. Repeat for cells C25 to D25 and cells C27 to D27.

Step 6. Select cells A1 to D1. Click the Merge and Centre alignment button on the Formatting toolbar.

Step 7. Select cells B4 to D4. Click the Centre alignment button on the Formatting toolbar. Repeat for cells B19 to D19.

Step 8. Select cell C17. Click the Align Right button on the Formatting toolbar. Repeat for cells C25 and C27.

Step 9. Select cells A5 to A15. On the menu bar, go to Format/Cells (shortcut Ctrl+1).

Step 10. When the Format Cells dialogue box appears, click on the Alignment tab (if it's not already selected).

Step 11. Use the up arrow key to increase the indent to 2.

Step 12. Repeat for cells A20 to A23.

Step 13. Select cell A1. Click the Font Size drop-down menu on the Formatting toolbar, and choose 14 point.

Step 14. Select cell A1 again. Click the Font Colour drop-down on the Formatting toolbar, and choose a dark colour.

Step 15. Repeat for row 4 and row 19. (Clicking on a row number on the left-hand side of the screen will select the whole row).

Step 16. Select cells A4 to D4. Click the Fill colour button on the Formatting toolbar, and select a pale colour. Repeat for cells A19 to D19 and for cell A1.

Step 17. Select cell A1. Click the Borders drop-down menu on the Formatting toolbar, and choose the Outside borders button.

Step 18. Repeat for Cells C27 to D27.

Step 19. Select cell D17. On the menu bar, go to Format/Cells.

Step 20. When the Format Cells dialogue box appears, click on the Number tab.

Step 21. Select Currency. Check that the Decimal places window is showing '2', and click OK.

Step 22. Repeat for cells D25 and D27.

Step 23. Save your file

- **Quality Criteria:** Your worksheet should now look something like this

Small renovation job			
Material	**Quantity**	**Unit price**	**Total**
Plywood	12	12.25	147
Chipboard	2	14.8	29.6
Dowel	5	6.55	32.75
Paint	28	39.9	1,117.20
Spray paint	2	8.1	16.2
Nails	2	1.4	2.8
Screws	4	1.75	7
Glue	5	10.45	52.25
Wallpaper	16	8.99	143.84
Sundries	1	20	20
Thinners	1	5.6	5.6
		Materials total:	*$1,574.24*
Labour	**Hours**	**Hourly rate**	**Total**
Carpenter	56	42.5	2,380.00
Painter	32.5	41	1,332.50
Apprentice	9	26	234
Assistant	44	29	1,276.00
		Labour total:	*$5,222.50*
		GRAND TOTAL:	***$6,796.74***

- **Precautions:** use the formatting file from resource folder.

Operation sheet 2.3 Formulas and functions

- **Operation Title:** Basic formulas
- **Purpose:** Applying basic formulas in worksheet
- **Instruction:** Follow the procedures below
- **Tools and requirement:**
    1. This operation sheet
    2. Resource files
    3. a computer with spreadsheet software
- **Precautions:**
- **Procedures in doing the task**.

Step 1. Open a new workbook (go to File/New/Workbook).

Step 2. Save the workbook by going to File/Save as and giving it the file name 'Formulas 1'.

Step 3. In cell B5, type 12. In cell C5, type 6.

Step 4. Note: Before entering a formula, you must select the cell where you want the result of the calculation to appear.

Step 5. All formulas in a spreadsheet must start with an equals sign (=). When you type an equal's sign into a cell, the program knows to treat whatever follows as a formula.

Step 6. In cell D5, type =b5+c5 and press Enter. Cell D5 should now contain the sum of cells B5 and C5. With cell D5 selected, look at the formula bar. It should show the formula in that cell.

Step 7. Note: Capital and lower-case letters don't matter in formulas. Whether you type 'b5' or 'B5' in a formula, the program will treat them the same.

Step 8. Select cells B5 and C5 and drag downwards to fill the next four rows (down to row 9).

Step 9. Select cell D6. Type = (the equals sign) and then click on cell B6. Type + (the plus sign) and then click on cell C6. Press Enter.

Step 10. Cell D6 should now contain the sum of cells B6 and C6. Note that when you were entering the formula, clicking on a cell resulted in the same thing as typing the cell's address – it was entered into the formula. That's the easy way to do it.

Step 11. Select cell D7. Type = and then click on cell B7. Type - (the minus sign) and then click on cell C7. Press Enter.

Step 12. Do the same thing in cells D8 and D9, but make the formula multiply (*) and divide (/) the two preceding cells.

- **Quality Criteria:** You should end up like this.

B	C	D
12	6	18
12	6	18
12	6	6
12	6	72
12	6	2

- **Precautions:** The result D should be 18, 18, 6, 72, 2



Operation sheet 2.4 Formulas and functions

- **Operation Title:** functions
- **Purpose:** Applying basic functions in worksheet
- **Instruction:** Follow the procedures below
- **Tools and requirement:**
    1. This operation sheet
    2. Resource files
    3. a computer with spreadsheet software
- **Precautions:**
- **Procedures in doing the task**.

Step 1. Open the file Rows and columns from resource folder.

Step 2. Select cell B15.

Step 3. Click on the Functions button.

Step 4. From the ‘Or select a category’ list, select All. In the ‘Select a function’ box, select Average, then click OK.

Step 5. The spreadsheet program assumes you want to find the average of cells B5 to B14. This includes the total in B13, which would skew the average.

Step 6. Override this by changing the B14 in the dialogue box to B12, then click OK.

Step 7. The spreadsheet program has found the average revenue for all branches for January. Find the averages for the other months by grabbing the handle of cell B15 and filling its contents across to the right.

Step 8. Select cell H18.

Step 9. Click on the Functions button and, from the Statistical category, select Max.

Step 10. Change the suggested function arguments in the dialogue box by clicking and dragging so that you select the cells from B5 to G12. Click OK.

Step 11. The spreadsheet program has found the cell in that range that holds the largest number.

Step 12. Repeat the steps to find the lowest revenue by using Min function.

Step 13. Save and close the file



Operation sheet 2.5 using a worksheet

- **Operation Title:** Adjust Rows and columns
- **Purpose:** Row heights and column width can be adjusted
- **Instruction:** Follow the procedures below
- **Tools and requirement:**
    1. This operation sheet

2. Resource files
3. a computer with spreadsheet software

- **Precautions:**
- **Procedures in doing the task**.

Step 1. Open the file Rows and columns.

We're going to amend this worksheet to include the figures for June.

Step 2. Right-click anywhere in column G. From the pop-up menu, select Insert.

Step 3. From the choices available, select Entire column, then click OK.

Step 4. The data that was in column G is now in column H, and we have a new, empty column G.

Step 5. Select cells E4 and F4, and fill their contents across to G4 (the heading should be 'Jun').

Step 6. Click on H5 to see the formula in that cell – at the moment it's =SUM (B5:F5).

Step 7. In cell G5, type 1234567 (Perth's revenue for the month of June). Then press Enter.

Step 8. The total for row 5 has updated. If you click on cell H5, you'll see that the formula has automatically updated to include our new column.

Step 9. Put some data in the rest of column G's cells. Make them seven-digit figures so that the data remains meaningful.

Step 10. Select cell F12 and fill the formula across to cell G12 (i.e. drag the cell's handle).

Step 11. Right-click anywhere in row 8. From the pop-up menu, select Insert.

Step 12. From the choices available, select Entire row, then click OK.

Step 13. The spreadsheet program has moved all the data below down one row, so we now have an empty row 8.

Step 14. Type the word 'Canberra' in cell A8.

Step 15. Type 1234567 into cell B8.

Step 16. To save time, rather than type figures into the rest of Canberra's Feb to Jun cells, just use the Fill function to fill January's figures across to June (very steady sales in Canberra!).

Step 17. Select cell H7, and fill its formula into cell H8.

Notice that grand total in cell H13 is automatically updating each time you add data to the worksheet.

Setting column widths

Step 1. Right-click on the letter 'F' at the top of column F.

Step 2. From the pop-up menu, choose Column width and change the width from 11 to 8, then click OK.

Notice how some of the data in column F has turned to hash symbols (######). This is because the program can't fit the data in those cells into the narrower column width.

Step 3. We could fix the width of the column by entering a different width (as we did above), but we'll do it differently.

Step 4. Hover the cursor over the border between the 'F' and the 'G' at the top of column F. Notice that the cursor changes to a double-headed arrow.

Step 5. Left-click and hold. A box appears showing the width of column F. Drag the cursor to the right until the box shows 15.00, then let go. The column is now wider than it was to start with.

Step 6. Double-click on the border between the 'F' and the 'G' at the top of column F. The column is automatically resized to suit the widest data in it.

Step 7. To test this, click on cell D20 and type some characters so that they spill well to the right of the cell.

Step 8. Go to the top of column D and double-click its right-hand border. The column will resize itself to fit the data in cell D20.

Step 9. Delete the data in cell D20 and resize the column width using the double-click method.

Setting row heights

You probably won't be surprised to learn that row heights can be adjusted too.

Step 1. Select row 13 by right-clicking on the '13' at the left-hand edge of the

worksheet. From the pop-up menu, select Row height and change the value to 20, then click OK.

Step 2. Row 13 is now higher than it was.

Step 3. Hover the cursor between the '13' and the '14' on the left-hand side of the worksheet. Click and drag downwards, then let go. You've manually changed the row height.

Step 4. Select an empty cell in row 20. Type a small number into it (such as 23).

Step 5. With the cell still selected, change the font size to 24 point.

Notice that the row height has automatically increased to fit the larger font size.

Step 6. Compare this to column widths, which may need to be manually increased after a large number has had its font size increased.

Step 7. Save the file, then close it.



Operation sheet 2.6 Access help

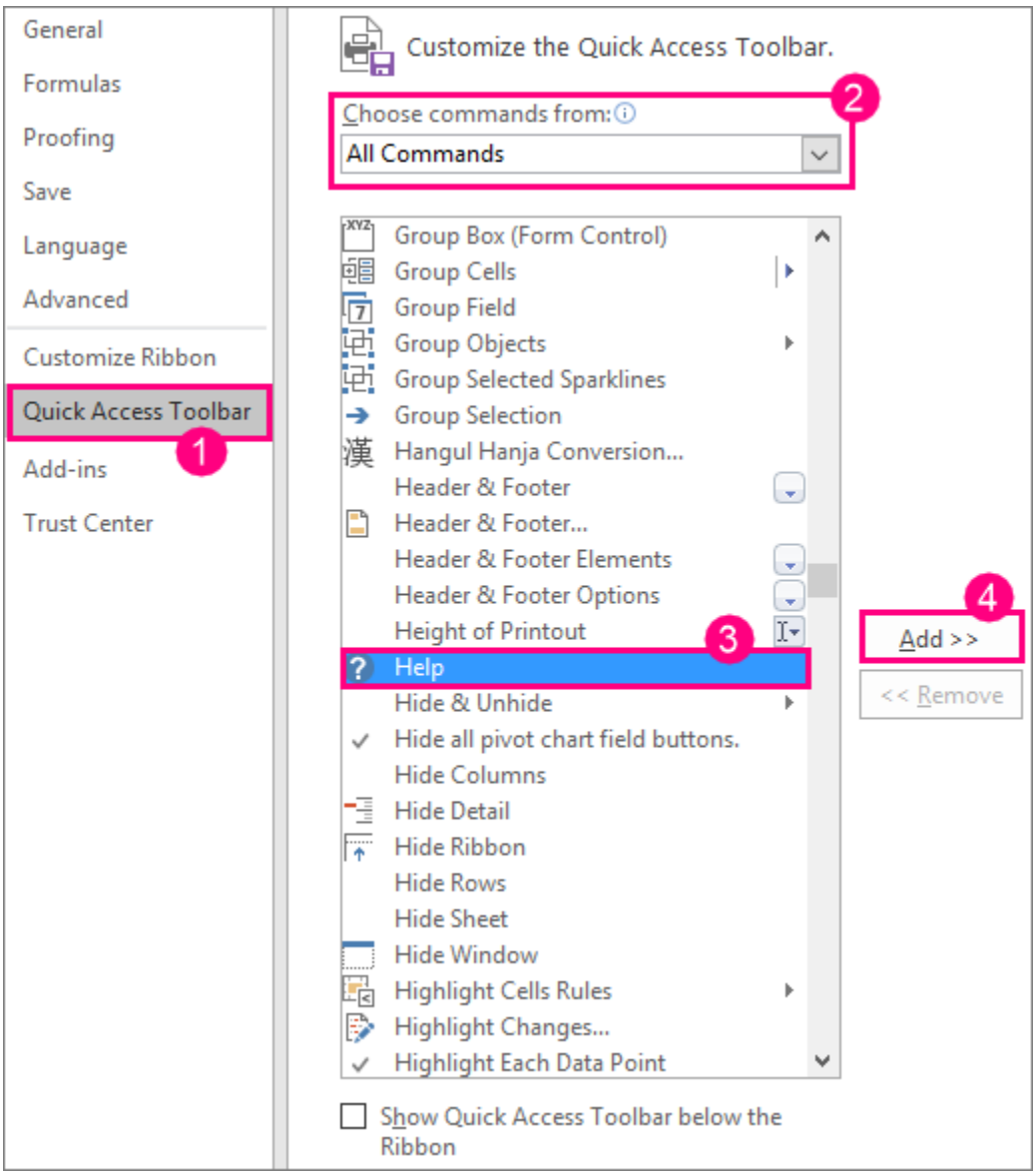
- **Operation Title:** Add a help shortcut to the Quick Access Toolbar
- **Purpose:** Add a help shortcut to Quick Access Toolbar to get easily
- **Instruction:** Follow the procedures below
- **Tools and requirement:**
    1. This operation sheet
    2. Resource files
    3. a computer with spreadsheet software
- **Precautions:**
- **Procedures in doing the task**.

Step 1. Select File > Options > Quick Access Toolbar.

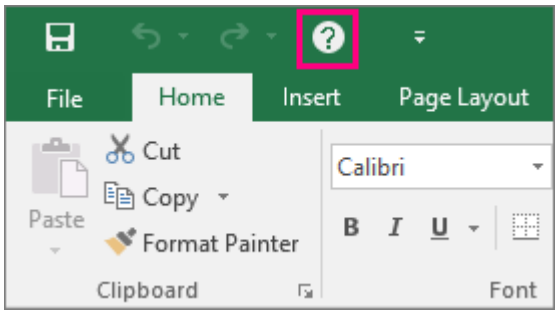
Step 2. Under the dropdown where it says Choose commands from, select All Commands.

Step 3. Select Help from the list of commands to add to the Quick Access Toolbar.

Step 4. Click Add.



Step 5. When you're done, click **OK**. The shortcut to help will be added to your Quick Access Toolbar in the upper-left corner.



Lap Test 1 – Instructions

Task 1 Adjust your workstation to suit OHS requirements and energy and resource conservation techniques.

Task 2 Open a new workbook, and create a spreadsheet that will calculate the weekly wages for A1 Constructions.

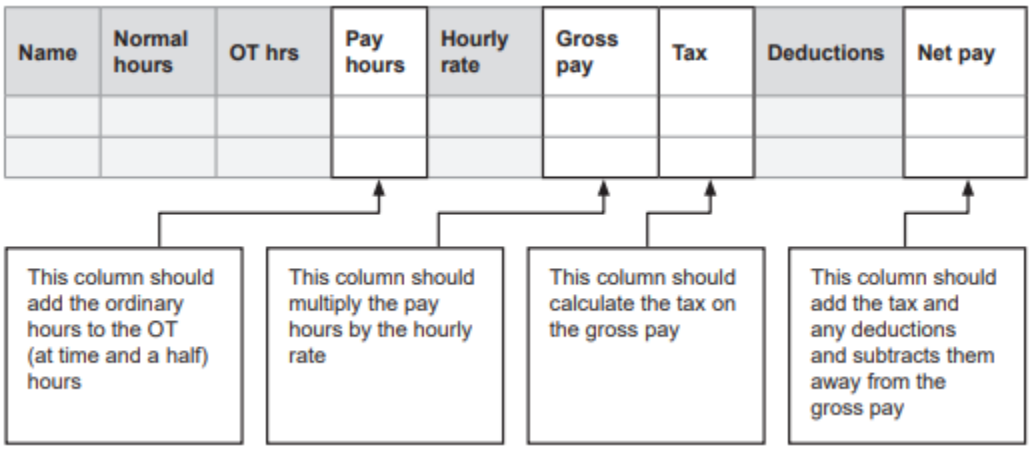
Below is the information for their six employees for the week ending 19 April.

Name	Ordinary hours	Overtime (OT) hours	Hourly rate ($)	Miscellaneous deductions ($)
Andrews	38	10	25.36	38.20
Brown	38	10	28.50	–
Carter	38	8	18.75	26.50
Davis	30		22.90	–
Edwards	38		28.50	20.00
Fletcher	38	4	24.60	10.00

The overtime (OT) rate is 1.5 times the ordinary rate. Tax is calculated at 32 cents in the dollar, after the $104 tax-free deduction.

Layout

Task 3 Your spreadsheet columns should be laid out something like this example.



Your spreadsheet should have the nine columns shown above, and formulas should calculate amounts for the Pay hours, Gross pay, Tax and Net pay columns.

Formatting

Task 4 **Finally**, give your spreadsheet a **heading**, and **apply some formatting** to enhance the appearance of your worksheet, such as **bold, text colour, text size, borders**, etc.

Before printing your spreadsheet, put your name in cell J3.

Printing

Task 5 When your worksheet is complete, preview, adjust, save and print it and give the printout to your trainer

Unit Three: Produce simple charts

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Introduction to chart
- Create chart
- Customize and organize chart

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Identify types of chart
- Create chart
- Customize and organize chart

3.1. Produce simple charts

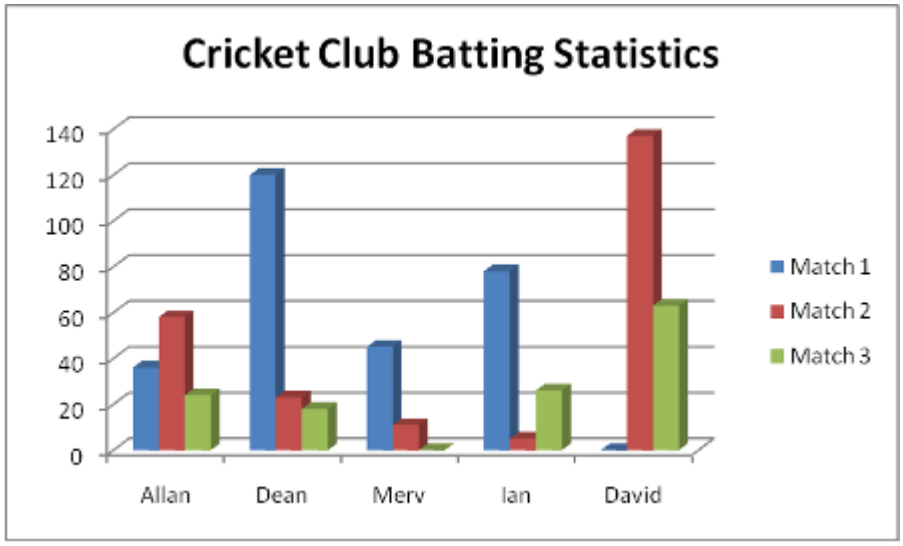
Charts

Charts provide a visual representation of statistical data.The numerical data contained in columns and totals and percentages can be rather daunting for an audience to understand. The power of an appropriate chart is that the use of chart devices will give the audience or reader a visual representation of the data. The information represented via the use of a chart is easier to explain and quicker to understand. As they say "a picture says a thousand words".

Types of charts.

I. Column chart

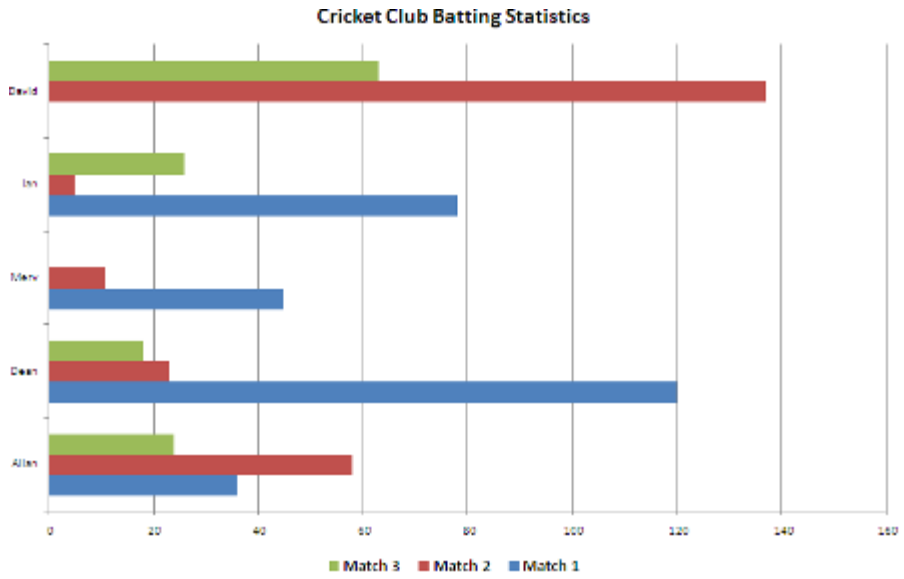
Useful for comparison. In the 3-dimensional chart below we are comparing the scores for each match by player.



II. Bar chart

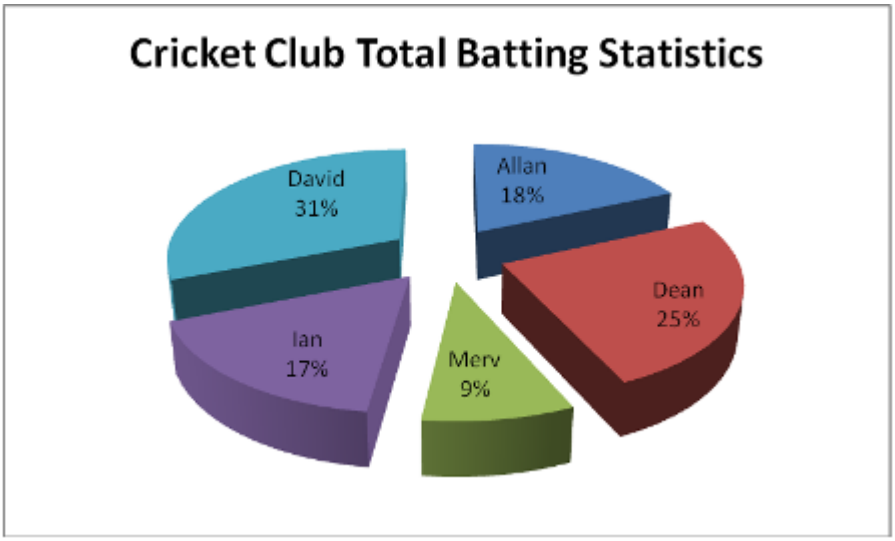
This is similar to a Column Chart. Below is a 2-dimensional bar chart showing the same information as above.

.



III. Pie chart

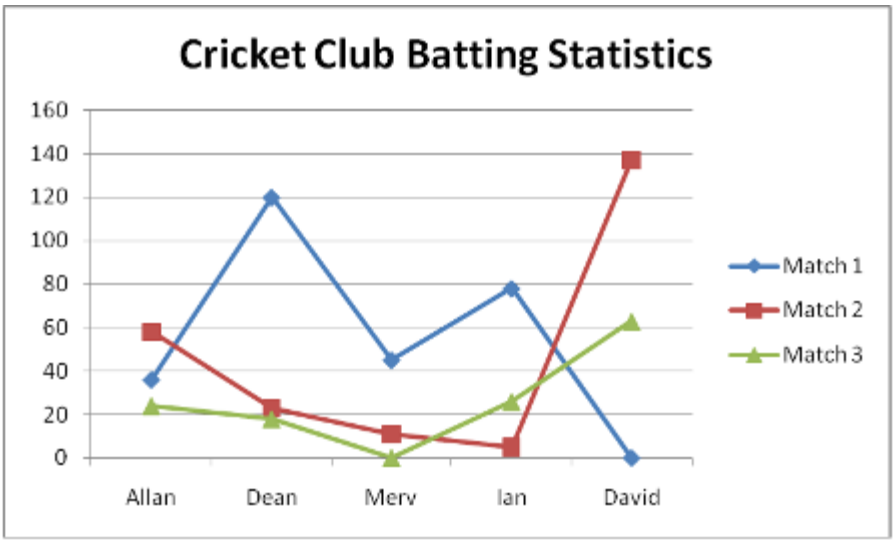
Shows the proportions of individual components compared with a whole. In the 3-dimensional example below, the scores have been converted to a percentage of the whole.



IV. Line Chart

Used for comparing separate sets of data. In the chart below you can see that Ian is improving overall, whereas David is not.

.



Those are some of types of chat listed above.

Self-check-3

Test-II Matching

Instruction: select the correct answer for the give choice. You have given 1 Minute for each question. Each question carries 3 Point.

A	B
---------1. Pie chart	A. 2-dimensional chart
---------2. Column chart	B. Shows the proportions of individual components compared with a whole
---------3. Bar chart	C. Useful for comparison 3-dimensional
---------4. Line Chart	D. Used for comparing separate sets of data
	E. To display data visual

Test II: short Answer writing

Instruction: write short answer for the given question. You are provided 3 minute for each question and each point has 5 Points.

1. Define chart?

Operation sheet 3.1 Produce simple charts

- **Operation Title:** Charts
- **Purpose:** Create and modify charts
- **Instruction:** Follow the procedures below
- **Tools and requirement:**
    1. This operation sheet
    2. Resource files
    3. a computer with spreadsheet software
    4. printer with A4 paper
- **Precautions:**
- **Procedures in doing the task**.

Step 1. Open the file Rows and columns.

Step 2. Select cells A4 to G11. This range includes the branch names, the months, the sales figures and the branch totals (a deliberate mistake which we'll fix later).

Step 3. Click the Chart Wizard button (on the Standard toolbar). (The Chart Wizard button might be in a different place in your spreadsheet program. If you can't find it, ask your trainer for help.)

A dialogue box will appear, showing a range of chart types. Clicking on one of these reveals several sub-types. The first sub-type will already be highlighted.

Step 4. Press the 'Press and hold to view sample' button, and a preview of what the chart would look like using that sub-type appears.

Step 5. Experiment with various chart types and sub-types. Some chart types will be inappropriate for the type of data to be used. For our current spreadsheet, the 'Clustered Column' sub-type will be best. Select this, then press the Next button.

Step 6. Press the Next button again, then next again, then the Finish button.

The chart should appear, superimposed on the spreadsheet.

Step 7. Save the file with the 'Save as' command, and give it the name 'Rows and columns with chart', but don't close the file.

Note the following.

- ✓ The cell range you selected is highlighted with three coloured boxes (if you look carefully).
- ✓ The Value axis at the left-hand side of the chart shows dollar amounts.
- ✓ The Category axis at the bottom shows the branches.
- ✓ The legend shows the colour-coded months.
- ✓ You can move the chart around or resize it, just like any other graphic.

You can edit the chart, which we'll do now.

Because we selected data in column G (the branch totals), the chart is skewed (the Totals data is forcing the monthly data to appear too small).

Note: You may need to shift the chart if it's in the way of the spreadsheet data.

Step 8. On the spreadsheet, 'grab' the bottom right-hand handle on the blue box and move it to the left so that only columns A to F are selected.

The chart automatically updates, and now shows the data more meaningfully.

You can now see how useful charts can be. We can see at a glance which branch had the most sales, and in which month, etc. We can also see that some branches' January figure was their highest, while for some it was their lowest. Very interesting to the general manager!

Step 9. Try right-clicking on various parts of the chart – pop-up menus for those parts will appear.

Step 10. Right-click on the Legend at the right-hand side. Choose Format Legend and, from the choices available, change the border colour and line weight and the font size and font. Click OK. The legend now looks different.

Step 11. Do something similar to the Category axis (across the bottom of the chart).

Step 12. Right-click and select Format Axis for the Value axis at the right-hand side

of the chart.

Step 13. Select the Number tab, then Currency from the category. Choose the $ symbol and reduce the decimal places to zero. Change the font, font colour and alignment if you want. Then click OK.

Step 14. Right-click in a blank area just inside the chart border, and select Format Chart Area.

Step 15. Change the border of the chart, and select a pale colour in the Area options section. Click OK. Now our chart's looking quite good, but it still lacks a title!

Step 16. Click in a clear area, and choose Chart Options.

Step 17. Give the chart a title (perhaps 'Sales figures') and try other options, including selecting the two options on the data table tag.

Step 18. Move the chart across so that it's under the data in the spreadsheet, then resize it so it fits on the page.

Step 19. Click anywhere in row 1 and click Print Preview. Your chart would be printed on top of your spreadsheet.

Step 20. Press the Escape key, then select the chart. Press Print Preview and you will see that just your chart would be printed.

Step 21. Save and close the file.

Lap Test 2 – Create and print a spreadsheet with a chart

	Estimate			Job cost		
Contract	Estimated cost	Profit	Contract price	Actual cost	Actual profit	Profit %
Allan	345 000			342 000		
Baird	376 800			375 000		
Carter	425 600			470 000		
Dennis	297 800			333 000		
Edwards	612 900			651 000		
Ford	321 000			321 000		
Green	236 500			250 000		
Harris	299 700			328 000		
Irwin	378 500			435 000		
Jenkins	879 000			841 000		
Total						
Average						

Task 1 Shown here is some data for the 10 house contracts your company has carried out this year. Create a spreadsheet containing the headings, names and Figures shown.

Task 2 In the appropriate cells, enter formulas to calculate the following missing information for each contract:

- profit of 11% on the estimated cost
- contract price (estimated cost + profit)
- actual profit (contract price – actual cost)
- profit % made (actual profit ÷ actual cost)
- totals (four cells only)
- Averages (five cells only).

Task 3 Save your spreadsheet with the name ‘Lap Test 2’.

Task 4 **Apply the following formatting:**

- figures are to show a space as a 'thousands separator', but no cents and no dollar sign
- profit % to show two decimal places
- column headings to be in bold
- negative numbers to be in red (go to Format/Cells/Number/Number)
- enough borders should be shown to make the spreadsheet look clear
- 'Total' row to have bold green text
- 'Average' row to have bold plum text
- header to have your company name in 18pt bold italics and '2009 Profits' in 14pt bold
- Footer to have your name and today's date.

Task 5 **Preview, adjust, print and save your spreadsheet.**

Chart

Task 6 Select the 'Contract' data (including the heading), the 'Contract price' data and the 'Actual profit' data (use the Ctrl key to select the additional data).

- Using the Chart Wizard, create a 'Line with markers' chart.
- Add the chart title 'By actual profit', and your name.
- Apply some formatting to the chart to make it look more professional.

Task 7 Print, review, adjust, print and save the chart only. (Tip: Select the chart first.)

Give both print outs to your trainer

Task 8 Repeat actions of 1.6–1.7 and modify your existing chart to be a bar graph.

Unit Four: finalize spreadsheet

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- **Prepare to print**
- **Finalize spreadsheet**

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this module, you will be able to:

- **Prepare to print**
- **Finalize spreadsheet**

4.1. Preparing to print

Adjusting content

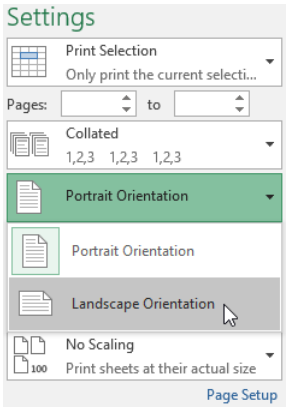
On occasion, you may need to make **small adjustments** from the Print pane to fit your workbook content neatly onto a printed page. The Print pane includes several tools to help fit and scale your content, such as **scaling** and **page margins**.

Types of page orientation:

Excel offers two page orientation options: **landscape** and **portrait**. **Landscape** orients the page **horizontally**, while **portrait** orients the page **vertically**. In our example, we'll set the page orientation to landscape.

Navigate to the **Print** pane.

Select the desired orientation from the **Page Orientation** drop-down menu. I we'll select **Landscape Orientation**.



I. The page can be changed in to Landscape orientation

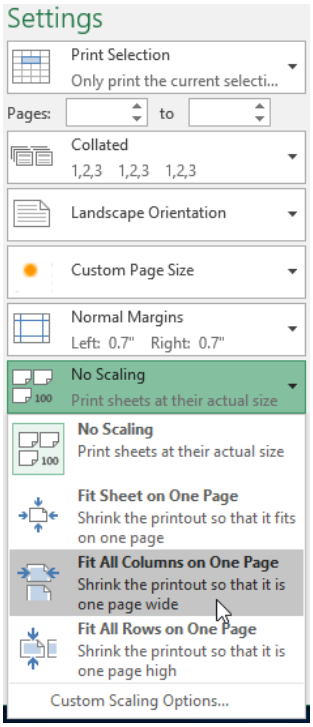
To fit content before printing:

If some of your content is being cut off by the printer, you can use **scaling** to fit your workbook to the page automatically.

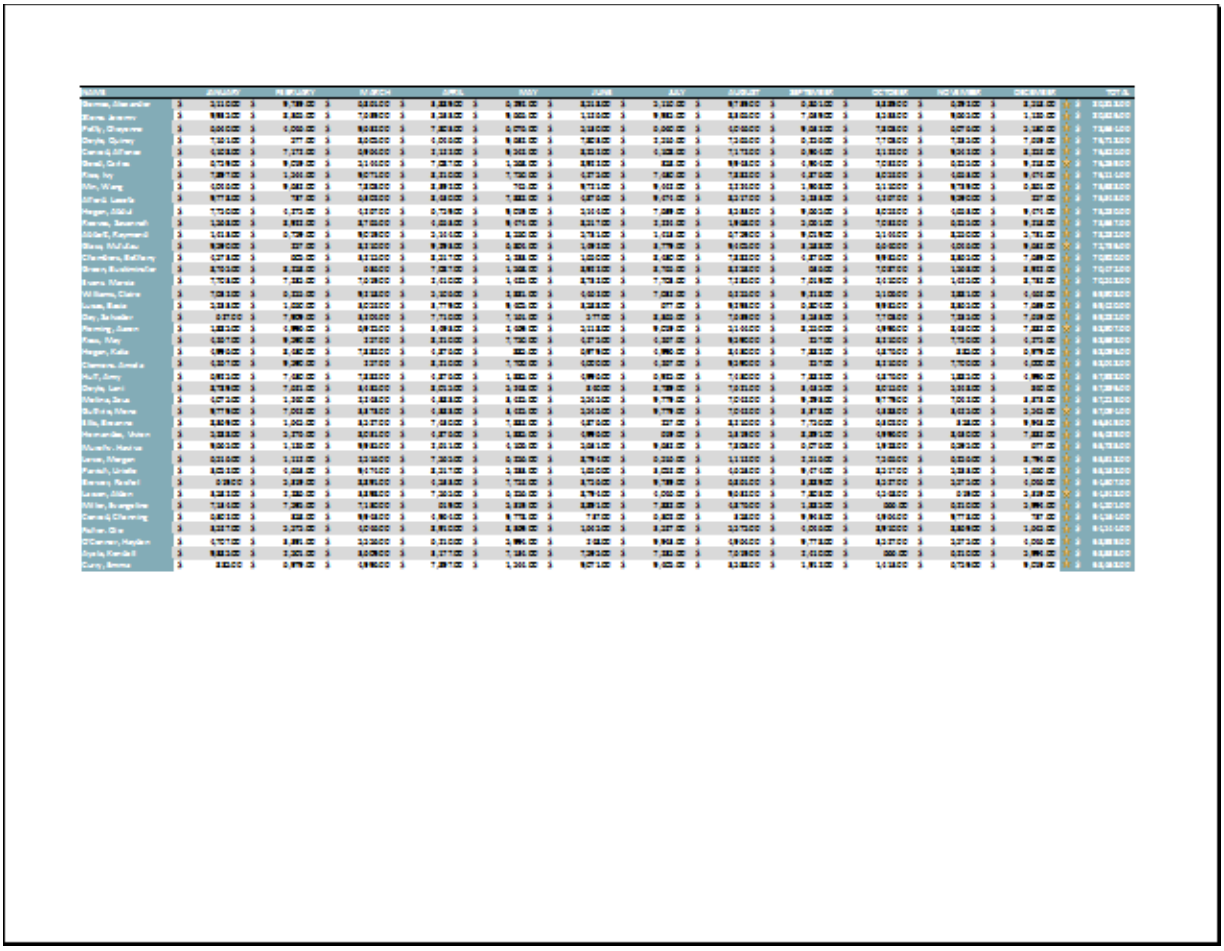
Navigate to the **Print** pane. In our example, we can see in the Preview pane that our content will be cut off when printed.

NAME	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Gomez, Alexander	$ 5,110.00	$ 9,739.00	$ 6,861.00	$ 3,889.00	$ 6,292.00	$ 8,518.00
Stone, Jeremy	$ 9,935.00	$ 8,365.00	$ 7,639.00	$ 3,533.00	$ 9,665.00	$ 1,126.00
Petty, Cheyenne	$ 6,540.00	$ 4,046.00	$ 9,632.00	$ 7,803.00	$ 6,076.00	$ 5,130.00
Doyle, Quincy	$ 7,161.00	$ 577.00	$ 8,605.00	$ 4,046.00	$ 9,632.00	$ 7,803.00
Conrad, Alfonso	$ 4,108.00	$ 7,172.00	$ 6,964.00	$ 2,122.00	$ 9,542.00	$ 8,252.00
Good, Carlos	$ 6,759.00	$ 9,019.00	$ 5,144.00	$ 7,087.00	$ 1,568.00	$ 8,922.00
Rice, Ivy	$ 7,897.00	$ 1,544.00	$ 9,071.00	$ 8,210.00	$ 7,750.00	$ 4,275.00
Min, Wang	$ 4,046.00	$ 9,632.00	$ 7,803.00	$ 8,392.00	$ 745.00	$ 9,721.00
Alford, Lacota	$ 9,778.00	$ 737.00	$ 6,302.00	$ 8,430.00	$ 7,882.00	$ 4,876.00
Hogan, Abdul	$ 7,750.00	$ 4,275.00	$ 4,267.00	$ 6,759.00	$ 9,019.00	$ 5,144.00
Reeves, Savannah	$ 1,568.00	$ 8,922.00	$ 8,765.00	$ 4,653.00	$ 9,474.00	$ 8,517.00
Abbott, Raymond	$ 1,413.00	$ 6,759.00	$ 9,019.00	$ 5,144.00	$ 8,550.00	$ 5,731.00
Glass, Mufutau	$ 9,590.00	$ 257.00	$ 8,210.00	$ 9,293.00	$ 6,804.00	$ 1,492.00
Chambers, Bethany	$ 4,573.00	$ 605.00	$ 3,215.00	$ 8,517.00	$ 5,233.00	$ 1,650.00
Green, Buckminster	$ 8,765.00	$ 8,258.00	$ 636.00	$ 7,087.00	$ 1,568.00	$ 8,922.00
Evans, Marcia	$ 7,703.00	$ 7,235.00	$ 7,619.00	$ 2,410.00	$ 1,425.00	$ 8,732.00
Williams, Claire	$ 7,032.00	$ 6,255.00	$ 9,218.00	$ 5,106.00	$ 2,881.00	$ 4,462.00
Lucas, Basia	$ 5,233.00	$ 1,650.00	$ 3,052.00	$ 3,779.00	$ 9,405.00	$ 3,588.00
Day, Salvador	$ 627.00	$ 7,909.00	$ 3,204.00	$ 7,710.00	$ 7,161.00	$ 577.00
Fleming, Aaron	$ 1,885.00	$ 4,996.00	$ 6,925.00	$ 3,493.00	$ 2,469.00	$ 5,118.00
Ross, May	$ 4,267.00	$ 9,590.00	$ 257.00	$ 8,210.00	$ 7,750.00	$ 4,275.00
Hogan, Kalia	$ 4,996.00	$ 8,430.00	$ 7,882.00	$ 4,876.00	$ 885.00	$ 6,979.00
Clemons, Amela	$ 4,267.00	$ 9,590.00	$ 257.00	$ 8,210.00	$ 7,700.00	$ 4,000.00
Huff, Amy	$ 6,925.00	$ 7,430.00	$ 7,882.00	$ 4,876.00	$ 1,885.00	$ 4,996.00
Doyle, Lani	$ 8,789.00	$ 7,621.00	$ 3,435.00	$ 8,015.00	$ 5,248.00	$ 840.00
Molina, Zeus	$ 4,075.00	$ 1,240.00	$ 2,243.00	$ 4,383.00	$ 3,425.00	$ 5,545.00
Guthrie, Mona	$ 9,779.00	$ 7,042.00	$ 3,373.00	$ 4,383.00	$ 3,425.00	$ 5,545.00
Ellis, Breanna	$ 8,369.00	$ 1,645.00	$ 3,527.00	$ 7,430.00	$ 7,882.00	$ 4,876.00
Hernandez, Vivien	$ 5,288.00	$ 5,276.00	$ 8,031.00	$ 4,876.00	$ 1,885.00	$ 4,996.00
Murphy, Haviva	$ 9,665.00	$ 1,126.00	$ 9,935.00	$ 2,611.00	$ 4,106.00	$ 5,631.00
Lowe, Morgan	$ 6,516.00	$ 1,112.00	$ 2,516.00	$ 7,565.00	$ 6,256.00	$ 8,794.00
Parrish, Urielle	$ 3,052.00	$ 4,653.00	$ 9,474.00	$ 8,517.00	$ 5,233.00	$ 1,650.00
Brewer, Rachel	$ 619.00	$ 5,319.00	$ 8,891.00	$ 4,533.00	$ 7,752.00	$ 3,756.00

Select the desired option from the **Scaling** drop-down menu. In our example, we'll select **Fit All Columns on One Page**.



The worksheet will be **condensed** to fit onto a single page.

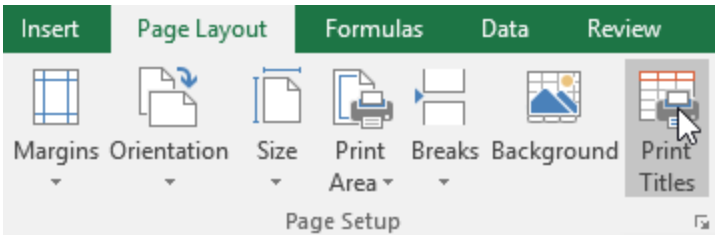


Keep in mind that worksheets will become more **difficult to read** as they are scaled down, so you may not want to use this option when printing a worksheet with a lot of information. In our example, we'll change the scaling setting back to **No Scaling**.

To include Print Titles:

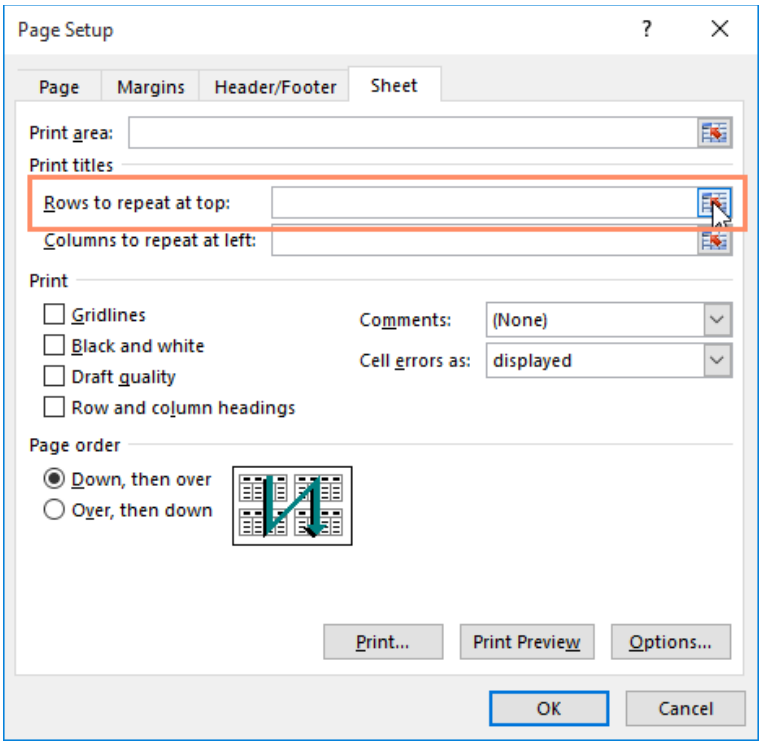
If your worksheet uses **title headings**, it's important to include these headings on each page of your printed worksheet. It would be difficult to read a printed workbook if the title headings appeared only on the first page. The **Print Titles** command allows you to select specific rows and columns to appear on each page.

I. Click the **Page Layout** tab on the **Ribbon**, then select the **Print Titles** command.

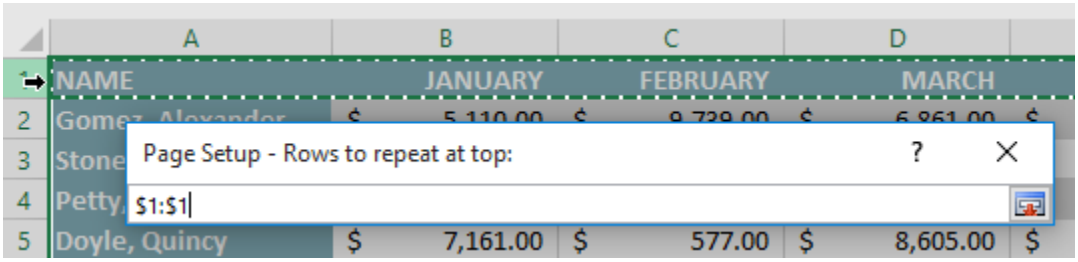


II. The Page Setup dialog box will appear. From here, you can choose rows or columns to repeat on each page. In our example, we'll repeat a row first.

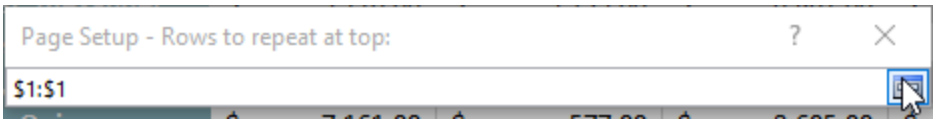
III. Click the Collapse Dialog button next to the Rows to repeat at top: field.



IV. The cursor will become a small selection arrow, and the Page Setup dialog box will be collapsed. Select the row(s) you want to repeat at the top of each printed page. In our example, we'll select row 1.

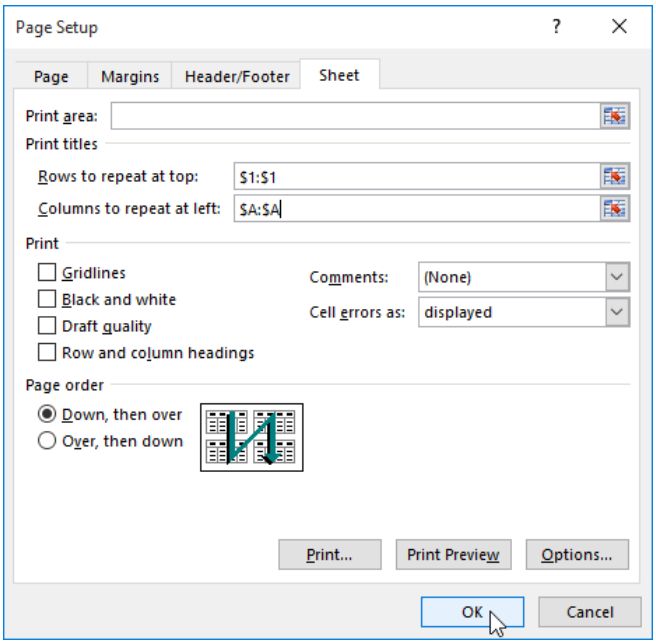


V. Row 1 will be added to the **Rows to repeat at top:** field. Click the **Collapse Dialog** button again.

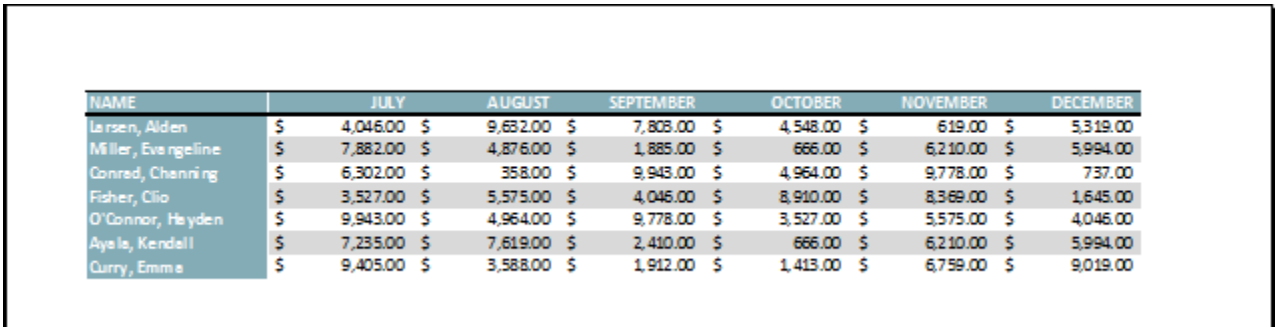


The **Page Setup** dialog box will expand. To repeat a column as well, use the same process shown in steps 4 and 5. In our example, we've selected to repeat row 1 and column A.

When you're satisfied with your selections, click **OK**.



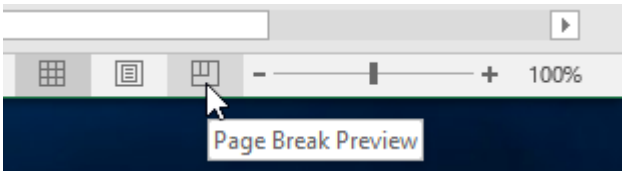
In our example, row 1 appears at the top of every page, and column A appears at the left of every page.



NAME	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Larsen, Alden	$ 4,046.00	$ 9,632.00	$ 7,808.00	$ 4,548.00	$ 619.00	$ 5,319.00
Miller, Evangeline	$ 7,882.00	$ 4,876.00	$ 1,885.00	$ 666.00	$ 6,210.00	$ 5,994.00
Conrad, Channing	$ 6,302.00	$ 358.00	$ 9,943.00	$ 4,964.00	$ 9,778.00	$ 737.00
Fisher, Clio	$ 3,527.00	$ 5,575.00	$ 4,046.00	$ 8,910.00	$ 8,369.00	$ 1,645.00
O'Connor, Hayden	$ 9,943.00	$ 4,964.00	$ 9,778.00	$ 3,527.00	$ 5,575.00	$ 4,046.00
Ayala, Kendall	$ 7,235.00	$ 7,619.00	$ 2,410.00	$ 666.00	$ 6,210.00	$ 5,994.00
Curry, Emma	$ 9,405.00	$ 3,588.00	$ 1,912.00	$ 1,413.00	$ 6,759.00	$ 9,019.00

To adjust page breaks:

Click the **Page Break Preview** command to change to Page Break view.

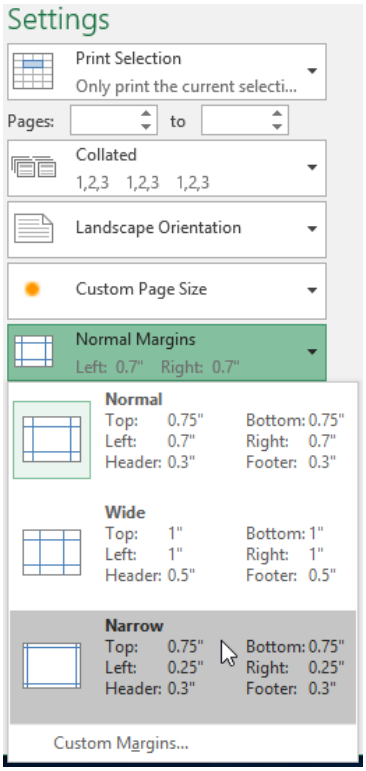


Vertical and horizontal **blue dotted lines** denote the page breaks. Click and drag one of these lines to adjust that page break.

A **margin** is the space between your content and the edge of the page. Sometimes you may need to **adjust** the margins to make your data fit more comfortably. You can modify page margins from the **Print** pane.

Navigate to the **Print** pane.

Select the desired margin size from the **Page Margins** drop-down menu. In our example, we'll select **Narrow Margins**.



The new page margins will be applied

You can adjust the margins manually by clicking the **Show Margins** button in the lower-right corner, then dragging the **margin markers** in the **Preview** pane.

4.2. Finalizing spreadsheet

Printing

As we've already seen, clicking the Print Preview button lets you to see what your printed spreadsheet will look like. This allows you to check and adjust the format, etc, without wasting paper.

Once you're ready to select the Print function (shortcut Ctrl + P), you'll be presented with a dialogue box that allows you to choose various options, including:

- ✓ which printer to use (if there is more than one available printer)
- ✓ how much of the document to print (all of it or just certain pages)
- ✓ How many copies to print.

The Properties button opens another dialogue box with options for the printer you selected.



Activity 14.5 Print preview

1. Open the file Print preview.

2. Press Ctrl + Home to move to cell A1, and then zoom out. This will give you an idea of how big the spreadsheet is.

3. Click Print Preview. You'll see that this spreadsheet would actually run across several pages if it was printed (but don't worry about that for now).

4. Press Escape to get back to the edit screen.

5. Go to the View menu. This will give you some choices in a drop-down box.

6. Select Page Break Preview. This will show you where the page breaks are (the way you saw in Print Preview).

7. Click and drag the blue lines around a bit (don't worry – you can't break anything!), then click on Print Preview again. You'll see that the data on the spreadsheet will be spread around the various pages differently. In other words, you can tell the program how much data to put on each page.

8. Close the file without saving it.

Reference

https://www.tutorialspoint.com/

https://www.myamcat.com/samplePapers/SP_MS-EXCEL.pdf

https://edu.gcfglobal.org/en/topics/excel/

https://www.dtwd.wa.gov.au/sites

https://aspire-solidus-production.s3-ap-southeast-2.amazonaws.com

Participants of this Module (training material) preparation

No	Name	Qualification (Level)	Field of Study	Organization/ Institution	Mobile number	E-mail
1		A(MSC)				
2						
3						
4						
5						
6						
7						