LEARNER GUIDE

MS Excel Intermediate

Unit Standard 116940
Level 3 Credits 6

Compiled by: Smartscript	Approved By:
This document is strictly confidential and may on no account be reproduced, copied or divulged without prior authorisation.	

TABLE OF CONTENTS

PERSONAL INFORMATION

NAME	
CONTACT ADDRESS	
Code	
Telephone (H)	
Telephone (W)	
Cellular	
Learner Number	
Identity Number	

EMPLOYER	
EMPLOYER CONTACT ADDRESS	
Code	
Supervisor Name	
Supervisor Contact Address	
Code	
Telephone (H)	
Telephone (W)	
Cellular	

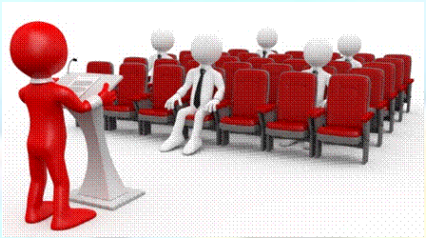
INTRODUCTION

Welcome to the learning programme

Follow along in the guide as the training practitioner takes you through the material. Make notes and sketches that will help you to understand and remember what you have learnt. Take notes and share information with your colleagues. Important and relevant information and skills are transferred by sharing!

This learning programme is divided into sections. Each section is preceded by a description of the required outcomes and assessment criteria as contained in the unit standards specified by the South African Qualifications Authority. These descriptions will define what you have to know and be able to do in order to be awarded the credits attached to this learning programme. These credits are regarded as building blocks towards achieving a National Qualification upon successful assessment and can never be taken away from you!

Programme methodology



The programme methodology includes facilitator presentations, readings, individual activities, group discussions and skill application exercises.

Know what you want to get out of the programme from the beginning and start applying your new skills immediately. Participate as much as possible so that the learning will be interactive and stimulating.

The following principles were applied in designing the course:

- ✓ Because the course is designed to maximise interactive learning, you are encouraged and required to participate fully during the group exercises
- ✓ As a learner you will be presented with numerous problems and will be required to fully apply your mind to finding solutions to problems before being presented with the course presenter's solutions to the problems

- ✓ Through participation and interaction the learners can learn as much from each other as they do from the course presenter
- ✓ Although learners attending the course may have varied degrees of experience in the subject matter, the course is designed to ensure that all delegates complete the course with the same level of understanding
- ✓ Because reflection forms an important component of adult learning, some learning resources will be followed by a self-assessment which is designed so that the learner will reflect on the material just completed.

This approach to course construction will ensure that learners first apply their minds to finding solutions to problems before the answers are provided, which will then maximise the learning process which is further strengthened by reflecting on the material covered by means of the self-assessments.

Different role players in delivery process

- ✓ Learner
- ✓ Facilitator
- ✓ Assessor
- ✓ Moderator

What Learning Material you should have

This learning material has also been designed to provide the learner with a comprehensive reference guide.

It is important that you take responsibility for your own learning process; this includes taking care of your learner material. You should at all times have the following material with you:

Learner Guide 	***This learner guide is your valuable possession:*** This is your textbook and reference material, which provides you with all the information you will require to meet the exit level outcomes. During contact sessions, your facilitator will use this guide and will facilitate the learning process. During contact sessions a variety of activities will assist you to gain knowledge and skills. Follow along in the guide as the training practitioner takes you through the material. Make notes and sketches that will help you to understand and remember what you have learnt. Take and share information with your colleagues. Important and relevant information and skills are transferred by sharing! This learning programme is divided into sections. Each section is preceded by a description of the required outcomes and assessment criteria as contained in the unit standards specified by the South African Qualifications Authority. These descriptions will define what you have to know and be able to do in order to be awarded the credits attached to this learning programme. These credits are regarded as building blocks towards achieving a National Qualification upon successful assessment and can never be taken away from you!

Formative Assessment Workbook 	The Formative Assessment Workbook supports the Learner Guide and assists you in applying what you have learnt. The formative assessment workbook contains classroom activities that you have to complete in the classroom, during contact sessions either in groups or individually. You are required to complete all activities in the Formative Assessment Workbook. The facilitator will assist, lead and coach you through the process. These activities ensure that you understand the content of the material and that you get an opportunity to test your understanding.

Different types of activities you can expect

To accommodate your learning preferences, a variety of different types of activities are included in the formative and summative assessments. They will assist you to achieve the outcomes (correct results) and should guide you through the learning process, making learning a positive and pleasant experience.

The table below provides you with more information related to the types of activities.

Types of Activities	***Description***	***Purpose***
Knowledge Activities 	You are required to complete these activities on your own.	These activities normally test your understanding and ability to apply the information.
Skills Application Activities 	You need to complete these activities in the workplace	These activities require you to apply the knowledge and skills gained in the workplace
Natural Occurring Evidence 	You need to collect information and samples of documents from the workplace.	These activities ensure you get the opportunity to learn from experts in the industry. Collecting examples demonstrates how to implement knowledge and skills in a practical way

Learner Administration

Attendance Register

You are required to sign the Attendance Register every day you attend training sessions facilitated by a facilitator.

Programme Evaluation Form

On completion you will be supplied with a "Learning programme Evaluation Form". You are required to evaluate your experience in attending the programme.

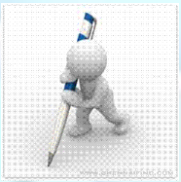
Please complete the form at the end of the programme, as this will assist us in improving our service and programme material. Your assistance is highly appreciated.

Assessments

The only way to establish whether a learner is competent and has accomplished the specific outcomes is through the assessment process. Assessment involves collecting and interpreting evidence about the learners' ability to perform a task.

To qualify and receive credits towards your qualification, a registered Assessor will conduct an evaluation and assessment of your portfolio of evidence and competency.

This programme has been aligned to registered unit standards. You will be assessed against the outcomes as stipulated in the unit standard by completing assessments and by compiling a portfolio of evidence that provides proof of your ability to apply the learning to your work situation.



How will Assessments commence?

Formative Assessments

The assessment process is easy to follow. You will be guided by the Facilitator. Your responsibility is to complete all the activities in the Formative Assessment Workbook and submit it to your facilitator.

Summative Assessments

You will be required to complete a series of summative assessments. The Summative Assessment Guide will assist you in identifying the evidence required for final assessment purposes. You will be required to complete these activities on your own time, using real life projects in your workplace or business environment in preparing evidence for your Portfolio of Evidence. Your Facilitator will provide more details in this regard.

To qualify and receive credits towards your qualification, a registered Assessor will conduct an evaluation and assessment of your portfolio of evidence and competency.

Learner Support

The responsibility of learning rests with you, so be proactive and ask questions and seek assistance and help from your facilitator, if required.

Please remember that this Skills Programme is based on outcomes based education principles which implies the following:

- ✓ You are responsible for your own learning – make sure you manage your study, research and workplace time effectively.
- ✓ Learning activities are learner driven – make sure you use the Learner Guide and Formative Assessment Workbook in the manner intended, and are familiar with the workplace requirements.
- ✓ The Facilitator is there to reasonably assist you during contact, practical and workplace time for this programme – make sure that you have his/her contact details.
- ✓ You are responsible for the safekeeping of your completed Formative Assessment Workbook and Workplace Guide
- ✓ If you need assistance please contact your facilitator who will gladly assist you.
- ✓ If you have any special needs please inform the facilitator

Learner Expectations

Please prepare the following information. You will then be asked to introduce yourself to the instructor as well as your fellow learners

Your name:
The organisation you represent:
Your position in organisation:
What do you hope to achieve by attending this course / what are your course expectations?

UNIT STANDARD 116940

Unit Standard: Use a Graphical User Interface (GUI)-based spreadsheet application to solve a given problem

NQF Level: 3

Credits: 6

Purpose

This unit standard is intended for people who need to plan, produce, use and spreadsheets to solve problems using a Graphical User Interface (GUI)-based spreadsheet application either as a user of computers or as basic knowledge for a career in the ICT industry

Learning assumed to be in place

The credit value of this unit standard is calculated assuming a person has the prior knowledge and skills to:

- ✓ Read, write, communicate and comprehend at least at GET level
- ✓ Competent in mathematical fundamentals at least at NQF level 1
- ✓ Operate a personal computer system
- ✓ Use generic functions in a Graphical User Interface (GUI)-environment
- ✓ Use a Graphical User Interface.

Specific Outcomes and Assessment Criteria

Specific Outcome 1: Prepare and produce a spreadsheet to provide a solution to a given problem

Assessment Criteria

- ✓ An outline solution is developed to meet the requirements of a given brief
- ✓ The spreadsheet produced addresses the given problem

Specific Outcome 2 Adjust settings to customise the view and preferences of the spreadsheet application

Assessment Criteria

- ✓ Toolbar menus are switched off and on
- ✓ The view of the spreadsheet is enlarged and made smaller
- ✓ The way that the spreadsheet is viewed is changed
- ✓ Cells are frozen to prevent scrolling: Row, column, both
- ✓ The default file location is changed
- ✓ A user name is added to the file

Specific Outcome 3: Work with multiple worksheets

Assessment Criteria

- ✓ The purpose of using multiple worksheets within one spreadsheet file are explained
- ✓ New worksheets are opened: Minimum 3 worksheets
- ✓ Worksheets are renamed
- ✓ Each worksheet to have a different name
- ✓ Cells are manipulated between worksheets
- ✓ A worksheet is deleted

Specific Outcome 4: Apply formulae to worksheets to provide alternative solutions to a problem: Formulae to include at least 3 of: addition(+), subtraction (-), multiplication (*), division (/), percentage (%).

Assessment Criteria

- ✓ Formulae are entered taking into consideration the natural order of operation
- ✓ Formulae are entered to deliberately change the natural order of operation
- ✓ The difference between relative and absolute cell addressing is demonstrated
- ✓ Data are changed to test possible solutions to the given problem without having to change formulae
- ✓ Scenarios are created that demonstrate different possible outcomes

Specific Outcome 5: Apply simple built-in functions

Assessment Criteria

- ✓ Functions are explained in terms of their purpose, use and construct
- ✓ At least one function to be used as an example
- ✓ Simple Mathematical functions are applied: At least the following functions: sum a range, round to a specified number of decimals
- ✓ Statistical functions are applied that achieve the anticipated result: At least two of the following functions: average a range, count the number of cells that contain numbers, find the highest value in a range, find the lowest value in a range

Specific Outcome 6: Apply formatting to a spreadsheet

Assessment Criteria

- ✓ Methods of automatically formatting a spreadsheet are explained: Templates, styles, manual
- ✓ A spreadsheet is created using a template
- ✓ Cells are formatted using styles
- ✓ Formats are copied

Specific Outcome 7: Use special effects to improve the presentation of the spreadsheet

Assessment Criteria

- ✓ Text is centered across a cell range
- ✓ Orientation of text within a cell is changed
- ✓ A border is applied to cells and removed from cells: Cell, range of cells, entire column, entire row
- ✓ Fill (shading) is applied to cells and removed from cells: Cell, range of cells, entire column, entire row

Specific Outcome 8: Print a spreadsheet

Assessment Criteria

- ✓ The page setup of a spreadsheet is changed: Page scaling to fit the page, margins
- ✓ Header and footer information is added to a spreadsheet and modified: At least two of the following: title, date, time, page numbers, spreadsheet information
- ✓ Spreadsheet is previewed to check that the presentation is in accordance with the given specification
- ✓ The spreadsheet is printed

Specific Outcome 9: Evaluate a spreadsheet

Assessment Criteria

- ✓ The spreadsheet is evaluated for compliance with a given problem, appropriate formatting, readability, legibility, presentation, accuracy, and data integrity

- ✓ The spreadsheet is modified if required and compliance with the brief is confirmed

Critical Cross-field Outcomes (CCFO)

- ✓ Identify and solve problems in which responses display that decisions using critical and creative thinking have been made
- ✓ Organise and manage oneself and one`s activities responsibly and effectively
- ✓ Collect, analyse, organise, and critically evaluate information
- ✓ Communicate effectively using visual, mathematical and/or language skills in the modes of oral and/or written persuasion when engaging with the subject
- ✓ Use science and technology effectively and critically, showing responsibility towards the environment and health of others

ADJUST SETTINGS AND PRODUCE A WORKSHEET

Outcomes

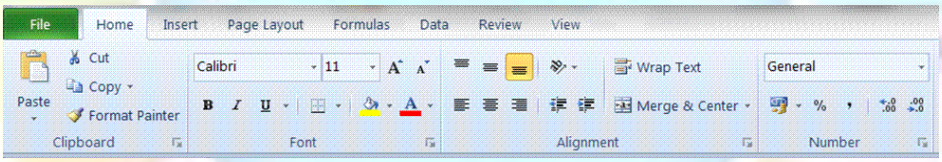
- ✓ Prepare and produce a spreadsheet to provide a solution to a given problem
- ✓ Adjust settings to customise the view and preferences of the spreadsheet application

Assessment Criteria

- ✓ An outline solution is developed to meet the requirements of a given brief
- ✓ The spreadsheet produced addresses the given problem
- ✓ Toolbar menus are switched off and on
- ✓ The view of the spreadsheet is enlarged and made smaller
- ✓ The way that the spreadsheet is viewed is changed
- ✓ Cells are frozen to prevent scrolling: Row, column, both
- ✓ The default file location is changed
- ✓ A user name is added to the file

Ribbons and groups

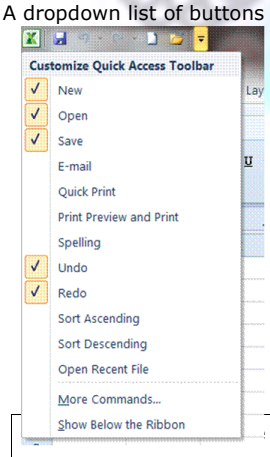
MS Excel 2010 does not make use of menu bars or toolbars anymore: the menu bars have been replaced by ribbons and the toolbuttons are found in groups on the ribbons.



Customise a Toolbar

The only toolbar that remains is the ***Quick Access toolbar***. To add or remove buttons, click on the down arrow next to the ***Quick Access Toolbar.***

A dropdown list of buttons associated with the toolbar is displayed.



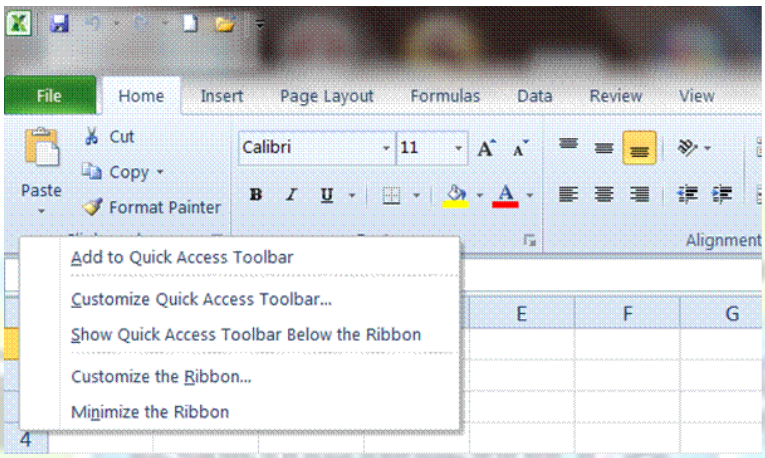
- ✓ ***Click*** the button to add or remove

Buttons with a tick next to them appear on the toolbar. Click again to deselect a button and remove it from the toolbar.

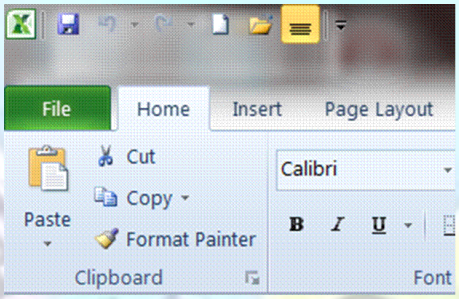
- ✓ Click away from the dropdown list to finish

Add or remove buttons to and from the Quick Access toolbar

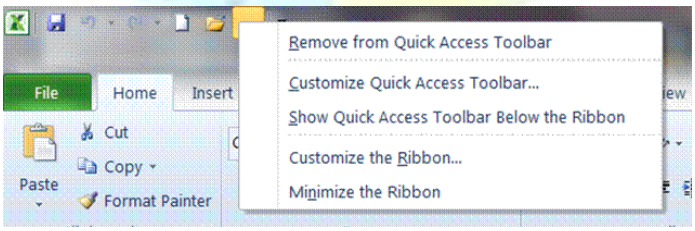
- ✓ To add a button to the ***Quick Access toolbar***, right click on the button you wish to add.
- ✓ Select ***Add to Quick Access Toolbar***



- ✓ The button will be added to the ***Quick Access Toolbar***

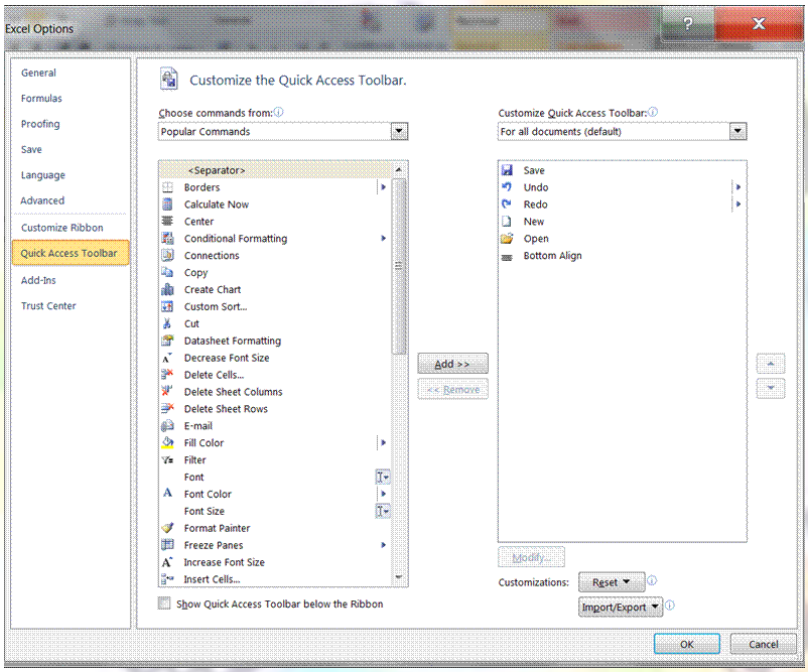


- ✓ To remove the button from the Quick Access toolbar, ***right-click*** on the button and select ***Remove from Quick Access Toolbar***
- ✓ The button will be removed from the ***Quick Access Toolbar***



OR

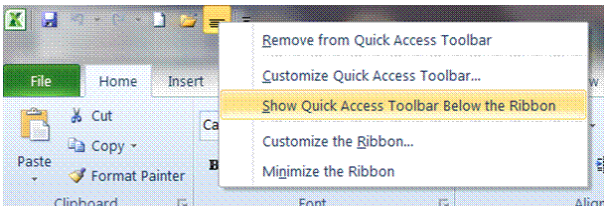
- ✓ Right click on the Quick Access toolbar and select ***Customise Quick Access Toolbar***
- ✓ The ***Excel Options*** dialogue box will appear
- ✓ Select the buttons your require in the left-hand pane and click on ***Add***
- ✓ The button will appear in the right-hand pane
- ✓ When you have made your selections, click ***OK***
- ✓ The selected buttons will appear on the ***Quick Access toolbar***



- ✓ To remove buttons from the Quick Access toolbar, ***right-click*** on the toolbar
- ✓ Select the ***buttons*** you want to remove from the right-hand pane
- ✓ Click ***Remove***
- ✓ Click ***OK***
- ✓ The buttons will be removed from the ***Quick Access toolbar***

Move the Quick Access toolbar

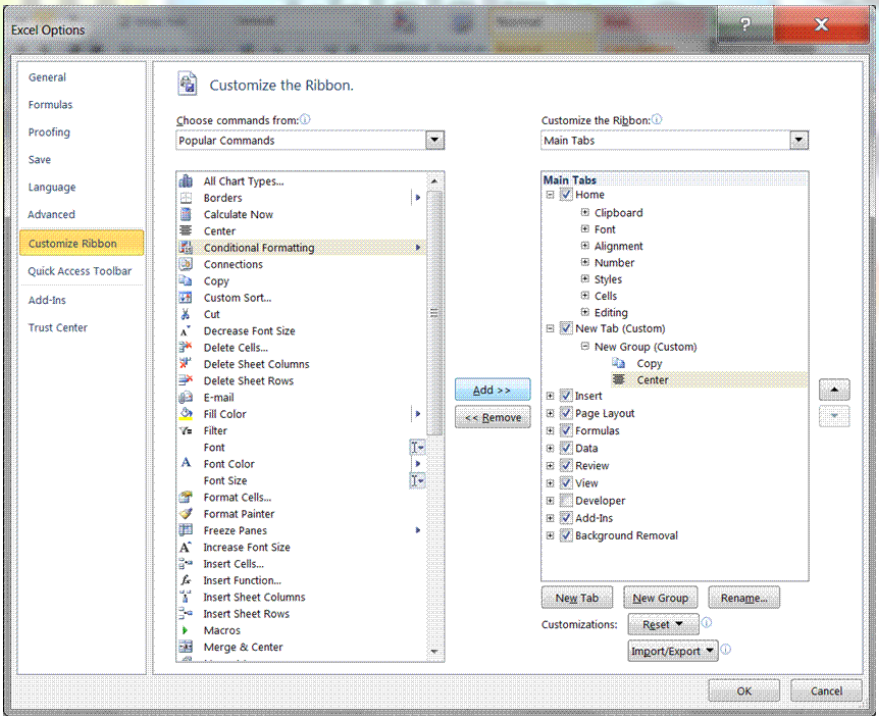
- ✓ To move the Quick Access toolbar, right click on the Quick Access Toolbar and select ***Show Quick Access Toolbar Below the Ribbon***



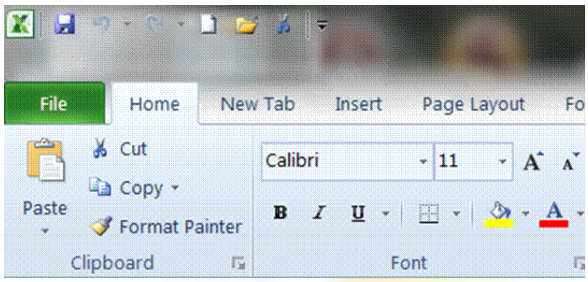
Tip	***you can also right click on any group on the ribbon for the shortcut menu to appear***

Customise the ribbon

- ✓ Right-click the ribbon and select customise the ribbon
- ✓ The ***Excel Options*** dialogue box will appear
- ✓ To add a new tab, click on ***New Tab*** just below the right-hand pane
- ✓ A new tab and new group will be created
- ✓ Select buttons from the left-hand pane and click ***Add***
- ✓ The buttons will be added to the new tab and the new group
- ✓ When you have made all your selections click ***OK***

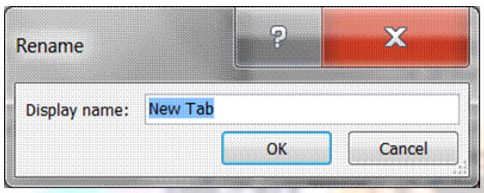


Your new tab will appear in the ribbon



Rename the new tab

- ✓ To rename the new tab, click on the tab in ***the Excel Options*** dialogue box
- ✓ The rename dialogue box will appear
- ✓ Select a name for your tab and click ***OK***



Remove the new tab

- ✓ Select ***Remove*** from the ***Excel Options*** dialogue box
- ✓ Click ***OK***

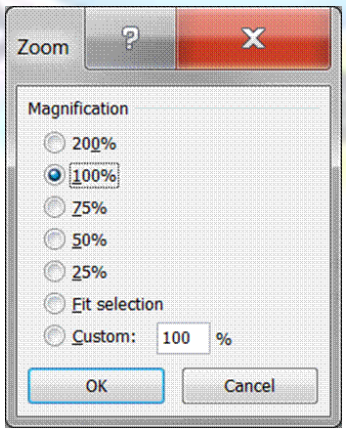
Formative Assessment

- ✓ Create a new tab named ***My Tab***
- ✓ Add at least four toolbar buttons that you use frequently
- ✓ Arrange the buttons appropriately, using at least one group
- ✓ Remove the tab
- ✓ Move the Quick Access Toolbar to display below the ribbon
- ✓ Move the Quick Access Toolbar back

The View Tab

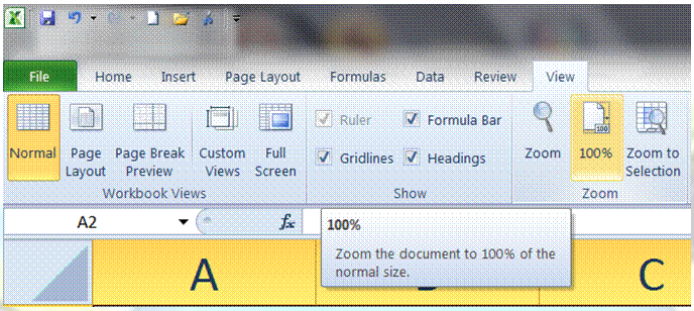
Zoom the display

- ✓ On the ***View*** tab in the ***Zoom*** group, click the ***Zoom button***
- ✓ ***Select*** the size you want, or enter a number from 10 to 400.
- ✓ To enlarge the selected area to fill the window, click Selection.



Note	***Zooming in or out does not affect printing. Sheets are printed at 100 percent unless you change the scaling on the Page tab of the Page Setup dialog box (File menu).***

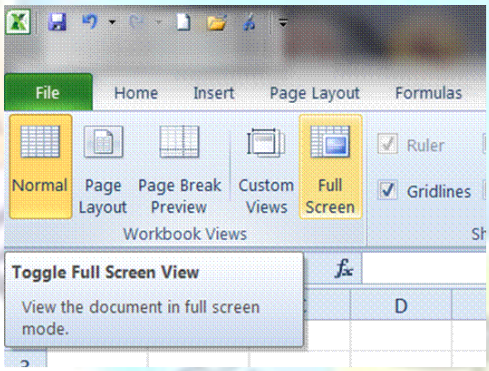
- ✓ ***Zoom to selection*** will zoom in on the area selected by you
- ✓ ***100%*** will return the document to 100% of its normal size



Switch to full or normal screen view

Switch to full screen view

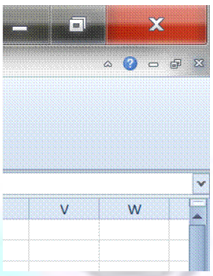
On the ***View*** tab, in the ***Workbook Views group***, click ***Full Screen***.

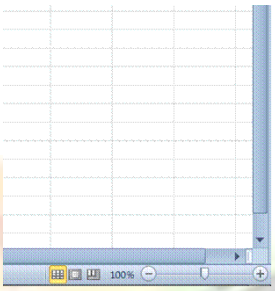


Switch back to normal view

- ✓ Press the ***Escape*** key on the keyboard

Split a Worksheet into Panes





To make large sheets easier to work with, the window can be split into horizontal and vertical ***panes***. ***Split boxes*** are positioned at the top of the vertical scroll bar and the right of the horizontal scroll bar.

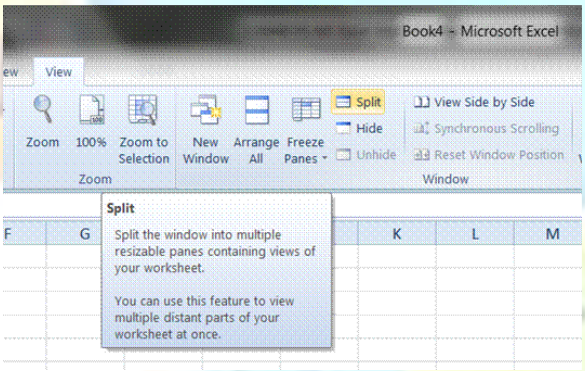
You can use the panes to view, edit, move, and copy data around the sheet more easily.

Split the window into panes

- ✓ Click-and-drag the horizontal or vertical ***split box*** to the required location on the sheet

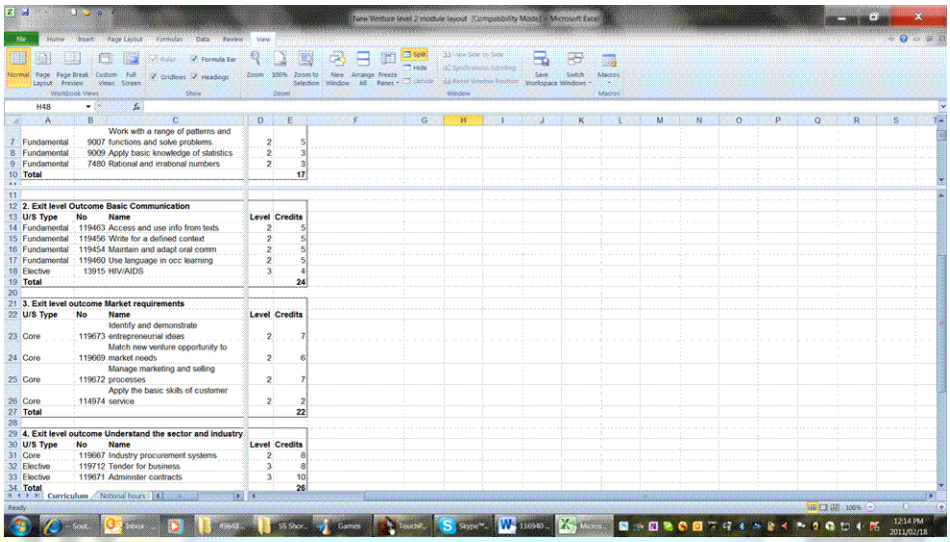
OR

- ✓ Position the active cell where the splits are to be located then from the ***Window*** group, select ***Split***



The screen is split into panes that can be scrolled independently.

- ✓ Click the mouse in the pane to activate, or press F6 to activate each pane in sequence



Clear worksheet panes

- ✓ Double-click on the ***split boxes***

OR

- ✓ ***Click-and-drag*** the split boxes to the edge of the sheet

OR

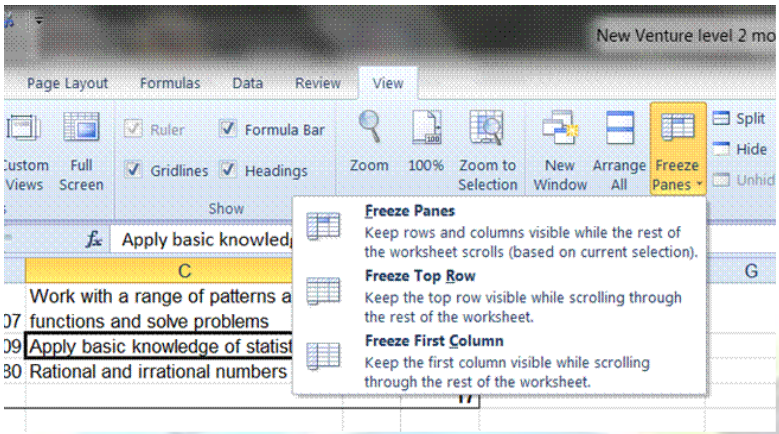
- ✓ Click on the ***split*** button in the ***Window*** group

Freeze Row and Column Panes as Titles

It is often useful to keep worksheet titles (entries in the first row or column that identify the data) on-screen all the time. To do this you can ***freeze*** panes as titles. Unlike normal panes, there are no scroll bars for the frozen area.

Freeze panes as worksheet titles

- ✓ Click on the cell where the freeze should be applied
- ✓ From the Window group, select ***Freeze Panes***
- ✓ Choose one of:
  - ➢ Freeze panes
  - ➢ Freeze top row
  - ➢ Freeze first column



To unfreeze worksheet titles

- ✓ In the ***Window*** group, click ***Freeze Panes***
- ✓ select ***Unfreeze Panes***

View a Workbook in Two Windows

As an alternative to splitting one window into panes, you can open another window for the active workbook and arrange both on-screen. This means that you can view different worksheets in the same workbook at the same time.

To view the active workbook in multiple windows

- ✓ From the ***Window*** group, select ***New Window***
- ✓ A new window is opened.

The title bar shows the name of the workbook with ***:2*** after it. The windows are still showing exactly the same file. Any changes you make in one window will be updated to the other. When more than one window is visible, select the workbook to work in by clicking on it with the mouse. The first click will activate the window but will not change the active cell.

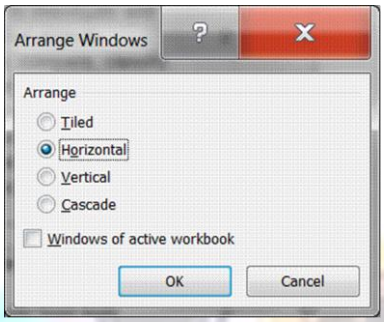
> ***Tip*** ***Alternatively, you can use*** `Ctrl` + `Tab` ***to switch between windows.***

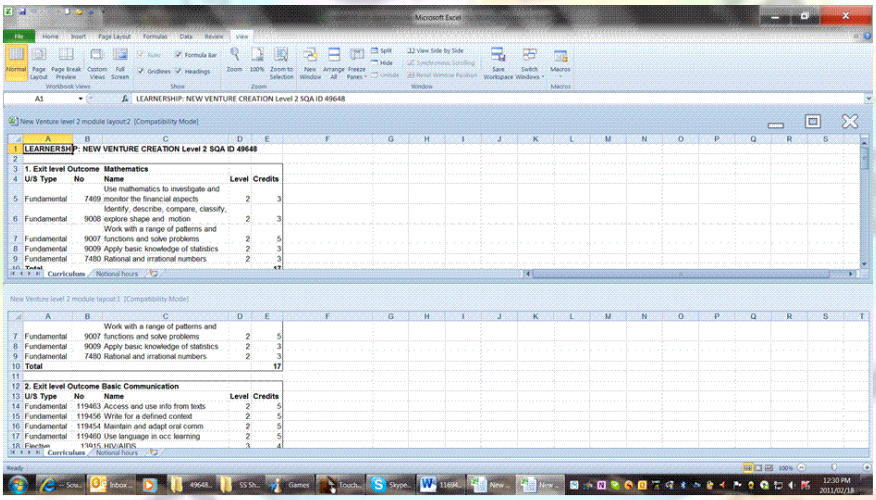
You can also arrange the windows on-screen:

- ✓ From the ***Window*** group, select ***Arrange***...

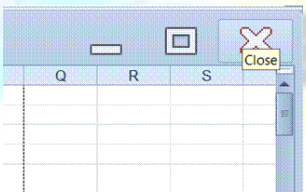
The ***Arrange Windows*** dialogue box is displayed.

- ✓ From the ***Arrange*** panel select an arrangement method
- ✓ Click ***OK***

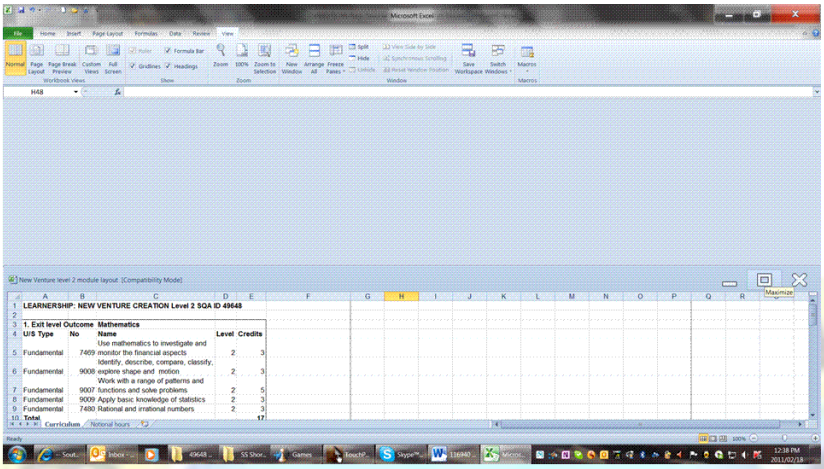




✓ Click ***Close*** to close the second view



- ✓ Click ***Maximise*** to return to N***ormal*** view



Compare Worksheets Side by Side

If you open two workbook windows, you can set both windows to scroll simultaneously (so if you scroll down in one window, the content of the other is redrawn too).

To compare worksheets side by side

- ✓ With the workbooks you want to compare open and the first workbook selected, from the ***Window*** group, select ***View Side by Side***...
- ✓ If there are more than two workbooks open, select the file with which you want to compare the current workbook

The windows of the workbooks are displayed together and you can edit either workbook by clicking it then editing as normal.

When the ***Synchronous Scrolling*** button  is active, scrolling in one window scrolls the other automatically.

- ✓ From the Window group, click ***View Side by Side*** to finish

Tip	***this does not close either workbook***

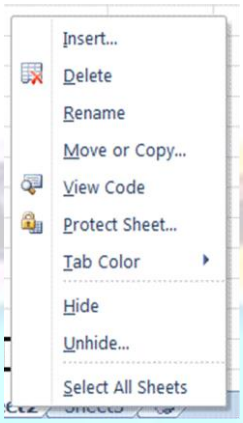
Hide and Unhide Data

You may want to ***hide*** a part of a worksheet because it contains sensitive information or intermediate calculations that do not need to be seen or printed. The contents of columns, rows, worksheets, and whole workbooks can be hidden. Even though it is not shown, a hidden cell is calculated as normal if it is used in a formula.

You can also hide columns and rows temporarily to make more room on-screen.

To hide columns, rows, and worksheets using the mouse

- ✓ Select the column(s), row(s), or worksheet(s) to hide
- ✓ Right-click the selection then from the shortcut menu, select ***Hide***



Unhide a worksheet

- ✓ Right click on any worksheet
- ✓ From the shortcut menu, select ***Unhide***...

Hide a workbook

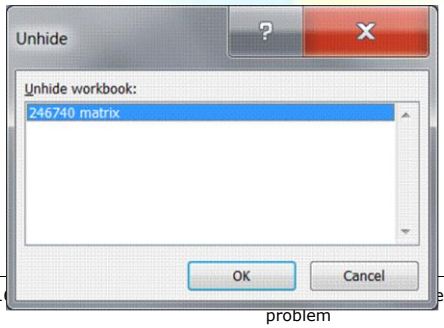
You might want to hide a workbook if you create formulas in one book that link to data in a second book that you want to keep confidential.

- ✓ Open the workbook
- ✓ From the ***Window*** group, select ***Hide***

Note	***When you exit Excel, you will be prompted to save any changes to the hidden workbook. When you open a hidden workbook, the workbook window remains hidden.***

Unhide a workbook

- ✓ From the Window group, select ***Unhide***
- ✓ From the Unhide dialogue box, select the workbook to unhide and click ***OK***




Sakhisisizwe cc

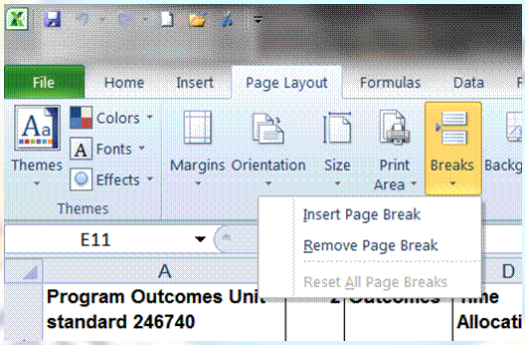
Hide and unhide columns or rows using the keyboard

Press	To
Ctrl + 0 (zero)	Hide selected column(s)
Ctrl + Shift +)	Unhide selected column(s)
Ctrl + 9	Hide selected row(s)
Ctrl + Shift + (	Unhide selected row(s)

Page Layout tab

Add, delete, or move page breaks

✓ On the ***Page Layout*** tab, ***Page setup*** group, select ***Breaks***



✓ Select ***Insert Page Break*** to insert a page break

✓ To remove a page break, select ***Remove Page Break***

Go To a Cell

You can use the ***Name*** box or the ***Go To*** tool to select ***named ranges*** on a worksheet. You can also use both these tools to move the active cell to a specific cell reference.

Tip ***Look up the topic "Name cells in a workbook" in the online help for more information about named ranges.***

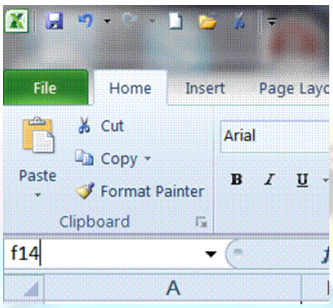
Select a range using the Name box

✓ Type the cell reference into the ***Name*** box

OR

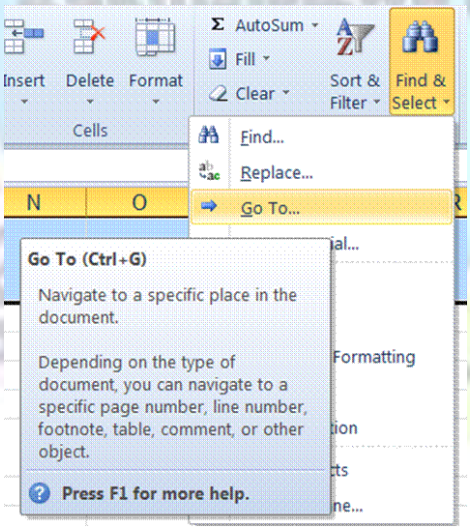
- ✓ Type the range name into the ***Name*** box

The named cell(s) are selected on the sheet, exactly as they appeared when the name was created.

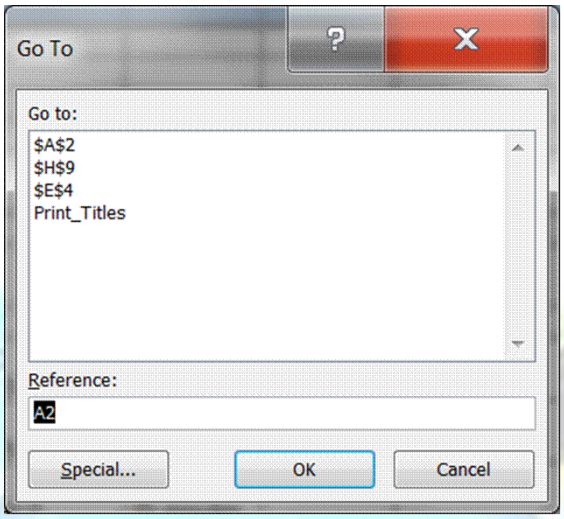


Select a range using the Go To dialogue box

- ✓ From the ***Home*** tab in the ***Editing*** group, click on the ***Find and Select*** arrow
- ✓ The ***Find & Select*** dialogue box will display



- ✓ The ***Go To*** dialogue box is displayed showing a list of named locations in the workbook.
- ✓ ***Select*** a name from the list or enter a grid reference in the Reference box
- ✓ Click ***OK***



Tip ***SpeedKey:*** ***F5*** ***or*** ***Ctrl*** **+** ***G***

Formative Assessment

- ✓ Open the workbook ***Alignment*** then click in cell ***C2*** then freeze the panes of the worksheet
- ✓ Scroll around the sheet, noticing that the titles always remain on the screen
- ✓ Hide column A
- ✓ Unfreeze the panes
- ✓ Unhide the column
- ✓ Go to cell A1 then go to cell E33
- ✓ Hide rows ***17:18***
- ✓ Open a new window and arrange to view the windows vertically
- ✓ Close the second window
- ✓ Open ***List of hard copy resources***
- ✓ Select ***View Side by Side***...
- ✓ Practise scrolling around one window and observe the changes in the other window
- ✓ End side by side viewing
- ✓ Use the horizontal split box to split the screen into two so that you can view the fixed and variable expenses on the screen together
- ✓ Remove the split
- ✓ Use Freeze Panes to lock the Source headings for scrolling across the sheet
- ✓ Remove the split
- ✓ Use Zoom to view all data on the worksheet without scrolling

- ✓ Save and close ***List of hard copy resources***
- ✓ Save and close the ***Alignment*** workbook

About places to save files

Some of the content in this topic may not be applicable to some languages.

You can save the file you're working on, whether it's new or has been saved before, and you can also save a copy of the file with a different name or in a different location. You can save any file as a Single File Web Page (MHTML) so that it can be viewed and used on the Internet.

My Documents

When you open the ***Open*** and ***Save As*** dialogue boxes after starting a Microsoft Office program, the ***My Documents*** folder appears by default. The ***My Documents*** folder is a good place to save files you're working on, such as documents, worksheets, or databases.

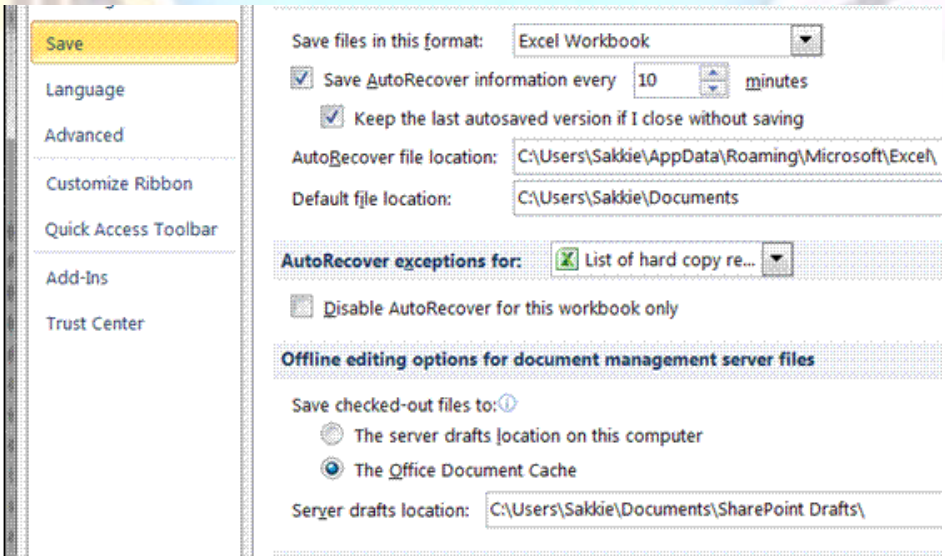
Network Folder

The Network folder, which is located in the left hand pane of the ***Open*** and ***Save As*** dialogue boxes, is a good place to save files you want to copy or publish to folders on network file servers or Web servers. Saving files to a server allows others easy access to them.

Change the default working folder

This procedure sets the default folder for opening and saving Microsoft Excel files.

- ✓ On the ***File*** tab, click ***Options***, the ***Excel Options*** dialogue box will display
- ✓ Select ***Save*** and in the ***Default file location*** box, type the path for the folder you want to display as the default working folder.
- ✓ For example, type c:\work.



About file properties

Document properties are details about a file that help identify it—for example, a descriptive title, the author name, the subject, and keywords that identify topics or other important information in the file. Use document properties to display information about a file or to help organize your files so that you can find them easily later. You can also search for documents based on document properties.

Types of document properties

There are four types of document properties:

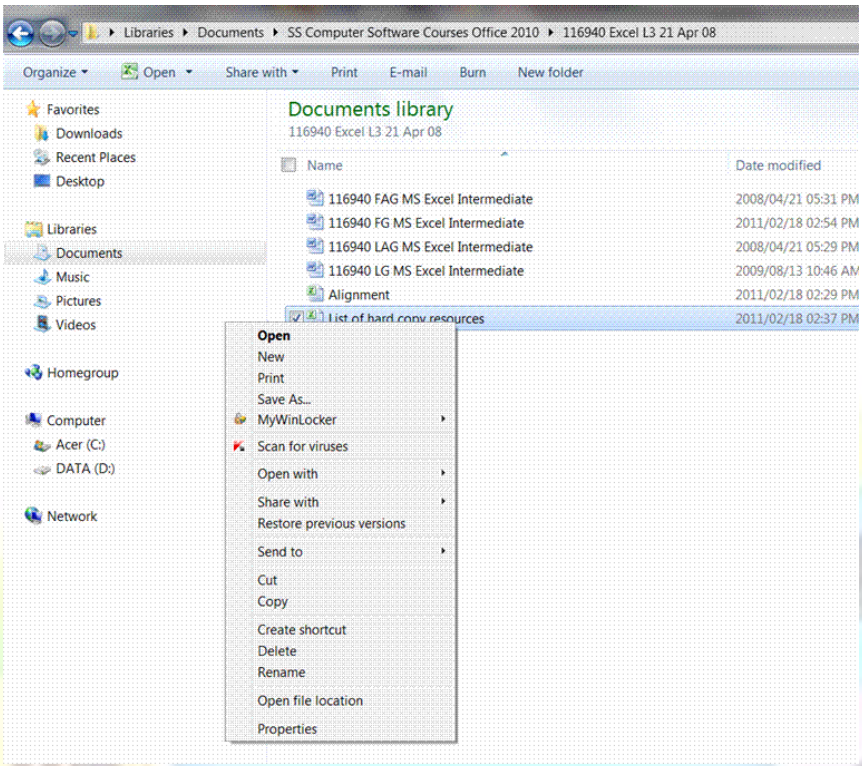
- ✓ ***Automatically updated properties*** include statistics that are maintained for you by Microsoft Office applications, such as file size and the dates files are created and last modified. For example, you can search for all files created after March 3, 1999, or for all files last modified yesterday.
- ✓ ***Preset properties*** already exist (such as author, title, and subject), but you must enter a text value. For example, in Microsoft Word, you can use the ***Keywords*** property to add the keyword "customers" to your sales files and then search for all sales files with that keyword.
- ✓ ***Custom properties*** are properties you define. You can assign a text, time, or numeric value to custom properties, and you can also assign them the values "yes" or "no." You can choose from a list of suggested names or define your own. You can optionally link custom document properties to specific items in your file, such as a named cell in Microsoft Excel, a selected item in PowerPoint, or a bookmark in Word. For example, in a contract form created in Word, you can create a custom file property that is linked to a form field that contains the contract's expiration date. Then you can search for all contract files with expiration dates earlier than the date you specify.
- ✓ ***Document library properties*** are for files in a document library on a Web site or public folder. When you design a document library, you define one or more document library properties and set rules on their values. When users add documents to the document library, they are prompted to fill in a form assigning values to each of these properties. For example, a document library that collects product ideas could prompt the user for properties such as Submitted By, Date, Category, and Description.

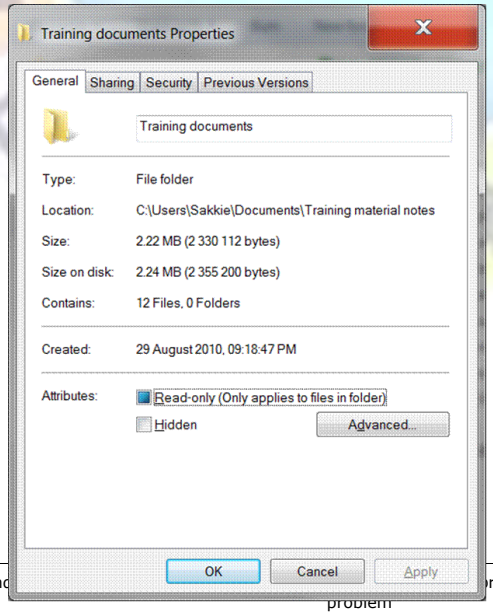
Viewing document properties

- ✓ If a document is open, you can view its properties on the ***File*** tab under ***Info***

You can view the properties of any document by selecting the document in Windows Explorer or in the Open, Save, or Search dialogue boxes.

- ✓ Right click on the workbook and select ***Properties***


Libraries ▸ Documents ▸ SS Computer Software Courses Office 2010 ▸ 116940 Excel L3 21 Apr 08
Organize
Open
Share with
Print
E-mail
Burn
New folder
Favorites
Downloads
Recent Places
Desktop
Libraries
Documents
Music
Pictures
Videos
Homegroup
Computer
Acer (C:)
DATA (D:)
Network
Documents library
116940 Excel L3 21 Apr 08
Name
Date modified
116940 FAG MS Excel Intermediate 2008/04/21 05:31 PM
116940 FG MS Excel Intermediate 2011/02/18 02:54 PM
116940 LAG MS Excel Intermediate 2008/04/21 05:29 PM
116940 LG MS Excel Intermediate 2009/08/13 10:46 AM
Alignment 2011/02/18 02:29 PM
List of hard copy resources 2011/02/18 02:37 PM
Open
New
Print
Save As...
MyWinLocker
Scan for viruses
Open with
Share with
Restore previous versions
Send to
Cut
Copy
Create shortcut
Delete
Rename
Open file location
Properties

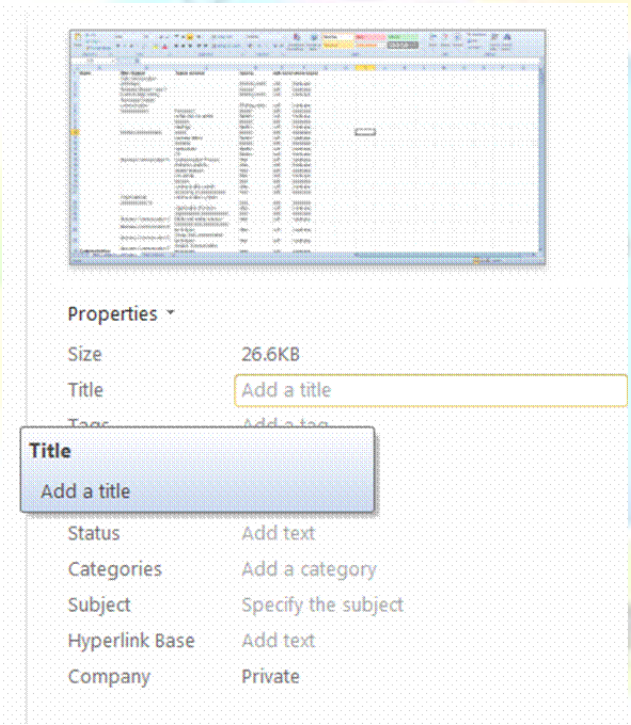

Training documents Properties
General
Sharing
Security
Previous Versions
Training documents
Type: File folder
Location: C:\Users\Sakkie\Documents\Training material notes
Size: 2.22 MB (2 330 112 bytes)
Size on disk: 2.24 MB (2 355 200 bytes)
Contains: 12 Files, 0 Folders
Created: 29 August 2010, 09:18:47 PM
Attributes: Read-only (Only applies to files in folder)
Hidden
Advanced...
OK
Cancel
Apply

Setting document properties

You can set document properties for the active file you're working on in any Microsoft Office application. If you want to be reminded to set document properties for every file you create, you can have Microsoft Excel, Word, or PowerPoint automatically display the Properties dialog box when you save files for the first time. When you add a file to a document library, you are automatically prompted for the file's document library properties.

Create custom file properties

- ✓ Go to the ***File*** tab, Info
- ✓ The properties of the worksheet is displayed on the right
- ✓ Make the changes you require



WORK WITH MULTIPLE WORKSHEETS

Outcome

Work with multiple worksheets

Assessment Criteria

- ✓ The purpose of using multiple worksheets within one spreadsheet file are explained
- ✓ New worksheets are opened: Minimum 3 worksheets
- ✓ Worksheets are renamed
- ✓ Each worksheet to have a different name
- ✓ Cells are manipulated between worksheets
- ✓ A worksheet is deleted

Note	***You can restructure a workbook by adding, copying, moving, or deleting up to 255 worksheets.***

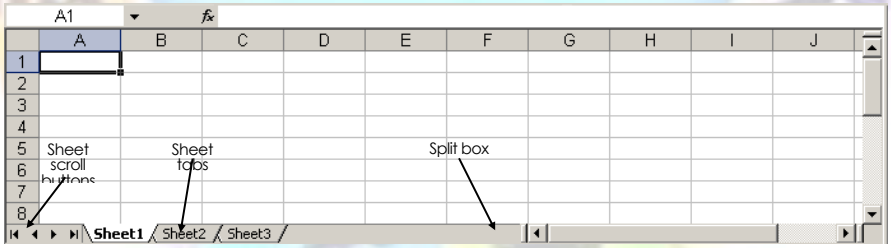
Switch Between Worksheets

The ***Sheet*** tab at the bottom of the worksheet window identifies each sheet within the workbook.

Select a worksheet using the mouse

- ✓ Clicking the worksheet's tab

The ***sheet scroll*** buttons allow viewing of sheet tabs that extend beyond the tab space.



Sheet tabs

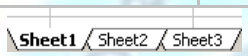
Tip	***To change the size of the area showing sheet tabs, click-and-drag on the split box.***

Group worksheets using the mouse

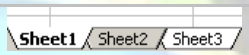
Some operations require you to select multiple worksheets. When you select additional sheets, the first sheet in the selection remains active. The active worksheet's name is shown in bold.

- ✓ Open the workbook containing the worksheets to be printed
- ✓ To activate and group the worksheets together for printing, do one of the following

To Select	***Click***
Two or more adjacent worksheets	The worksheet tab of the first worksheet to activate it. Press and hold down the Shift key, and click the last tab in the range of worksheets you want to select.
Two or more non-adjacent worksheets	The worksheet tab of the first worksheet to activate it. Press and hold down the Ctrl key, then click the tabs of the other worksheets you want to select



Grouped adjacent worksheets



Grouped non-adjacent worksheets

Tip ***When multiple worksheets are selected, the word [Group] is displayed in the workbook title bar.***

Ungroup worksheets

- ✓ Hold down the Shift key, and click on the active worksheet tab to ungroup all the worksheets

To select and group worksheets using the keyboard

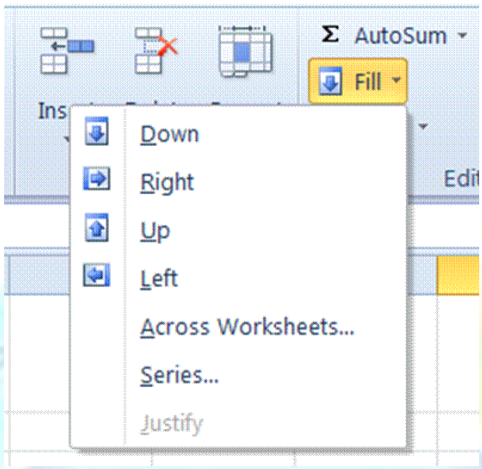
- ✓ Press Ctrl + Page Down and Ctrl + Page Up to select the next and previous worksheets respectively
- ✓ Press Shift + Ctrl + Page Down and Shift + Ctrl + Page Up to select multiple worksheets

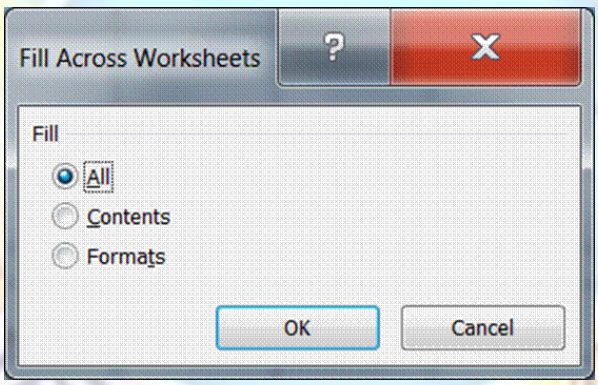
Enter data on multiple worksheets

When you have selected multiple sheets, if you type or paste data into a cell, the same data is inserted into each cell on each selected worksheet.

You can also use the AutoFill command to copy a series or existing data onto multiple worksheets.

- ✓ Select the worksheet containing the data or start of the series that you want to copy
- ✓ Select the additional worksheets to copy data to
- ✓ Select the range of cells from which to copy data (or the cell with the series origin and the cells to fill)
- ✓ From the ***Home*** tab,***Editing*** group, select ***Fill*** then ***Across Worksheets***...
- ✓ The ***Fill Across Worksheets*** dialogue box is displayed.
- ✓ Select whether to copy ***All*** or either ***Contents*** or ***Formats***
- ✓ Click ***OK***





Copy Cells and Data between Worksheets and Workbooks

Data can be moved or copied between different worksheets and workbooks using the Cut, Copy, and Paste tools.

Move or copy a cell or range to a different worksheet

Cutting and ***pasting*** is a single action, and the cut cells can only be pasted once. The cell contents can be moved within the same worksheet or to other worksheets. After ***copying***, the selection remains highlighted and may be pasted multiple times.

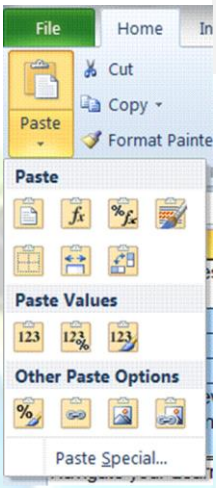
- ✓ Select the range to be move/copy (this can be a single cell, block of cells, column(s) or row(s))
- ✓ From the ***Home*** tab, ***Clipboard*** group, select ***Cut*** (*SpeedKey:* Ctrl+X) or ***Copy*** (*SpeedKey:* Ctrl+C)
- ✓ Click the tab to select the worksheet that you want to move/copy data to

- ✓ On the new worksheet, select a cell to be the new location for the data
- ✓ If you are moving/copying a range of cells, select the cell that will become the top-left corner of the range.
- ✓ From the ***Clipboard group***, select ***Paste*** (*SpeedKey:* Ctrl+V)

Use Paste Options

This allows you to choose formatting options such as pasting values only, pasting formats only, retaining column widths and so on. There is also an option to ***link*** the cells or to use the ***Paste Special*** option

- ✓ To display the ***Paste Options*** smart tag, click the arrow on the ***Clipboard*** group



Move or copy a cell or range to another open workbook

- ✓ Open the ***source*** and ***destination*** workbooks
- ✓ In the source workbook, select the range to be move/copy (this can be a single cell, block of cells, column(s), or row(s))
- ✓ From the ***Clipbaord group,*** select ***Cut*** (*SpeedKey:* Ctrl+X) or ***Copy*** (*SpeedKey:* Ctrl+C)
- ✓ Switch to the destination workbook using the ***Window*** menu or ***Taskbar*** (*SpeedKey:* Alt+Tab)
- ✓ In the destination workbook, select the worksheet that you want to move/copy data to
- ✓ Select a cell to be the new location for the data

If you are moving/copying a range of cells, select the cell that will become the top-left corner of the range.

- ✓ From the ***Clipboard*** group, select ***Paste*** (*SpeedKey:* Ctrl+V)

If you copied the range, the ***Paste Options*** smart tag is displayed. This allows you to choose formatting options (such as pasting values only, pasting formats only, retaining column widths, and so on). There is also an option to ***link*** the cells. This pastes the formula ***=CellReference*** into the destination cell.

Tip	***If you do not want to move cells, you can click-and-drag to select text within the cell or formula bar then cut and paste it to another location as normal***

Insert a New Worksheet

A new workbook contains three worksheets named ***Sheet1***, ***Sheet2***, and ***Sheet3***. Additional sheets may be added or existing sheets duplicated up to a total of 255. Sheets not required can be deleted. Sheets can be renamed and colour-coded to identify them clearly. You can move and copy sheets into a different sequence in the workbook.

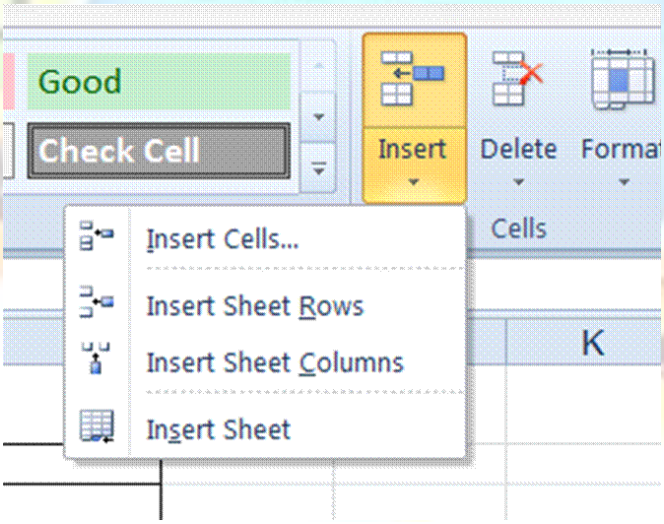
Worksheets make it easier to store related data together in one file. For example, if you had a series of monthly sales reports, you might store the monthly data for each year on 12 sheets in 1 workbook.

Add a new worksheet

- ✓ From the ***Home*** tab, ***Cells*** group, select ***Insert***
- ✓ The ***Insert*** dialogue box is displayed.
- ✓ Select ***Insert Sheet***

Tip	***SpeedKey:*** ***Shift*** + ***F11***

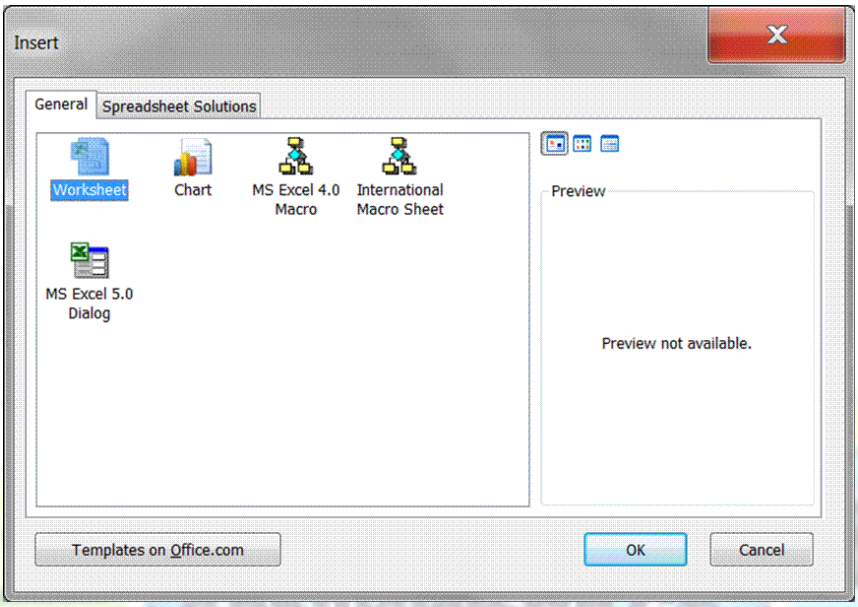
A new sheet is inserted before the current sheet, and given the next sheet number in sequence.



OR

- ✓ Right-click a ***Sheet*** tab and from the shortcut menu, select ***Insert...***
- ✓ The ***Insert*** dialogue box is displayed.
- ✓ Select the ***Worksheet*** icon
- ✓ Click ***OK***

A new sheet is inserted before the current sheet, and given the next sheet number in sequence.

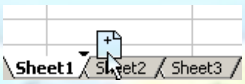


Move, Copy, Rename, and Delete a Worksheet

Copy a worksheet using drag-and-drop

- ✓ Point to the sheet tab of the worksheet to move or copy
- ✓ Hold down `Ctrl` then click-and-drag to the left or right

A small arrow appears above the sheet tabs.



Copying a worksheet

- ✓ Release the mouse to insert the duplicate sheet where the arrow is positioned

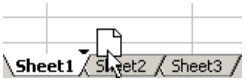
The new sheet has the same name as the original, with a number after it to identify it as a duplicate. For example, if the original sheet is named ***Summary***, the duplicate is named ***Summary (2)***.

Move a worksheet using drag-and-drop

- ✓ Position the pointer over the worksheet tab to move then click-and-drag to move the sheet

A small arrow appears above the sheet tabs.

- ✓ Release the mouse to move the sheet to where the arrow is

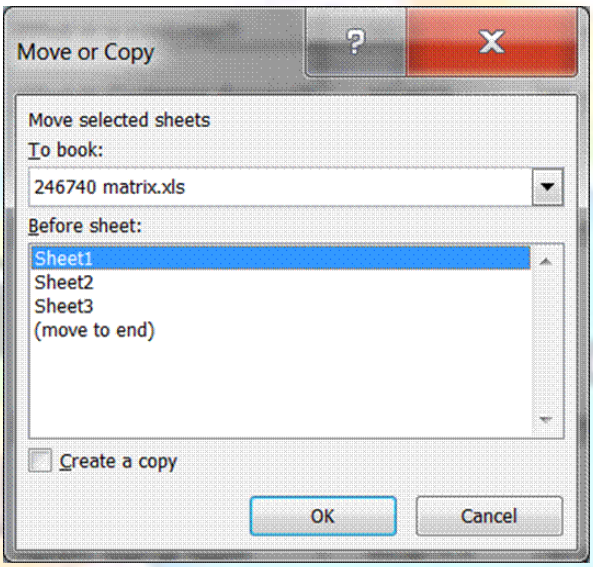


positioned

Move or copy a worksheet using the Move or Copy dialogue box

You can move or copy a worksheet within the same workbook, to another open workbook, or to a new workbook.

- ✓ Right-click the selected tab and from the shortcut menu, select ***Move or Copy...***
- ✓ The ***Move or Copy*** dialogue box is displayed.



- ✓ Optionally, from the ***To book:*** list box, select the name of another open workbook or select ***(new book)*** to create a new workbook and move/copy the sheet to it
- ✓ From the ***Before sheet:*** box, select a location for the sheet
- ✓ To copy the sheet, click the ***Create a copy*** check box
- ✓ Click ***OK***

Rename a worksheet

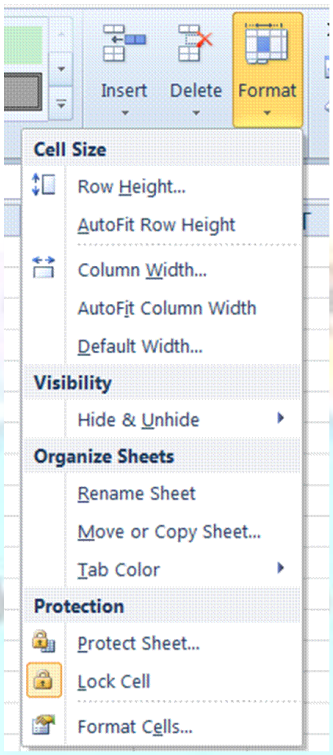
- ✓ Select the worksheet tab to rename
- ✓ Double-click on the sheet tab

OR

- ✓ From the ***Home*** tab, ***Cells*** group, select ***Format***
- ✓ Under ***Organise Sheets***, select ***Rename***

OR

- ✓ Right-click the selected tab and from the shortcut menu, select ***Rename***
- ✓ Type the new name on the highlighted sheet tab and press `Enter`

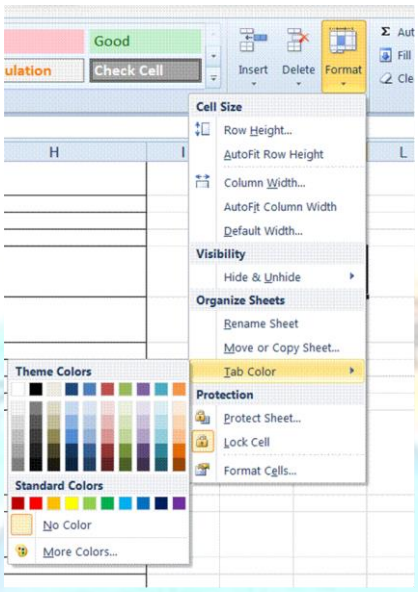


Change the colour of a worksheet tab

- ✓ Select the worksheet tab to rename
- ✓ From the ***Home*** tab, ***Cells*** group, select ***Format***
- ✓ Under ***Organise Sheets***, select ***Tab Colour***

OR

- ✓ Right-click the selected tab and from the shortcut menu, select ***Tab Colour***
- ✓ Select a colour from the colour palette
- ✓ Click ***OK***

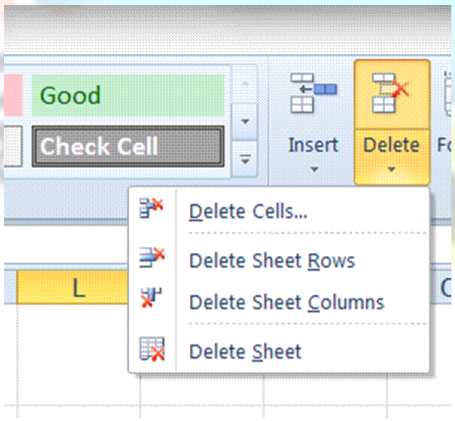


Delete a worksheet

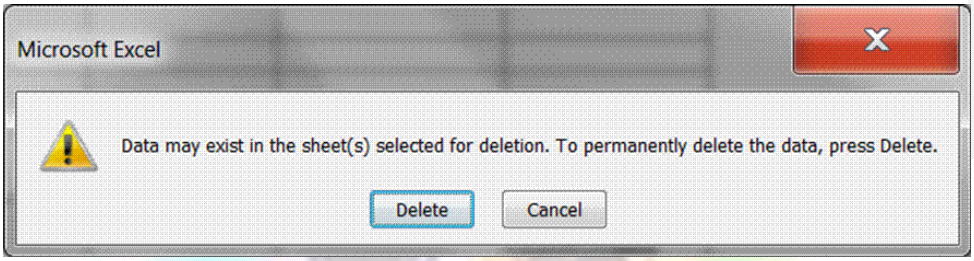
- ✓ Select the worksheet tab to delete
- ✓ From the ***Home*** tab, ***Cells*** group, select ***Delete Sheet***

OR

- ✓ Right-click the selected tab and from the shortcut menu, select ***Delete***



If there is any data on the sheet, a warning dialogue box is displayed.



- ✓ Click ***Delete***

> ***Warning*** ***You cannot undo this command, so data on the sheet will be deleted permanently unless you close the workbook without saving changes.***

Formative Assessment

- ✓ Open the workbook ***List of hard copy resources***
- ✓ Delete column ***B***
- ✓ Rename ***Sheet 1*** as ***Topics***
- ✓ Make the sheet ***Topics*** colour ***Pale Blue***
- ✓ Select rows 1 to 8 then click ***Copy***
- ✓ Click the ***Sheet3*** tab
- ✓ Click ***Paste***
- ✓ From the ***Paste Options*** smart tag, select ***Keep Source Column Widths***
- ✓ Rename ***Sheet 2*** to ***Subjects*** and apply the ***Pale Yellow*** colour
- ✓ Delete ***Sheet 3***
- ✓ Right-click the ***Topics*** sheet and select ***Move or Copy...***
- ✓ Move to the end of the workbook and make it a copy
- ✓ Click the original ***tab*** sheet and delete rows 2 to 8
- ✓ Save and close the workbook

WORK WITH FORMULAE

Outcome

Apply formulae to worksheets to provide alternative solutions to a problem: Formulae to include at least 3 of: addition(+), subtraction (-), multiplication (*), division (/), percentage (%).

Assessment Criteria

- ✓ Formulae are entered taking into consideration the natural order of operation
- ✓ Formulae are entered to deliberately change the natural order of operation
- ✓ The difference between relative and absolute cell addressing is demonstrated
- ✓ Data are changed to test possible solutions to the given problem without having to change formulae
- ✓ Scenarios are created that demonstrate different possible outcomes

Formulas

Performing calculations is one of the main uses of spreadsheets. Excel allows you to build complex formulas using arithmetic operators and predefined functions.

A formula is a calculation designed to produce a particular result. A formula can use constant number values or references to values stored in cells on the worksheet. Excel includes many built-n functions to help you create formulae that perform complex calculations easily.

Writing Excel, formulas are a bit different than the way it is done in a mathematics class.

Excel formulas starts with the equal sign (=) rather than ending with it.

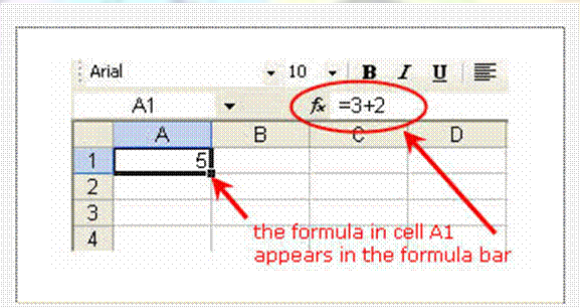
The equal sign always goes in the cell where you want the formula answer to appear.

Note	***The equal sign informs Excel that what follows is part of a formula, and not just a name or a number.***

Excel formulas look like this:

=3 + 2rather

than: 3 + 2 =



Cell References in Formulas

While the formula in the previous step works, it has one drawback. If you want to change the data being calculated you need to edit or rewrite the formula. A better way would be to write formulas so that you can change the data without having to change the formulas themselves.

To do this, you need to tell Excel which cell the data is located in. A cell's location in the spreadsheet is referred to as its cell reference.

To find a cell reference, simply look at the column headings to find which column the cell is in, and across to find which row it is in.

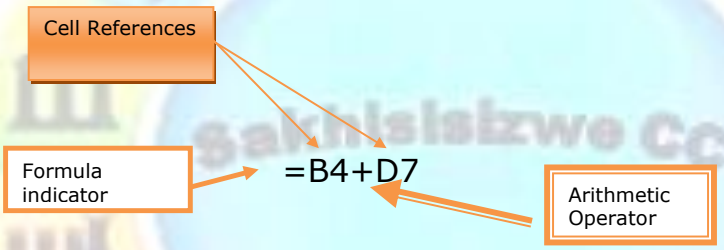
The cell reference is a combination of the column letter and row number -- such as A1, B3, or Z345. When writing cell references the column letter always comes first.

So, instead of writing this formula in cell C1:

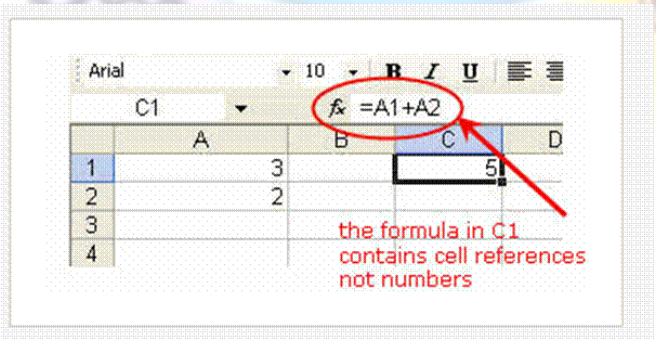
= 3 + 2

write this instead:

= A1+A2



Note: When you click on a cell containing a formula in Microsoft Excel, the formula always appears in the formula bar located above the column letters.



Updating Excel Formulas

When you use cell references in Excel formulas, the formulas will automatically update whenever the relevent data in the spreadsheet changes. For example, if you realize that the data in cell A1 should have been an 8 instead of a 3, you only need to change the contents of cell A1.

Excel will update the answer in cell in cell C1 automatically. You don't have to change the formula itself because it was written using cell reference .

Mathematical Operators

To create formulas in Microsoft Excel you just have to combine the cell references of your data with the correct mathematical operator.

The mathematical operators used in Excel formulas are similar to the ones used in math class.

- ✓ Subtraction - minus sign (-)
- ✓ Addition - plus sign (+)
- ✓ Division - forward slash (/)
- ✓ Multiplication - asterisk (*)
- ✓ Exponentiation - caret (^)
- ✓ Order of Operations

If more than one operator is used in a formula, there is a specific order that Excel will follow to perform these mathematical operations. This order of operations can be changed by adding brackets to the equation. An easy way to remember the order of operations is to use the acronym: ***BEDMAS***

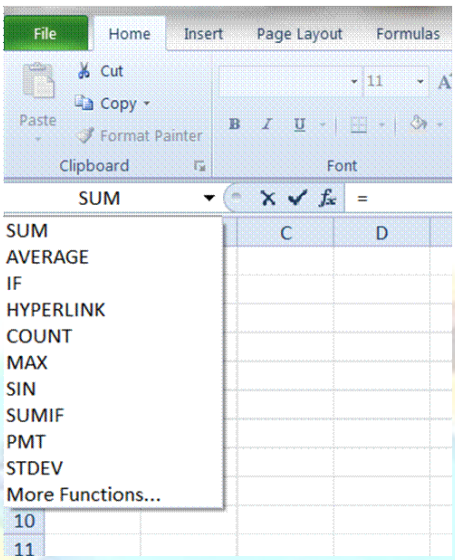
The Order of Operations is:

- ✓ Brackets
- ✓ Exponents
- ✓ Division
- ✓ Multiplication
- ✓ Addition
- ✓ Subtraction

How the Order of Operations Works

- ✓ Any operation(s) contained in brackets will be carried out first followed by any exponents.
- ✓ After that, Excel considers division or multiplication operations to be of equal importance, and carries out these operations in the order they occur left to right in the equation.
- ✓ The same goes for the next two operations – addition and subtraction. They are considered equal in the order of operations. Which ever one appears first in an equation, either addition or subtraction, is the operation carried out first.

When you create a formula that contains a function, the Formula Bar helps you enter worksheet functions. As you enter a function into the formula, the Formula Palette displays the name of the function, each of its arguments, a description of the function and each argument, the current result of the function, and the current result of the entire formula.



Editing formulas

You can use the Formula toolbar to edit functions in formulas. Select a cell that contains a formula, and then click in the toolbar to edit the formula.

Cell and Range References

A reference identifies a cell or a range of cells on a worksheet and tells Microsoft Excel where to look for the values or data you want to use in a formula. With references, you can use data contained in different parts of a worksheet in one formula or use the value from one cell in several formulas. You can also refer to cells on other sheets in the same workbook, to other workbooks, and to data in other programs. References to cells in other workbooks are called external references. References to data in other programs are called remote references.

Relative references

When you create a formula, references to cells or ranges are usually based on their position relative to the cell that contains the formula. In the following example, cell B6 contains the formula =A5; Microsoft Excel finds the value one cell above and one cell to the left of B6. This is known as a relative reference.

When you copy a formula that uses relative references, Excel automatically adjusts the references in the pasted formula to refer to different cells relative to the position of the formula. In the following example, the formula in cell B6, =A5, which is one cell above and to the left of B6, has been copied to cell B7. Excel has adjusted the formula in cell B7 to =A6, which refers to the cell that is one cell above and to the left of cell B7.

Absolute references

If you don't want Excel to adjust references when you copy a formula to a different cell, use an absolute reference. For example, if your formula multiplies cell A5 with cell C1 (=A5*C1) and you copy the formula to another cell, Excel will adjust both references. You can create an absolute reference to cell C1 by placing a dollar sign ($) before the parts of the reference that

do not change. To create an absolute reference to cell C1, for example, add dollar signs to the formula as follows:

=A5*C1

Move or copy a formula

- ✓ When you move a formula, the cell references within the formula do not change.
- ✓ When you copy a formula, absolute cell references do not change; relative cell references will change. If you do not want the cell references to change, use absolute cell references.

Formative assessment

- ✓ Open the Budget workbook
- ✓ Enter the details of your personal budget
- ✓ Add the total of your monthly expenses
- ✓ Add the total of your monthly income
- ✓ Subtract the total expenses from the total income
- ✓ Calculate the percentage of your monthly income that you save

WORK WITH FUNCTIONS

Outcome

Apply simple built-in functions

Assessment Criteria

- ✓ Functions are explained in terms of their purpose, use and construct
- ✓ At least one function to be used as an example
- ✓ Simple Mathematical functions are applied. At least the following functions: sum a range, round to a specified number of decimals
- ✓ Statistical functions are applied that achieve the anticipated result: At least two of the following functions: average a range, count the number of cells that contain numbers, find the highest value in a range, find the lowest value in a range

Working With Functions

Excel's functions are built-in calculation tools that perform complex financial, statistical or analytical calculations, assist in decision-making and create or manipulate text. Although you can enter many of these functions manually as a formula, using built-in functions can help reduce errors.

You worked with the =SUM function in a previous session when you added using Autosum and Paste Function. A function is a predefined formula designed to make life easier by doing a common or a complicated task. If there is no pre-defined functions available, you can enter a formula.

FORMULA	FUNCTION
=A1+A2+A3+A4	=SUM(A1:A7)
=A8-A10	No function available, use the formula
(A1+A2+A3+A4+A5)/5	=AVG(A1:A5)

Function Format

Each function consists of the equal (=) sign, the function name and the arguments. Arguments are cells used for carrying out of the calculation. The most common argument type is numeric, but arguments can also be text, values, dates, time or arrays. The general format of a function is:

=FUNCTION-NAME(ARGUMENT1, ARGUMETNT2….)

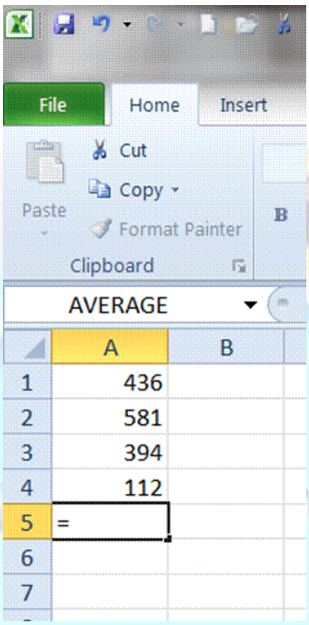
Note that spaces are not used and that a comma separates the arguments if there are more than one. The function name must be one of the pre-defined functions available in Excel, there are more than 200.

Arguments are the specifications that tell Excel on which data it must perform the function. In the =SUM function, the argument was the range which was to be summed.

Entering Functions

In the active cell, type =, followed by the function name, followed by an open parenthesis. Then specify the cell or range of cells you want the function to use, followed by a closed parenthesis. Press Enter to display the result of the formula in the cell. See what happens to the Name box and the formula bar when you do this.

=SUM(A1:A5)



Create a function by pointing

- ✓ Click on the = on the formula bar
- ✓ Select a function from the Name box.

Basic Mathematical Functions

SUM

Adds all the numbers in a range of cells.

The most common calculation carried out in spreadsheet programs like Excel is the adding up columns or rows of data. It is done so often, that Excel has a SUM function built into the program to simplify the task

Example Using Excel's SUM Feature:

- ✓ Enter the following data into cells D1 to D6: 114, 165, 178, 143, 130, 165.
- ✓ Click on cell D7 - the location where the results will be displayed.
- ✓ From the Formulas tab of the ribbon menu and choose Math & Trig
- ✓ the function drop down list will display

- ✓ Click on SUM in the list to bring up the function's dialog box.
- ✓ In the dialog box, click on the Number1 line.
- ✓ Drag to cells D1 and D6 in the spreadsheet.
- ✓ Click OK.
- ✓ The answer 895 should appear in cell D7.

Note	***Click on cell D7 and the complete function = SUM (D1 : D6) appears in the formula bar***

Syntax

SUM(number1,number2, ...)

Number1, number2, ... are 1 to 30 arguments for which you want the total value or sum.

Remarks

- ✓ Numbers, logical values, and text representations of numbers that you type directly into the list of arguments are counted. See the first and second examples following.
- ✓ If an argument is an array or reference, only numbers in that array or reference are counted. Empty cells, logical values, text, or error values in the array or reference are ignored. See the third example following.
- ✓ Arguments that are error values or text that cannot be translated into numbers cause errors.

SUMIF

The SUMIF function combines two of Excel's most popular functions - the SUM function and the IF function. What SUMIF will do is sum up data in a selected range of cells that meet specific criteria.

Syntax

= SUMIF (Range, Criteria, Sum Range)

- ✓ Range - the group of cells the function is to search.
- ✓ Criteria - determines whether the data in a cell is to be summed up or not.
- ✓ Sum Range - the data in this range will be summed if data in corresponding cells in the first range meets the specified criteria. If this range is omitted, the first range is summed instead.

Example Using SUMIF Function

In this example we will find the values in the range E1 to E6 that equal 165.

For those that do equal 165, we will sum up the corresponding numbers in cells F1 to F6.

- ✓ Enter the following data into cells E1 to E6: 114, 165, 178, 143, 130, 165.
- ✓ Enter the following data into cells F1 to F6: 10, 20, 30, 10, 20, 30.
- ✓ Click on cell F7 where the results will be displayed.
- ✓ From the Formulas tab choose Math & Trig to open the function drop down list.
- ✓ Click on SUMIF in the list to bring up the function's dialogue box
- ✓ In the dialogue box, click on the Range line.
- ✓ Drag cells E1 to E6 to enter these cell references as the range to be searched by the function.

- ✓ On the Criteria line in the dialog box, type "165". The function will search the range selected in step 8 for data that matches this criteria.
- ✓ Click on the SUM Range line.
- ✓ Drag cells F1 to F6 on the spreadsheet. If the criteria specified in step 9 matches any data in the first range (E1 : E6), the function will add up the data in the corresponding cells in this second range of cells.
- ✓ Click OK.
- ✓ The answer 50 should appear in cell F7. Since the criterion of equaling 165 is met in only two cells - E2 and E6, only the numbers in cells F2 and F6 are summed. The sum of 20 and 30 is 50.

Note ***When you click on cell F7, the complete function= SUMIF (E1 : E6 , "=165" , F1 : F6) appears in the formula bar.***

ROUND

Rounds a number to a specified number of digits.

Rounding data in Excel is a very common task. As a result, there are number of rounding functions available and each one does a slightly different job. One rounds up, one rounds down, a third removes all decimal places when it rounds, and another does no rounding at all.

ROUNDOWN

The ROUNDDOWN function is used to round a number downwards towards the next lowest number.

ROUNDDOWN is similar to the ROUND function except that it always rounds a number downward while the ROUND function will round up or down depending on whether the last digit is greater than or less than 5.

The syntax for the ROUNDDOWN function is:

= ROUNDDOWN (Number, Num_digits)

- ✓ Number - the value to be rounded.
- ✓ Num_digits - the number of decimal places to reduce the above number to.

Example Using Excel's ROUNDDOWN Function:

- ✓ Enter the following data into cell D1: 34.567
- ✓ Click on cell E1 in the speadsheet - this is where the function will be located.
- ✓ From the Formulas tab select Math & Trig to open the function drop down list.
- ✓ Click on ROUNDDOWN in the list to bring up the function's dialogue box.
- ✓ In the dialogue box, click on the Number line.
- ✓ Click on cell D1 in the spreadsheet.
- ✓ In the dialogue box, click on the Num_digits line.
- ✓ Type in a 1 to reduce the number in D1 to 1 decimal place.
- ✓ Click OK.
- ✓ The answer 34.5 should appear in cell E1.

Note	*When you click on cell E1 the complete function = ROUNDDOWN (D1 , 1) will appear in the formula bar.*

ROUNDUP

This function is used to round a number upwards towards the next highest number.

ROUNDUP is similar to the ROUND function except that it always rounds a number upward while the ROUND function will round up or down depending on whether the last digit is greater than or less than 5.

The syntax for the ROUNDUP function is:

= ROUNDUP (Number, Num_digits)

- ✓ Number - the value to be rounded.
- ✓ Num_digits - the number of decimal places to reduce the above number to.

Example Using Excel's ROUNDUP Function:

- ✓ Enter the following data into cell D1: 34.321
- ✓ Click on cell E1 where the function will be located.
- ✓ From the Formulas tab of select Math & Trig to open the function drop down list.
- ✓ Click on ROUNDUP in the list to bring up the function's dialogue box.
- ✓ In the dialogue box, click on the Number line.
- ✓ Click on cell D1 in the spreadsheet.
- ✓ In the dialogue box, click on the Num_digits line.
- ✓ Type in a 1 to reduce the number in D1 to 1 decimal place.
- ✓ Click OK.
- ✓ The answer 34.3 should appear in cell E1.

Note	*When you click on cell E1 the complete function = ROUNDUP (D1 , 1) appears in the formula bar*

INT

You will use the INT to round a number downwards towards the next lowest number.

INT is similar to the ROUNDOWN function except that it always rounds a number down to the nearest whole number - completely removing the decimal portion.

The ROUNDDOWN function, on the other hand, will round a number down to a desired number of decimal places.

The syntax for the INT function is:

= INT (Number)

- ✓ Number - the value to be rounded. This can also be a cell reference to the location of the number in the spreadsheet.

Example Using Excel's INT Function:

- ✓ Enter the following data into cell D1: 34.567
- ✓ Click on cell E1 where the function will be located.

- ✓ From the Formulas tab choose Math & Trig to display the function drop down list.
- ✓ Click on INT in the list to bring up the function's dialogue box.
- ✓ In the dialogue box, click on the Number line.
- ✓ Click on cell D1 to enter that cell reference into the dialog box.
- ✓ Click OK.
- ✓ The answer 34 should appear in cell E1.

Note	***When you click on cell E1 the complete function = INT (D1) appears in the formula bar***

Statistical Functions

Statistical functions perform different counting operations on data.

When using these functions, you should be aware of different types of empty values that a cell can hold:

- ✓ Blank - blank cells contain no data at all.
- ✓ Empty text - resulting from a formula that assigns a null text string ("") to a cell.
- ✓ Zero - a cell storing the value 0 (zero).

Different functions may treat either empty text or zero-value cells or both as blanks.

Use Counting Functions

Variations on the COUNT function allow you to calculate the number of values used in a range.

COUNT function

COUNT (***value1***, *value2*, ...) returns the number of numbers supplied by the Value1, Value2... arguments. A "number" is a numeric value, a date or time, or text representing a number (for example, "two" is included in the result). Other text, logical values, errors, and blank cells are not included in the result. Arguments are typically cell ranges, but you can supply any type of value if necessary. You can include up to 30 arguments.

In the example below, in cells F3 and G3, the COUNT function is being used to count valid values in D3:D10 and E3:E10 respectively (***=COUNT(D3:D10)***). Note that zero values (E7 and E9) are counted, but text (D7) and blanks (D10) are not.

	A	B	C	D	E	F	G
1	**Weekly Charge Sheet**						
2	**Name**	**Job Code**	**Hours**	**Hourly Rate**	**Charges**	**Values in D**	**Values in E**
3	Jolly, R	P	40	30.00	1200.00	6	8
4	Smith, P	M	24	27.00	648.00		
5	Newman, C	A	32	18.50	592.00		
6	Leen, V	A	35	18.50	647.50		
7	Taylor, R	C	40	Code?	0.00		
8	Robinson, M	A	40	18.50	740.00		
9	Richards, A	P	0	30.00	0.00		
10	**Total**		**211**		**3827.50**		

COUNTIF

The COUNTIF is used to count up the number of cells in a selected range that meet certain criteria.

The syntax for the COUNTIF function is:

=COUNTIF (Range, Criteria)

- ✓ Range - the group of cells the function is to search.
- ✓ Criteria - determines whether the cell is to be counted or not. This can be a number, expression, cell reference or text string.

Example Using Excel's COUNTIF Function:

Enter the following data into cells E1 to E6: 114, 165, 178, 143, 130, 165.

Click on cell E7 where the results will be displayed.

From the Formulas tab choose More Functions > Statistical to open the function drop down list.

Click on COUNTIF in the list to bring up the function's dialogue box.

- ✓ In the dialogue box, click on the button at the end of the Range line to return to the spreadsheet.
- ✓ Drag cells E1 to E6 on the spreadsheet to select them.
- ✓ Click on the button at the end of the Range line to return to the dialog box
- ✓ On the Criteria line in the dialog box, type "165".
- ✓ Click OK.
- ✓ The answer 2 should appear in cell E7 since two cells in the range - A2 and A6 - contain the number 165 and, therefore, match the criteria argument.

Note	***When you click on cell E7 the complete function = COUNTIF (E1 : E6 , 165) appears in the formula bar***

Use Averaging Functions

AVERAGE function

The AVERAGE function is used to find the average or arithmetic mean of a given list of arguments

The syntax for the AVERAGE function is:

= AVERAGE (argument1, argument2, ... argument255)

Argument1, argument 2, ... argument 255 can be numbers, named ranges, arrays, or cell references. Up to 255 arguments can be entered.

Example Using Excel AVERAGE Function:

- ✓ In this example we will find the average value for data entered into cells C1 to C6.
- ✓ Enter the following data into cells C1 to C6:11, 12, 13, 14, 15, 16
- ✓ Click on cell C7 where the results will be displayed.
- ✓ From the Formulas tab select More Functions > Statistical to open the function drop down list.
- ✓ Click on AVERAGE in the list to bring up the function's dialogue box .
- ✓ Drag cells C1 to C6 in to enter that range into the dialogue box.
- ✓ Click OK.
- ✓ The answer 13.5, which is the average value for the data in cells C1 to C6, should appear in cell C7.

Note	***When you click on cell C7 the complete function = AVERAGE (C1 : C6) appears in the formula bar***

MIN function

The MIN function is used to find the smallest or minimum value in a list of numbers or arguments

The syntax for the MIN function is:

=MIN (argument1, argument2, ... argument30)

Argument1 ... argument 30: Arguments can be numbers, named ranges, arrays, or cell references. Up to 30 arguments can be entered.

Example Using Excel's MIN Function:

- ✓ Enter the following data into cells C1 to C6: 114,165,178,143,130,167.
- ✓ Click on cell C7 - the location where the results will be displayed.
- ✓ Click on the Formulas tab and select More Functions > Statistical to open the function drop down list.
- ✓ Click on MIN in the list to bring up the function's dialogue box.
- ✓ Drag cells C1 to C6 to enter the range into the dialogue box.
- ✓ Click OK.
- ✓ The answer 114 should appear in cell C7 as it is the smallest number in the selected range.

Note	***When you click on cell C7 the complete function = MIN (C1 : C6) appears in the formula bar.***

MAX function

You will use the MAX function, to find the largest or maximum number in a given list of values or arguments

Syntax

=MAX(argument1, argument2, ... argument30)

- ✓ Argument1 ... argument30: Arguments can be numbers, named ranges, arrays, or cell references. Up to 30 arguments can be entered.

Example Using Excel MAX Function:

- ✓ Enter the following data into cells C1 to C6: 114,165,178,143,130,167.
- ✓ Click on cell C7 where the results will be displayed.
- ✓ From the Formulas tab and select More Functions > Statistical to open the function drop down list.
- ✓ Click on MAX in the list to bring up the function's dialogue box.
- ✓ Drag cells C1 to C6 to enter the range into the dialogue box.
- ✓ Click OK.
- ✓ The answer 178 should appear in cell C7 as it is the largest number in the selected range

When you click on cell C7 the complete function = MAX (C1 : C6) appears in the formula bar

Formative Assessment

Open a new workbook

Enter the following details:

Afrikaans	70
English	85
Mathematics	65
Social sciences	55
Life skills	63
Information technology	72

- ✓ Create a formula to calculate the average grades
- ✓ Create a formula to calculate the minimum grades
- ✓ Create a formula to calculate the maximum grades
- ✓

Practice ROUNDUP, ROUNDOWN, COUNTIF formulas

Save the workbook as ***Functions*** and your name

FORMAT A SPREADSHEET

Outcome

Apply formatting to a spreadsheet

Assessment Criteria

- ✓ Methods of automatically formatting a spreadsheet are explained: Templates, styles, manual
- ✓ A spreadsheet is created using a template
- ✓ Cells are formatted using styles
- ✓ Formats are copied

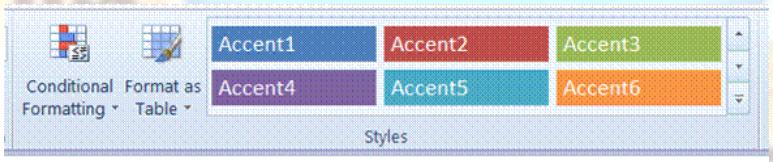
Work With Styles

MS Excel allows you to create a style where you decide on a specific set of formatting options, in other words where you decide the type of font, the size of the font, the colour, shading and borders of your document.

Excel allows you to apply a specific style to the whole sheet or only to selected ranges. Furthermore, Excel has a number of built-in styles that you can apply.

Apply a style

- ✓ Select the cell(s) to format then from the ***Home*** tab, ***Styles*** group, click the down arrow to display the different styles
- ✓ Select a style from the list
- ✓ Click ***OK***



Remove style formatting

- ✓ Select the cell(s) from which you want to remove style formatting
- ✓ from the ***Home*** tab, ***Styles*** group, click the down arrow to display the different styles
- ✓ Select the ***Normal*** style from the list

Modify the Formatting of a Style

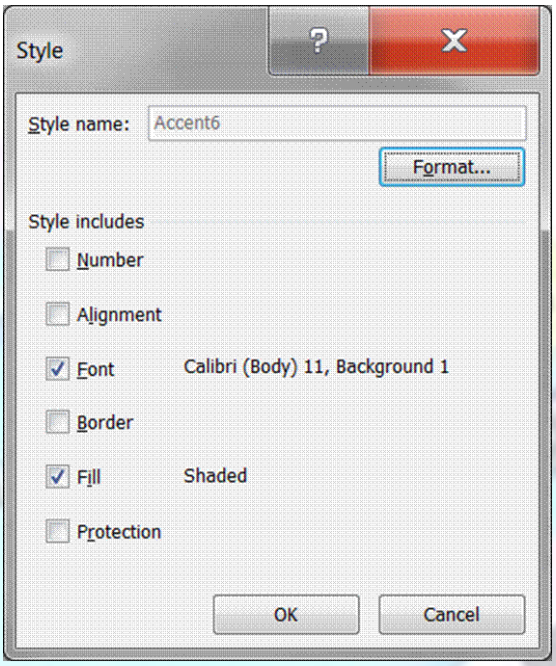
When you modify the style definition, the formatting of any cells to which the style is applied is updated automatically.

To modify a style

- ✓ From the ***Styles group***, select a style
- ✓ Right-click on the style to display the ***Modify*** dialogue box

The ***Style*** dialogue box is displayed.

- ✓ Select the new formats for the style and click ***OK***
- ✓ Optionally, check, or uncheck, the boxes for the type of formats that you do, or do not, want to apply from the style
- ✓ Click ***OK*** to save the new settings for the style



To delete a style

- ✓ From the ***Style group,*** select a style
- ✓ Right-click on the style to display the shortcut menu then click ***Delete***
- ✓ The style is deleted. All cells formatted with that style will revert to ***Normal***.

Copy a Style from a Different Workbook

Merging styles allows you to copy styles from a different workbook.

Merge a style

- ✓ Open the workbook containing the style or styles to be copied
- ✓ Switch back to the workbook that you want to copy the styles into
- ✓ Click the button on the right hand side of the ***Styles group***

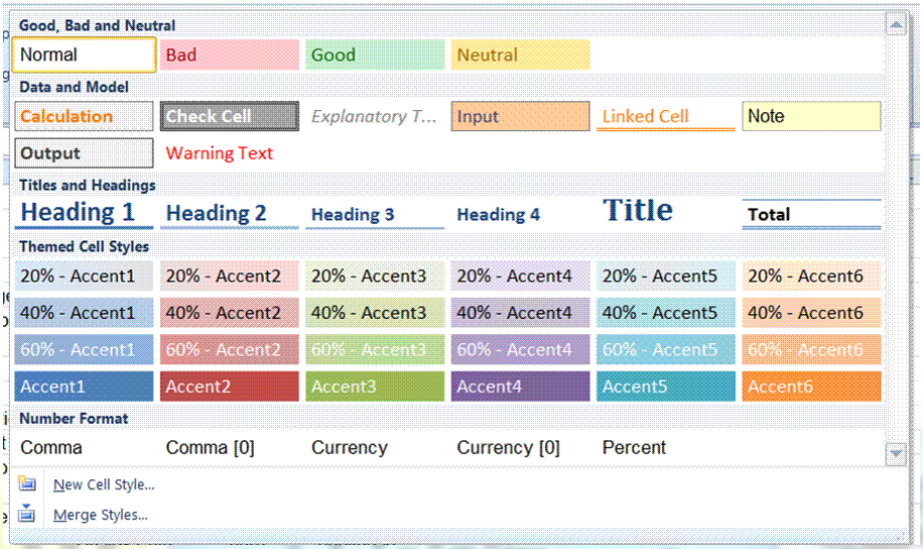
The ***Style*** dialogue box is displayed.

- ✓ Click ***Merge...***

The ***Merge Styles*** dialogue box is displayed.

- ✓ Select the workbook name containing the styles to be copied
- ✓ Click ***OK***

The styles are copied into the open workbook.



Formative Assessment

- ✓ Open the workbook ***List of hardcopy resources***
- ✓ Format cell ***A1*** as follows
  - ➢ Font - ***Times New Roman***
  - ➢ Font Size – ***12***
  - ➢ Font Style – ***Bold***
  - ➢ Font Colour - ***Red***
- ✓ Save this formatting as a style called ***Title***
- ✓ Apply the ***Title*** style to cell ***B1 to F1***
- ✓ Format cells B2 as follows
  - ➢ Font - ***Century Gothic***
  - ➢ Font Size – ***9***
  - ➢ Font Style – ***Italics***
  - ➢ Font Colour - ***Blue***

Tip	***If the*** Century Gothic ***font is not installed on your PC, use another font of your choice.***

- ✓ Save this formatting as a style called ***Subtitle***
- ✓ Apply the ***Subtitle*** style to cells ***AB3: B51***
- ✓ Modify the ***Title*** style so that the style is underlined
- ✓ Delete the ***Subtitle*** style
- ✓ Save and close the workbook

Work With Templates

Templates are a great way to save time and create consistent Office 2010 documents. They are especially valuable for types of documents that you use frequently, such as

- ✓ weekly presentations,
- ✓ application forms, and
- ✓ expense reports.

If possible, you want to use a file that already has the look and feel that you want, with placeholders that you can change to tailor it for your current needs.

Tip	***That's what a template is—a file where the hard work has been done for you, saving you from having to start with a blank page***

A ***custom*** template can be created for different types of spreadsheet (invoice, expenses, sales analysis) and include anything you would normally add to a spreadsheet. When a new workbook is created from the template, any data or formatting from the template is put in the new workbook.

All Excel workbooks are based on a default ***template***. To speed up the creation of new sheets, template files containing standard formulas, formatting and print settings can be saved for regular use or distribution to other users.

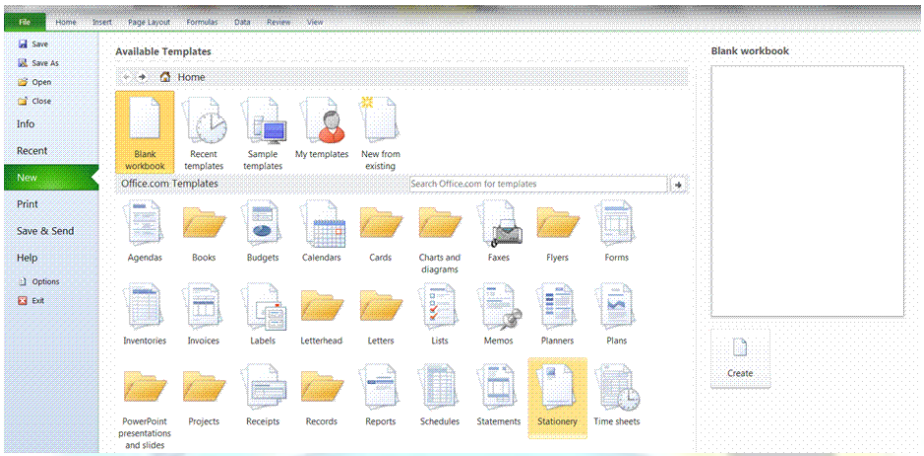
A ***template*** is a file that is used as a form for other files to be created on. New files will contain all of the formatting, essential data, and other elements in the template. Custom templates are useful when you are sharing workbooks with others as they provide a basis for a consistent design.

Open a template

- ✓ From the ***File*** tab, click ***New***

Available templates will be displayed in a visual list. This list is divided into categories

- ✓ Click a category to see the templates it contains
- ✓ Select the template that you require, and then click Create or Download to open a new Excel Worksheet using that template.



Create a custom template

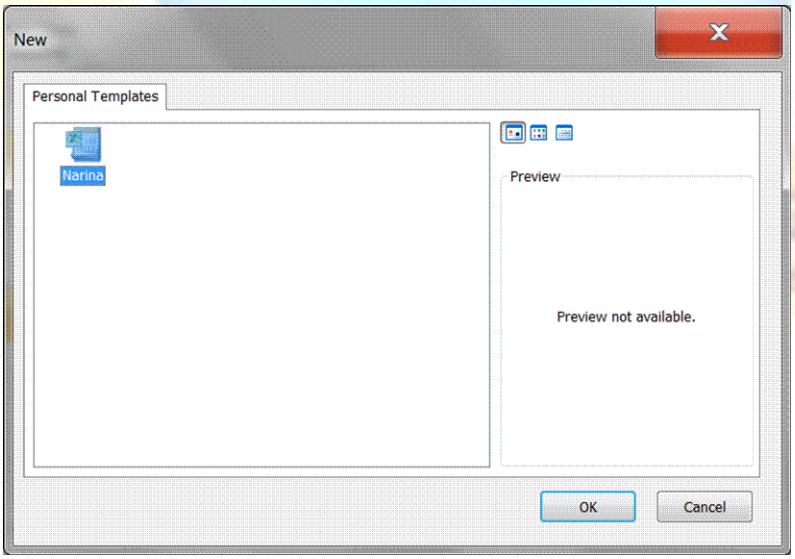
Create a workbook containing the features, cell contents and formatting that you want to apply to all workbooks based on the template

- ✓ From the ***File*** tab, select ***Save As...***
- ✓ The ***Save As*** dialogue box is displayed.
- ✓ In the ***Save as type*** box, select ***Template (*.xlt)***
- ✓ The ***Templates*** folder is displayed in the ***Save in:*** box.
- ✓ In the ***File name:*** box, enter a file name
- ✓ Click ***Save***

Note	***A template file type is saved with the .XLT extension by selecting Template from the Save as type box. Typing .XLT on the file name does not automatically save the file as a template.***

Use a custom template

- ✓ From the ***File*** tab, click ***New***
- ✓ Available templates will be displayed in a visual list.
- ✓ Click ***My Templates*** dialogue and select the template to use
- ✓ Click ***OK***



Edit a template

- ✓ From the ***File*** tab, click ***New***

Tip	***SpeedKey:*** Ctrl + O

- ✓ Select the template and click ***Open***
- ✓ Make changes as required then ***Save And Close*** the file

Formative Assessment

- ✓ Open the ***budget workbook***
- ✓ Format the workbook in a style of your choice
- ✓ Save the workbook as a template with the name: ***My budget template***

IMPROVE THE PRESENTATION

Outcome

Use special effects to improve the presentation of the spreadsheet

Assessment Criteria

- ✓ Text is centered across a cell range
- ✓ Orientation of text within a cell is changed
- ✓ A border is applied to cells and removed from cells: Cell, range of cells, entire column, entire row
- ✓ Fill (shading) is applied to cells and removed from cells: Cell, range of cells, entire column, entire row

Change The Position Of Text And Numbers In A Cell

You can change the position of text and numbers in a cell. You can also choose whether to align right, left or centre.

Alignment group

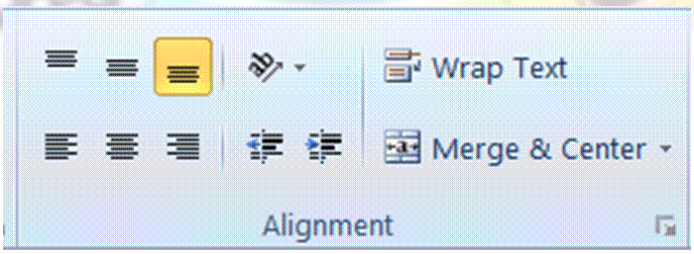
The ***Home*** tab, ***Alignment*** group have several buttons that give you a choice of alignments

The horizontal choices are:

- ✓ ***General***: will put the text to the left and the numbers to the right;
- ✓ ***Left***: will put all contents to the left
- ✓ ***Centre***: arranges contents in the cell centre
- ✓ ***Right***: places all the content to the right side

When you select the ***Centre*** option and click ***OK***, your cell contents will be arranged in the centre of the cells.

When you select the ***Right*** option, the contents of the cells will be aligned to the right and the ***Left*** option will align the contents of a cell to the left.

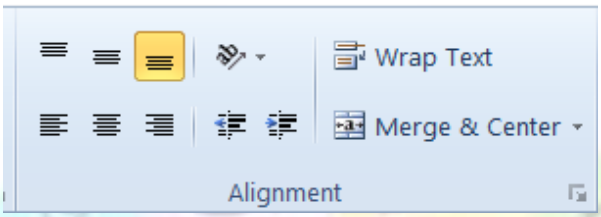


The vertical options are

- ✓ ***Top align***: aligns text to the top of the cell
- ✓ ***Middle align***: aligns text to the middle of the cell
- ✓ ***Bottom align***: aligns text to the bottom of the cell

Centre text across columns

Select the cells you want to centre and click on the ***Merge and Centre*** button of the ***Alignment Group***. See how the text is centred in the row



Wrap Text

To display multiple lines of text within a cell:

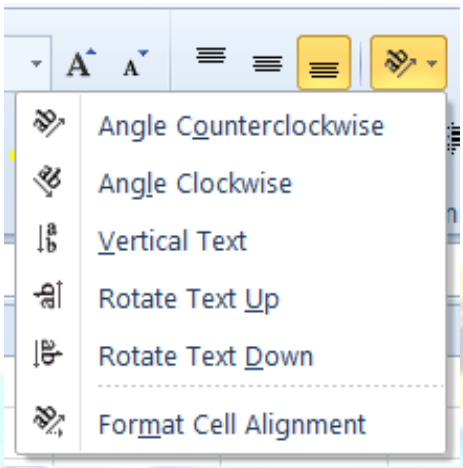
- ✓ Select the cells you want to format.
- ✓ On the ***Alignment*** group, click ***Wrap text***

Tip	***You can also shrink the font size to show all data in a cell***

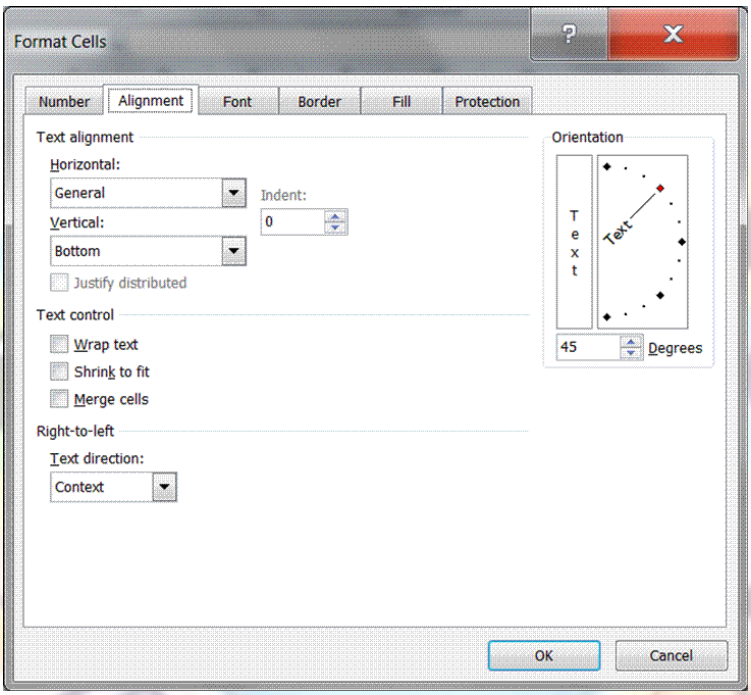
Rotate text in a cell

The data in a column is often very narrow while the label for the column is much wider. Instead of creating unnecessarily wide columns or abbreviated labels, you can rotate text and apply borders that are rotated to the same degree as the text.

- ✓ Select the cells in which you want to rotate text.
- ✓ On the ***Alignment*** tab, in the ***Orientation*** box, make your selection:
  - ➢ You can ngle the text clockwise or counterclockwise
  - ➢ You display the text vertically
  - ➢ You can rotate text up or down



- ✓ ***Format cell alignment*** gives you the opportunity to fine tune the rotation of text in the cell:
- ✓ , click a degree point, or drag the indicator to the angle you want.
- ✓ To display text vertically from top to bottom, click the vertical Text box under Orientation



Apply Cell Borders and Shading

Cell shading and borders can be used to highlight selected areas of the sheet; for example, to identify where you should or should not enter data. Commonly, cells containing formulas (such as row or column totals) are shaded differently or marked by a border from the cells containing the data they calculate.

When you design a spreadsheet, you should always bear in mind that you might not be the only person who has to use it. Effective use of borders and shading can improve the usability of a complex worksheet.

If you want to apply formats quickly, the AutoFormat feature gives you the option of simply choosing from a range of predefined formats.

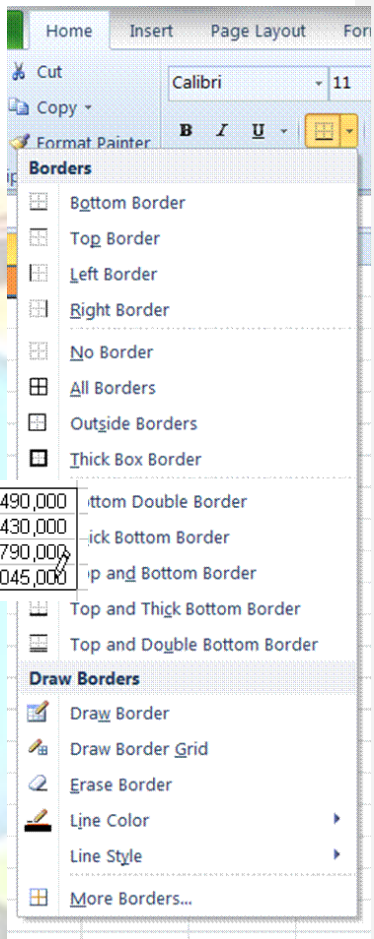
Borders and shading can be used to mark out different areas of the worksheet, making it easier to edit and read data. A variety of different border and shading line styles, colours, and patterns is available.

Add a border

- ✓ Select the cell(s) to which to add borders

You can apply a border to a single cell, a range, or whole rows/columns. If you select a block of cells, you can apply borders to the inside and outside edges of the selection.

- ✓ On the ***Home tab*** in the ***Font group,*** click ***Border*** to apply the border style that is displayed
- ✓ To select a border style,, click the arrow on the ***Border*** button



Draw a border

The ***Draw Borders*** tool, much like the ***Draw Table*** tool in Word.

- ✓ Click the ***Draw Border*** button

The mouse pointer changes to a pen shape.

- ✓ Click-and drag-the mouse pointer to draw borders around a block of cells

450,000	380,000	450,000	210,000	1,490,000
350,000	645,000	750,000	685,000	2,430,000
425,000	390,000	560,000	415,000	1,790,000
550,000	590,000	440,000	465,000	2,045,000

- ✓ Click the edge of a cell to add a border to that edge only
- ✓ Optionally, change the line style and colour to draw different borders
- ✓ To return the cursor to normal, click the ***Draw Border*** button again (*SpeedKey:* Esc)
- ✓ To remove a border, click ***Erase Border***

The mouse pointer changes to an eraser shape.

- ✓ Click or click-and-drag over the borders to remove

Tip	***To draw with internal borders, click the arrow on the Draw Border button and select Draw Border Grid. The cursor changes to the following shape. You can also switch to the grid cursor by holding down Ctrl or to the eraser cursor by holding down Shift.***

Add a border using the Format Cells dialogue box

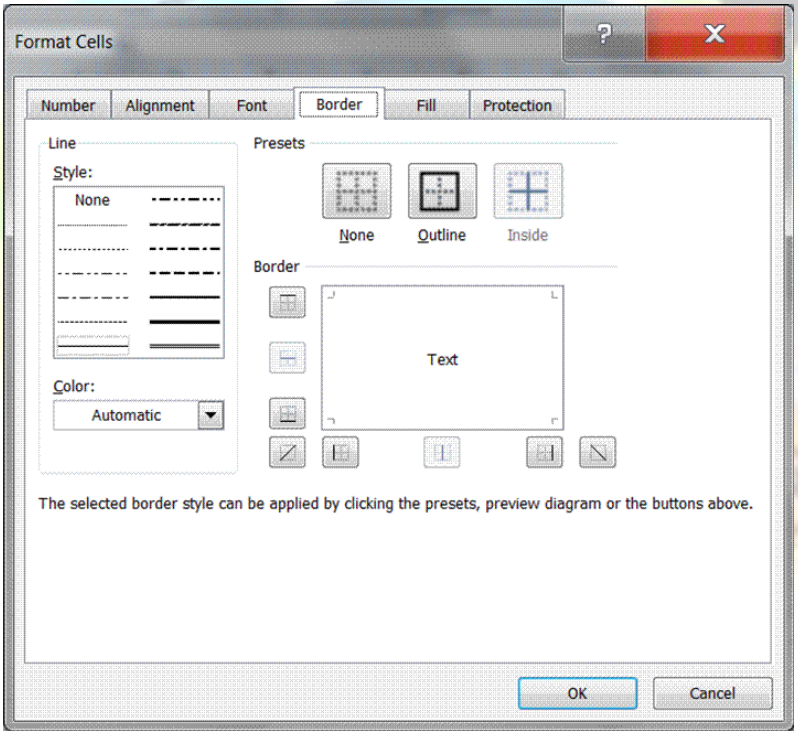
- ✓ Select the cell(s) to have borders added
- ✓ From the ***Home*** tab, ***Cells*** group, click the arrow on the ***Format button***

The ***Format Cells*** dialogue box is displayed.

- ✓ Click the ***Border*** tab
- ✓ From the ***Line*** panel, select a line ***Style:***
- ✓ From the ***Line*** panel, select a border colour from the ***Colour:*** pull-down list
- ✓ From the ***Colour:*** box, select a colour for the border
- ✓ To apply the selected border, from the ***Presets*** panel, select an outline style

OR

- ✓ Click the buttons in the ***Border*** panel to add and remove borders from particular edges
- ✓ Click ***OK***



Tip ***The border style applied is the one selected in the Line panel. You can change the settings there then click in the Border panel to apply different border styles to particular edges.***

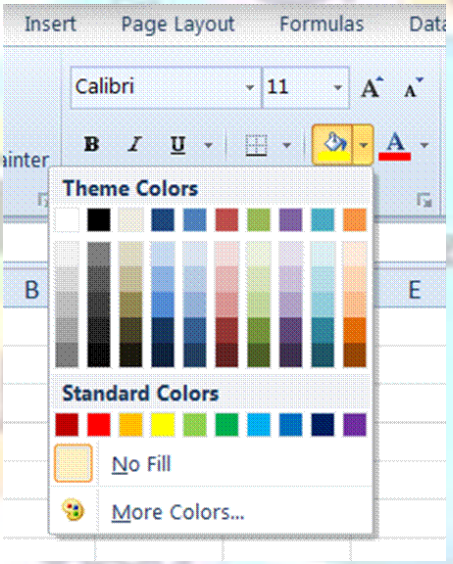
Apply Cell Shading

If you apply shading to a cell, make sure that you also adjust the font colour if necessary. The text and its background should use contrasting colours to ensure legibility.

- ✓ For a dark background, use lighter font colours
- ✓ For a light background, use darker font colours

Add shading

- ✓ Select the cell(s) to have shading applied
- ✓ On the ***Home tab*** in the ***Font group,*** click ***Fill Color*** to apply the fill colour shown
- ✓ Click the arrow on the ***Fill Color*** button to select a fill colour from the colour palette

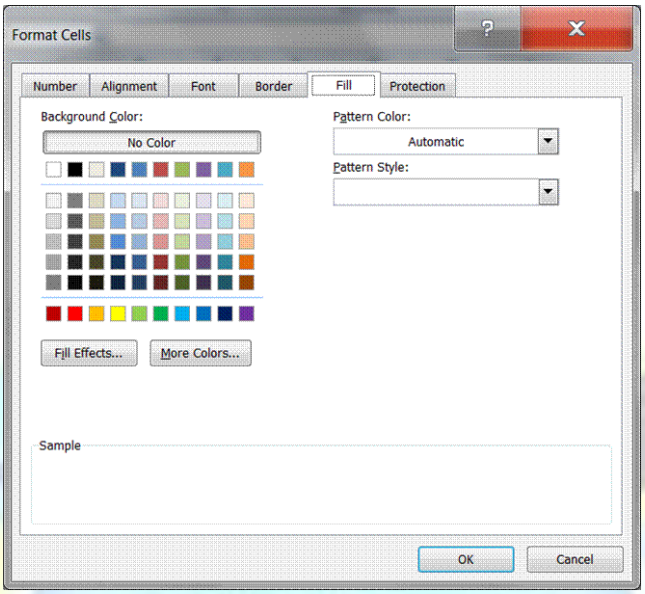


Use the Format Cells dialogue box

- ✓ Select the cell(s) to have borders added
- ✓ From the ***Home*** tab, ***Cells*** group, click the arrow on the ***Format button***

The ***Format Cells*** dialogue box is displayed.

- ✓ Click the ***Patterns*** tab
- ✓ From the ***Cell shading*** panel, select a ***Color:***
- ✓ Optionally, from the ***Pattern:*** box, select a pattern style
- ✓ Click ***OK***



Change the font colour

- ✓ Select the cell(s) to which to apply formats
- ✓ On the ***Home tab*** in the ***Font group,*** click ***Font Color*** to apply the colour displayed on the button
- ✓ Click the arrow on the ***Font Colour*** button and select a colour from the pull-down menu

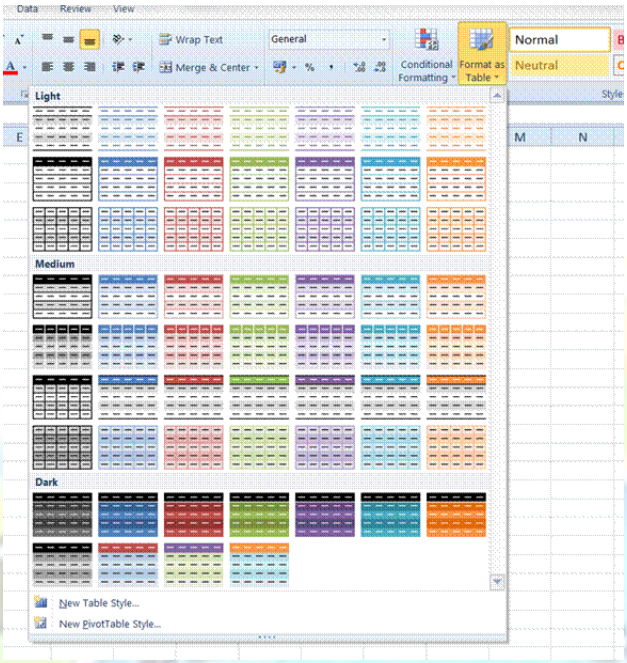
Format as Table

Format as table allows you to quickly format a rane of cells and convert it to a table by choosing a pre-defined style.

Format a range of cells

- ✓ Select the range to which to apply the formatting
- ✓ On the ***Home tab*** in the ***Font group,*** select ***Format as Table***

A drop-down list of the available formatting is displayed



- ✓ Scroll down through the options to view all the available AutoFormats
- ✓ Select a formatting style from the list by clicking on it once
- ✓ Click ***OK***

Formative Assessment

- ✓ Open the ***Functions*** workbook
- ✓ Change the alignment of the text of the names of subjects
- ✓ Add borders and shading to the cells containing the names of subjects
- ✓ Save and close the workbook

PRINT A SPREADSHEET

Outcome

Print a spreadsheet

Assessment Criteria

- ✓ The page setup of a spreadsheet is changed: Page scaling to fit the page, margins
- ✓ Header and footer information is added to a spreadsheet and modified: At least two of the following: title, date, time, page numbers, spreadsheet information
- ✓ Spreadsheet is previewed to check that the presentation is in accordance with the given specification
- ✓ The spreadsheet is printed

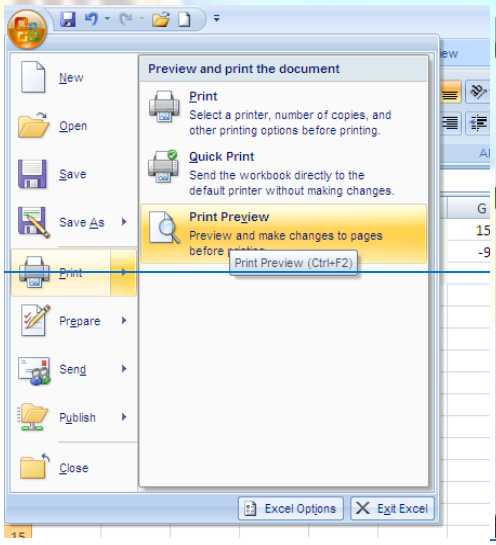
Print ~~Preview~~Your Worksheet

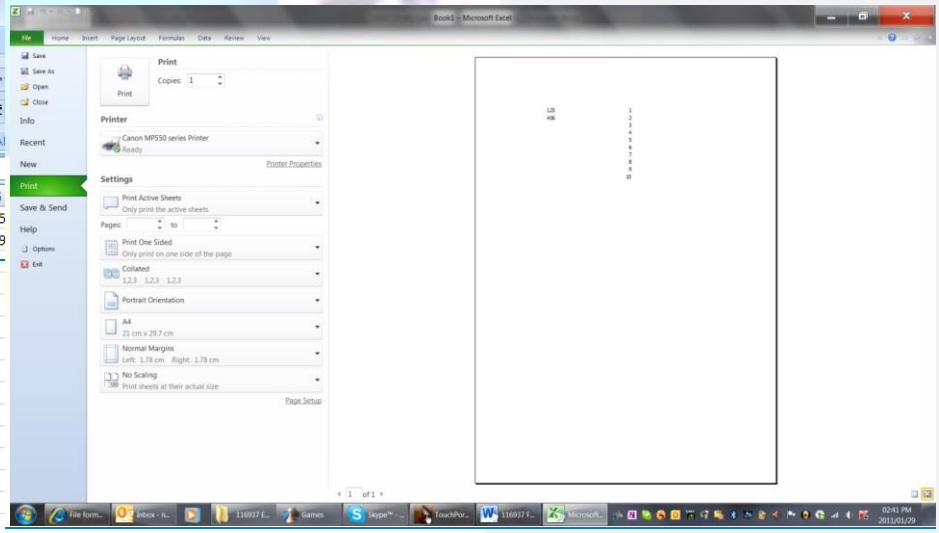
Whenever you want to print a worksheet, always first go to print preview to see what your worksheet will look like when it is printed.

Preview your worksheet

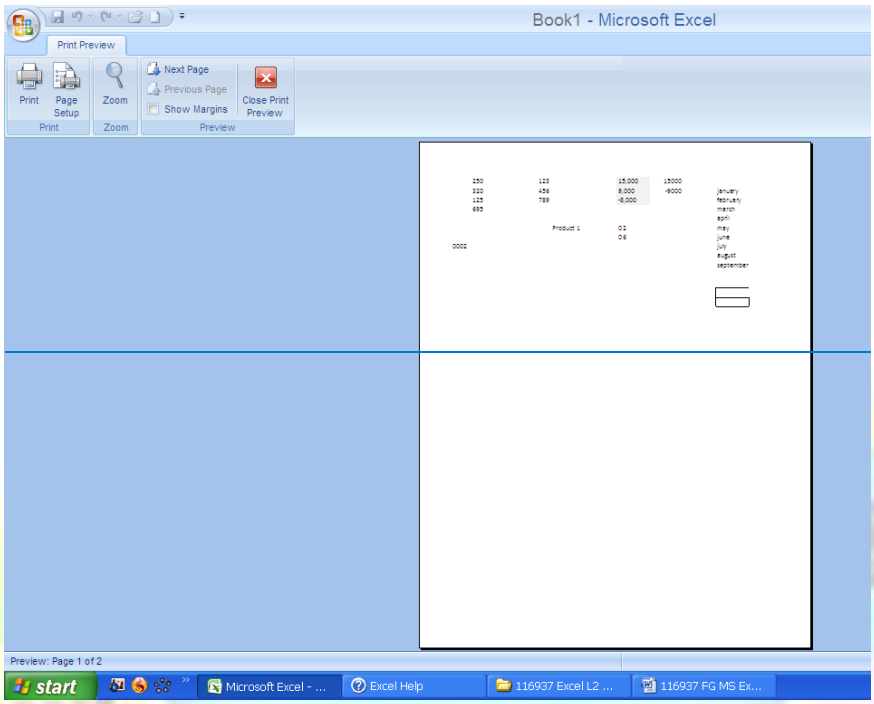
Formatted: Centered, Space Before: 6 pt, After: 6 pt

- ✓ Go to the ***File*** tab and click ***Print***
- ✓ The Preview is shown on the right
- ~~✓ Click the Microsoft Office Button , point to the arrow next to Print, and then click Print Preview.~~





- ✓ On the File menu, point to Print, and then click Print Preview.
- ✓ Click the buttons on the Ribbon to preview the page or make changes before you print.
- ✓ To preview the next and previous page, in the ***Preview*** group, click ***Next Page*** and ***Previous Page***.
- ✓ To view page margins, in the ***Preview*** group, select the ***Show Margins*** check box.
- ✓ This displays the margins in the ***Print Preview*** view. To make changes to the margins, you can drag the margins to the height and width that you want. You can also change the column widths by dragging handles at top of print preview page.



~~Printing The Document~~

Printing options

- ✓ Go to the ***File*** tab and click ***Print***
- ✓ Your printing options will be displayed

Print selection

Select the text that you want to print

- ✓ Go to the ***File*** tab and click ***Print***
- ✓ Click the arrow next to print active sheets
- ✓ Select ***Print Selection***

Print active sheets

- ✓ Select this option to print only the active sheets

OR

- ✓ Select the pages you want to print

Print one sided

- ✓ This option will print only one side of the page.

Formatted: Heading 4, Justified, None, No bullets or numbering, Don't keep with next

Formatted: Normal, No bullets or numbering

Formatted: Heading 4, Justified, None, No bullets or numbering, Don't keep with next

Formatted: Bulleted + Level: 1 + Aligned at: 0,63 cm + Indent at: 1,26 cm

Formatted: Normal, No bullets or numbering

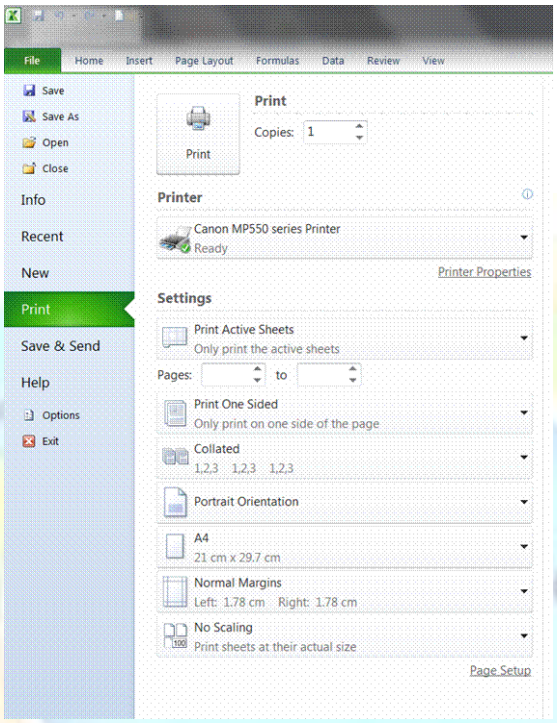
Formatted: Bulleted + Level: 1 + Aligned at: 0,63 cm + Indent at: 1,26 cm

Formatted: Heading 4, Justified, Don't keep with next

Formatted: List Bullet 2, No bullets or numbering

✓ To print both sides, select print on both sides

Formatted: Normal



Collated

Will collate the pages when you print more than one copy of the document

Orientation

Use this option to change the orientation of your workbook to portrait or landscape

A4

This option allows to select the size of the page

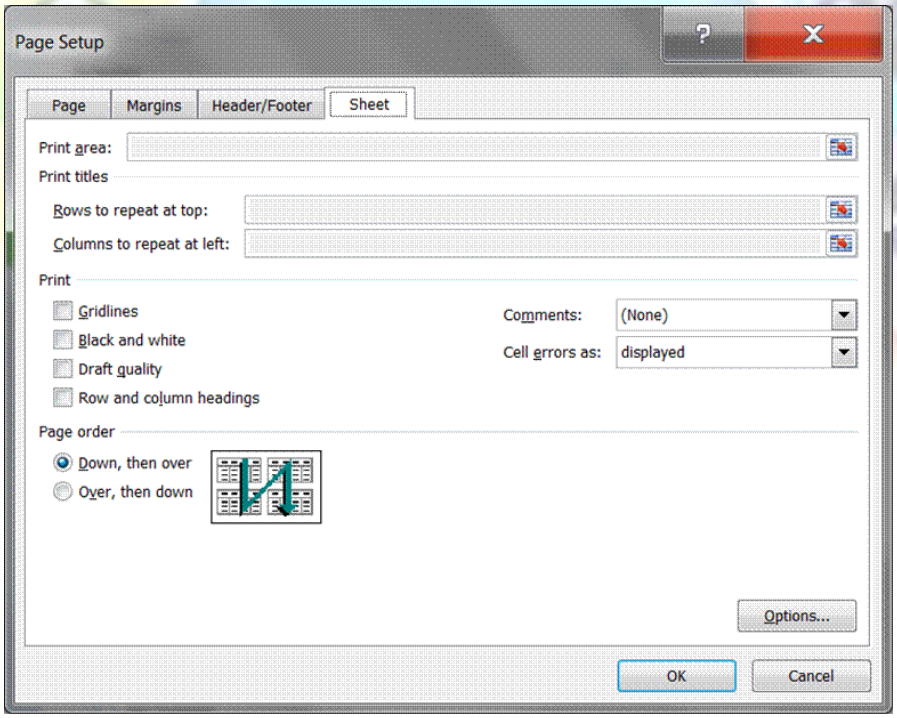
Margins

Select the size of the margins for your printed workbook

Page setup

Print gridlines

- ✓ Click ***Page Setup*** and select the ***Sheet*** tab
- ✓ Click the ***Print Gridlines*** box



Formatted: Heading 4, Justified, Don't keep with next
Formatted: Normal
Formatted: Heading 4, Justified, Don't keep with next
Formatted: Normal
Formatted: Heading 4, Justified, Don't keep with next
Formatted: Normal
Formatted: Heading 4, Justified, Don't keep with next
Formatted: Normal
Formatted: Heading 4, Justified, Don't keep with next
Formatted: List Bullet 2, No bullets or numbering
Formatted: Font: 10 pt, Not Bold, English (United Kingdom)
Formatted: Font: 10 pt, Not Bold, English (United Kingdom)
Formatted: Font: 10 pt, Not Bold, English (United Kingdom)
Formatted: Normal

Print Row Labels On All The Sheets

- ✓ Click ***Page Setup***, and then click the ***Sheet*** tab.
- ✓ Click Columns to repeat at left, and then enter the entire columns that contain the row labels.

To Print Column Headings On All The Sheets

- ✓ Click ***Page Setup***, and then click the ***Sheet*** tab.
- ✓ Click Rows to repeat at top, and then enter the rows that contain the column labels. Restore a split window to a single pane

Add headers or footers to your workbook

- ✓ Click ***Page Setup***, and then click the ***Header/Footer*** tab.
- ✓ Enter the details for the header or footer as required ~~a partial or entire worksheet or workbook~~
- ~~✓ Do one of the following:~~
- ~~✓ To print a partial worksheet, click the worksheet, and then select the range of data that you want to print.~~
- ~~✓ To print the entire worksheet, click the worksheet to activate it.~~
- ~~✓ To print a workbook, click any of its worksheets.~~
- ~~✓ Click ***Microsoft Office Button*** , and then click ***Print***.~~
- ~~✓ ***Keyboard shortcut***: You can also press CTRL+P.~~
- ~~✓ Under ***Print what***, select an option to print the selection, the active sheet or sheets, or the entire workbook.~~

~~***Note: If a worksheet has a defined print area, Excel will print only the print area. If you don't want to print a defined print area, select the Ignore print areas check box.***~~

Formatted: Heading 4, Justified, None, Don't keep with next

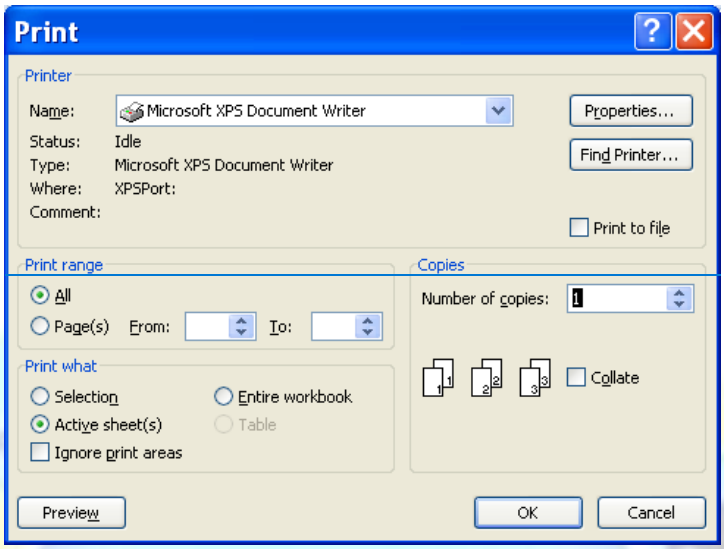
Formatted: Heading 4, Justified, None, Don't keep with next

Formatted: List Bullet 2, Indent: Left: 1,13 cm, No bullets or numbering, Tab stops: 1,13 cm, List tab

Formatted: Heading 4, Justified, Don't keep with next

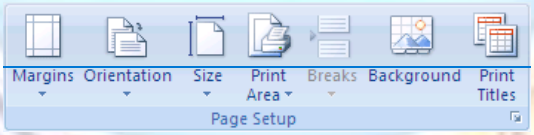
Formatted: List Bullet 2, Indent: Left: 1,13 cm, No bullets or numbering, Tab stops: 1,13 cm, List tab

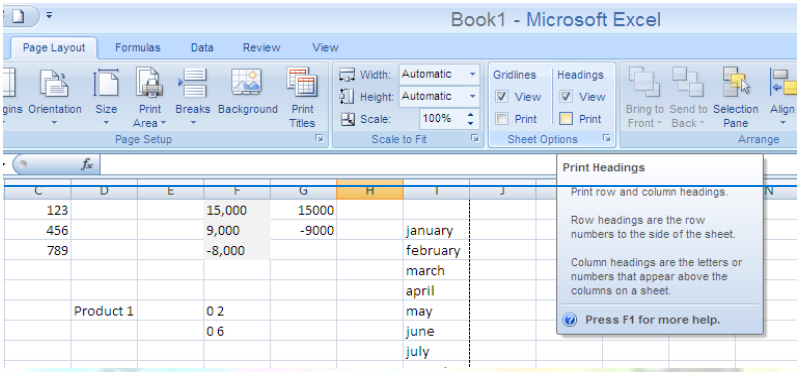
Formatted: Left, Indent: Left: 1,27 cm, Right: 1,32 cm, Space Before: 12 pt, After: 12 pt, No widow/orphan control



Print row and column headings

- ✓ Select the worksheet or worksheets that you want to print.
- ✓ On the ***Page Layout*** tab, in the ***Sheet Options*** group, select the ***Print*** check box under ***Headings***.





~~Print with or without cell gridlines~~

~~To make a printed worksheet or workbook easier to read, you can print the worksheet or workbook with gridlines displayed around the cells.~~

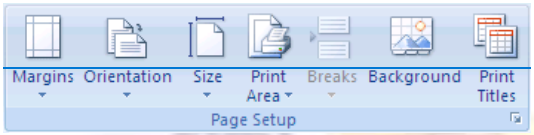
- ~~Select the worksheet or worksheets that you want to print.~~
- ~~On the Page Layout tab, in the Sheet Options group, select the Print check box under Gridlines.~~
- ~~Click Microsoft Office Button~~  ~~, and then click Print.~~
- ~~Keyboard shortcut: You can also press CTRL+P.~~

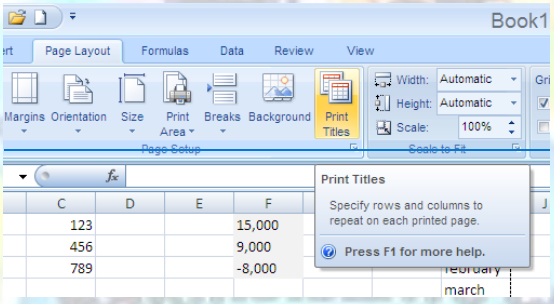
~~Note: Worksheets print faster if you print without gridlines.~~

Formatted: Left, Indent: Left: 1,27 cm, Right: 1,32 cm, Space Before: 12 pt, After: 12 pt, No widow/orphan control

Print row or column labels on every page

- ✓ Select the worksheet or worksheets that you want to print.
- ✓ On the Page Layout tab, in the Page Setup group, click Print Titles.





- ✓ On the Sheet tab, in the Page Setup dialog box, do one or both of the following:
- ✓ In the Rows to repeat at top box, type the reference of the rows that contain the column labels.
- ✓ In the Columns to repeat at left box, type the reference of the columns that contain the row labels.
- ✓ Click Print.

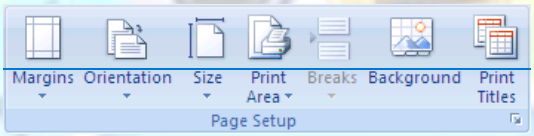
♦—

Print landscape or portrait

You can change the orientation of a worksheet page directly in the worksheet, so that you can see how your worksheet will be printed while you work, or you can select the orientation in the Printer Properties dialog box when you are ready to print.

Change the page orientation of worksheets while you work

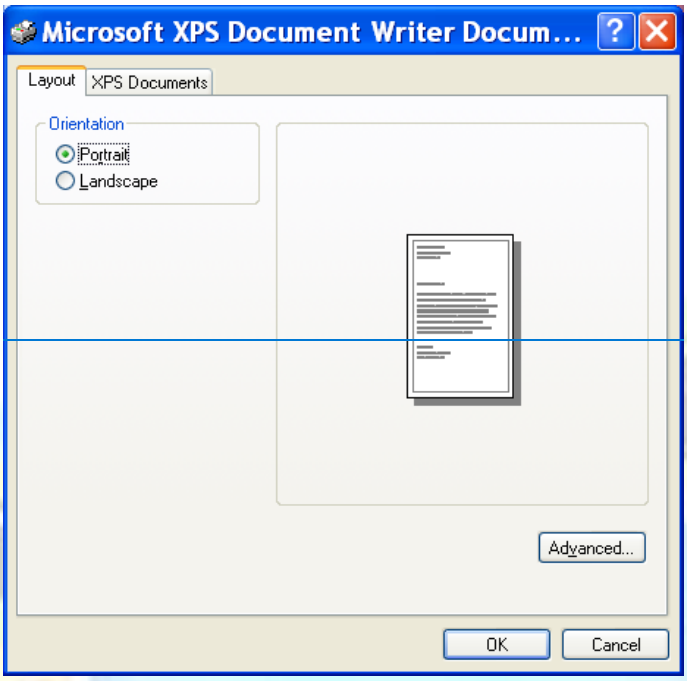
- ✓ Select the worksheet or worksheets for which you want to change the orientation.
- ✓ On the Page Layout tab, in the Page Setup group, click Orientation, and then click Portrait or Landscape.



Change the page orientation in the Printer Properties dialog box

Do one of the following:

- ✓ To print a partial worksheet, click the worksheet, and then select the range of data that you want to print.
- ✓ To print the entire worksheet, click the worksheet to activate it.
- ✓ To print a workbook, click any of its worksheets.
- ✓ Click Microsoft Office Button , and then click Print.
- ✓ Keyboard shortcut: You can also press CTRL+P.
- ✓ Under Printer, click Properties.
- ✓ On the Layout tab, under Orientation, click Portrait or Landscape.
- ✓ Click OK.
- ✓ In the Print dialog box, select any other options that you want, and then click OK.



Print several worksheets at once

Select the worksheets that you want to print.

- ✓ Click Microsoft Office Button , and then click Print.
- ✓ Keyboard shortcut: You can also press CTRL+P.

Print an Excel table

- ✓ Click a cell within the table to activate the table.
- ✓ Click ***Microsoft Office Button*** , and then click ***Print***.
- ✓ ***Keyboard shortcut***: You can also press CTRL+P.
- ✓ Under ***Print what***, select ***Table***.

~~Print a workbook to a file~~

- ~~Click Microsoft Office Button~~  ~~, and then click Print.~~
- ~~Keyboard shortcut: You can also press CTRL+P.~~
- ~~In the Name box, select the printer on which you want to print the file.~~
- ~~Select the Print to file check box, and then click OK.~~
- ~~In the Print to File dialog box, under Output File Name, type a name for the file that you want to print.~~

~~Note: If you print a workbook to a file so that you can later print the file on a different type of printer from the one that was originally used to print the document, the page breaks and font spacing may change.~~

Formatted: Left, Indent: Left: 1,27 cm, Right: 1,32 cm, Space Before: 12 pt, After: 12 pt, No widow/orphan control

Formative Assessment

Print your ***Budget*** workbook

EVALUATE A SPREADSHEET

Outcome

Evaluate a spreadsheet

Assessment Criteria

- ✓ The spreadsheet is evaluated for compliance with a given problem, appropriate formatting, readability, legibility, presentation, accuracy, and data integrity
- ✓ The spreadsheet is modified if required and compliance with the brief is confirmed

Check Your Work

As with any document, it is important to check a spreadsheet carefully for spelling errors before distributing it, either electronically or by print.

As well as checking spelling in a workbook, you should also make sure that the formula you have used and the data you entered are correct. To help check formulas, you can view and print a copy of a worksheet with formulas displayed in place of the results of calculations.

Check spelling

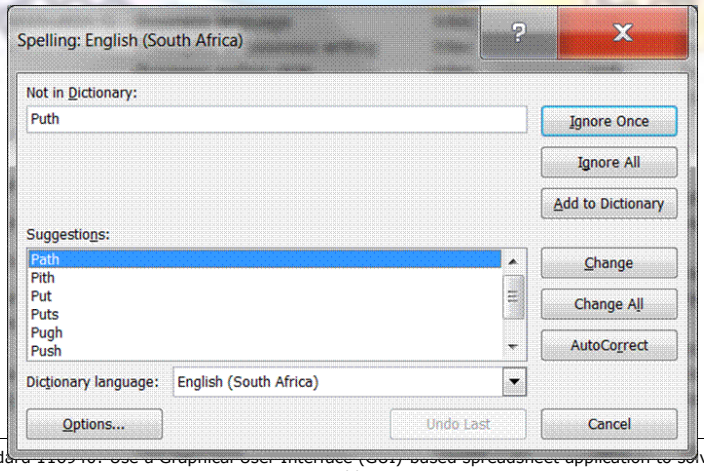
- ✓ From the ***Review*** tab, ***Proofing*** group, select ***Spelling***

MS Excel will check the spelling of the document

- ✓ When Excel finds a possible spelling error, make your changes in the Spelling dialogue box.

You can:

- ✓ Ignore the error
- ✓ Ignore all
- ✓ Add the word to the dictionary
- ✓ Change the word
- ✓ Change all similar word
- ✓ Use Autocorrect

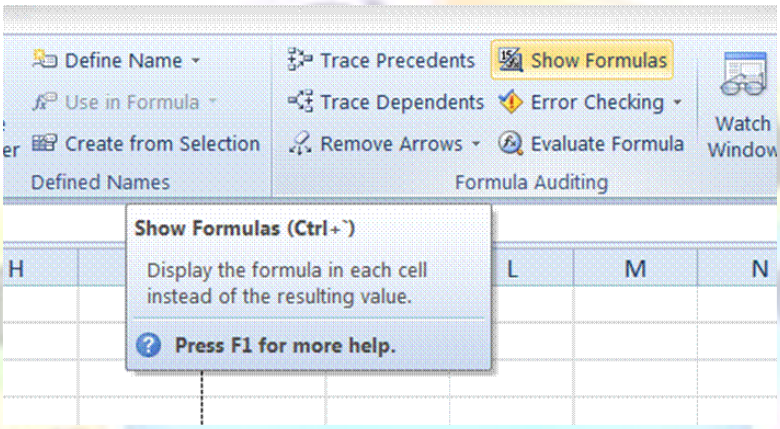


Show Formulas in Worksheet Cells

If you need to validate or edit a worksheet, you may find it useful to display formulas rather than results in the worksheet cells.

Show formulas in place of formula result

- ✓ From the ***Formula*** tab, ***Formula Auditing*** group, select ***Show Formulas***
- ✓ The formulas will display in the cells rather than the value



Note	***If formulas are shown in cells on-screen, they will also appear in place of data when the worksheet is printed.***

Error Checker

Errors can be marked and corrected in two ways: one error at a time (like a spelling checker), or immediately when they occur on the worksheet as you enter data. Either way, a triangle appears in the top-left corner of the cell when an error is found.

The Error Checker works rather like a grammar checker. It applies certain rules in order to check your formulas for problems. Like a grammar checker, this does not mean that your worksheets will be free from errors, but it can be a useful tool to use to resolve problems.

You can review any problems either individually or all at once. Excel identifies a cell with a potential problem by displaying a green triangle in the top left-hand corner of the cell.

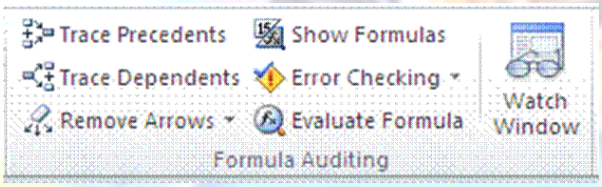
You can resolve an error by using the options that Excel displays, or you can ignore the error by clicking Ignore Error. If you ignore an error in a particular cell, the error in that cell does not appear in further error checks. However, you can reset all previously ignored errors so that they appear again.

Cell with a formula error

Correct common formula errors one at a time

Note	***If the worksheet has previously been checked for errors, any errors that were ignored will not appear until ignored errors have been reset.***

- ✓ Select the worksheet that you want to check for errors.
- ✓ On the ***Formulas*** tab, in the ***Formula Auditing*** group, click the ***Error Checking*** in-group button.



The ***Error Checking*** dialogue box will display when errors are found.

If you have previously ignored any errors, you can check for those errors again by doing the following:

- ✓ Click ***Options***.
- ✓ In the ***Error Checking*** section, click ***Reset Ignored Errors***.
- ✓ Click ***OK***.
- ✓ Click ***Resume***.

Note	***Resetting ignored errors resets all errors in all sheets in the active workbook.***

- ✓ Position the ***Error Checking*** dialogue box just below the formula bar
- ✓ Click one of the action buttons in the right side of the dialog box. The available actions differ for each type of error.

Note	***If you click Ignore Error, the error is marked to be ignored for each consecutive check.***

- ✓ Click ***Next***.
- ✓ Continue until the error check is complete.

Correct common formula errors on the worksheet

- ✓ Click the ***File*** tab.
- ✓ Click ***Options***, and then click the ***Formulas*** category.
- ✓ Under ***Error Checking***, make sure that the ***Enable background error checking*** check box is selected.
- ✓ To change the color of the triangle that marks where an error occurs, in the ***Indicate errors using this colour box***, select the color that you want.

✓ Click ***OK*** to close the ***Excel Options*** dialogue box.

To correct an error in a worksheet, select a cell with a triangle in the top-left corner of a cell.

- ✓ Next to the cell, click the ***Error Checking*** button  that appears, and then click the option that you want. The available commands differ for each type of error, and the first entry describes the error.
- ✓ Repeat the two preceding steps.

Note	***If you click Ignore Error, the error is marked to be ignored for each consecutive check.***

Formative Assessment

Evaluate all your worksheets:

- ✓ Is the worksheet readable and pleasing to the eye?
- ✓ Are the details accurate?
- ✓ Do spell checks
- ✓ Do error checks