Module 4 Spreadsheets





A first look at Excel 2007

Starting the Excel program

• Click on the Start button (bottom-left of the screen). Click on All Programs. Click on Microsoft Office. Click on Microsoft Office Excel 2007. The Excel window will be displayed, as illustrated.

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What is the Active Cell?

 Excel identifies the active cell with a bold outline around the cell and highlighting the column heading letter and row heading number of the cell. In the following example, **B2** is the active cell:

	B2	-	(•	<i>f</i> _x =2000)+2
	А	В	С	D	E
1					
2		2002			
3					
4					

- In the above illustration, notice that **B2** is displayed in the **Name Box**, and the contents of the cell is displayed in the Formula Bar. In this case, 2002 is a calculated value, 2000+2.
- In order for you to enter data into a cell, it needs to be the active cell. The active cell will accept keyboard entries. You can make a cell active by clicking on it or navigating to it.





ICDL Manual



Microsoft Excel

The Excel cell referencing system

• An Excel worksheet is made up of individual cells, each of which had a unique reference.

Look at the illustration . We have clicked on cell **B3**,

which means that the cell is in **column B, row 3**.

Entering numbers and text

• Click on cell **B2**, as illustrated.



• Type in the word '**Region**'. Press the **Enter** key. When you press the **Enter** key you will automatically drop down to the next cell within the worksheet. Your screen will now look like this.

	B3	-		f_{x}	
	А	В	С	D	
1					
2		Region			
3					
-					

- The active cell is now **B3**. Type in the word '**Dammam**'. Press the **Enter** key.
- The active cell is now **B4**. Type in the word '**Khobar**'. Press the **Enter** key.
- The active cell is now **B5**. Type in the word '**Riyadh**'. Press the **Enter** key.
- The active cell is now **B6**. Type in the word '**Gizan**'. Press the **Enter** key.

Your screen will now look like this:

	А	В	С
1			
2		Region	
3		Dammam	
4		Khobar	
5		Riyadh	
6		Gizan	
7			

	D7	-	0	f_{x}
	А	В	С	D
1				
2		Region	Sales	
3		Dammam	10488	
4		Khobar	11973	
5		Riyadh	13841	
6		Gizan	16284	
7				

• Click on cell **C2**. Type in the word '**Sales'**. and press the **Enter** key.

- Type in the number **10488** and press the **Enter** key.
- Type in the number **11973** and press the **Enter** key.
- Type in the number **13841** and press the **Enter** key.
- Type in the number **16284** and press the **Enter** key.

Your screen will now look like this:



Summing a column of numbers

- Click on cell **B7** and type in the word ' **Total**'.
- Click on cell C7. Click on the Formulas

Button tab, and then click on the **AutoSum**

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	<i>fx</i> Insert Function	Σ Auto β Rece β Fina	oSum ▼ ently Used ▼ ncial ▼	 Logical × Text × Date & Time × Function Library 	🙀 Lookup 🖗 Math & 🎢 More Fu	& Referenc Trig * Inctions *	e -
					_		

Σ AutoSum *

	STDEV	•	• (• X 🗸	$f_{\mathcal{K}}$	=SUN	A(C3:C6)
	А	В	С		D	E
1						
2		Region	Sales			
3		Dammam	10488			
4		Khobar	11973			
5		Riyadh	13841			
6		Gizan	16284			
7			=SUM(C3:	C6)		
8			SUM(nun	nber	1 ; [num	nber2];)

Your screen likes this:

• Press the **Enter** key and Excel will automatically add up the column of numbers, as illustrated.

	C7	-	0	f _x
	А	В	С	
1				
2		Region	Sales	
3		Dammam	10488	
4		Khobar	11973	
5		Riyadh	13841	
6		Gizan	16284	
7				
8				

The best thing about Excel is that if you make changes to the numbers then totals and other calculations are automatically updated. Click on cell **C4** and type in a different number. When you press the **Enter** key you will see that the total value displayed in cell **C7** changes to recalculate the total vales of the sales.

Default text and number alignment

• If you look carefully at what you have typed in you will see that by default text is aligned within a cell to the left, while numbers are aligned within the cell to the right. This makes sense, as normally text starts from the left of a page and it is the same within a cell. Numbers on the other hand normally align to the right. Think how you would write down a column of numbers on a page that you want to add up. Numbers align to the right.

Entering a date

• Click on cell A1. Enter the following information and then press the **Enter** key.



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Excel recognizes this as a date and automatically marks the cell as containing date information.

• Right click over the date you have just entered. From the popup menu displayed, select the **Format Cells** command, as illustrated.

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-	Home	In	sert	Page	Layout	For	mulas	Dat	а	Review	View	1	D
Pa	Cut	nt Pair	nter 🕞	Calibri B I	U - Fo	• 11	• A	A*		= =	≫r I≢ I≢ Alignm	ent	Vra /lei
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1	2/02/200	18						_					
2		*	Cut						_				
3		6	Cop	У									
4			<u>P</u> ast	e									
5			Past	e <u>S</u> pecial									
6			Inse	rt									
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9				r co <u>n</u> ten				_					
10			Filte	r									
11			Sort					•					
12		1	Inse	rt Co <u>m</u> me	ent								
13			Forn	nat Cells									
14			Pic <u>k</u>	From Dro	op-dowr	n List							

• This will display the Format Cells dialog box.

<u>Category:</u> General Number Currency Accounting Date Time Percentage Fraction Scientific Text Special Custom	Sample 2/02/2008 Type: 114/03/2001 14/03/2001 14/03/2001 14/03/2	
Date formats display	date and time serial numbers as date values. Date format	s that
begin with an asterisl	(*) respond to changes in regional date and time settings	that are
specified for the oper	rating system. Formats without an asterisk are not affected	d by
operating system set	tings.	Cancel

Microsoft Excel

• If you have time you can select a different type of date format, using the **Type** Section of the dialog box. Press the **OK** button to apply any changes you make.

Worksheets and Workbooks

• Look at the bottom-left of your screen and you will see the worksheet tabs displayed.

25	
<u>26</u> { ↓ ↓	M Sheet1 Sheet2 Sheet3
Ready	E

By default each workbook contains three worksheets. This is similar to a notebook that contains separate pages. Click on the **Sheet 2** worksheet tab and the second worksheet is displayed. Click on the **Sheet 3** worksheet tab and the third worksheet is displayed. Click on the **Sheet 1** worksheet tab and the first worksheet, containing your data is displayed again. As we will see later you can add or remove worksheets as well as reordering and renaming them.

Saving a workbook

• To save the workbook click on the **Save** icon (top-left part of your screen).



This will display the **Save As** dialog box.

Save As											[2 🗙
Save in:	📋 My Docum	nents					~	٩		×	Ľ	•
My Recent My Recent My Coments Desktop My Computer My Network My Network	Cyberink Gristant/CDC Why Deta So Why Belocks Why Practice Why Practice Why Practice Why Practice Why Stype C Why Stype C Why Stype S Why Web SR Why Web SR Prinade SP Samsung P Samsung P Samsung P	DVD surces F Files Heles Sontent Fictures tes Udio C Studio 3	⊇My Sharing I	Folders								
	File name:	Book1.xlsx							~			
	Save as type:	Excel Workb	ook (*.xlsx)						~			
Tools •								Sav	e		Canc	el

- Click on the **down arrow** next to the **Save in** section of the dialog box to navigate to the folder containing your sample files.
- Click within the **File name** section of the dialog box to name the file. In this case use the file name **My First Spreadsheet**.
- Click on the Save button the save the file to disk.

Closing a workbook

- To close the workbook,
- click on the **Office Button** (top-left of your screen), from the drop down options displayed
- , click on the **Close** command.





• The screen will now look like the illustration below. The Excel program is

open but no workbook is displayed.

• To close the Excel program,

Click on the **Close** icon this icon is the small Cross displayed at the top right of the Excel screen.

_ = X

Creating a new workbook

- Start the Excel program. Each time you start the Excel program, by default, it displays a new blank workbook containing three blank worksheets. Type in your **First Name** in to cell **A1**.
- To create a new workbook, press **Ctrl+N.** This is the keyboard shortcut for
- creating a new file. A new workbook will be created containing three worksheets. Type in your **Second Name** in to cell **A1**.
- Close both workbooks without saving your changes.

Opening a workbook

• Press **Ctrl+O** the keyboard shortcut to open an existing file.

Or click on the Microsoft Office Button

(top-left) and then click on the

Open command.

- This will display the **Open** dialog box. Click on the **down arrow** within the **Look in** section of the dialog box and navigate to the folder containing your sample files. Select a file called **Sales 2005**, and then click on the **Open** button to open the workbook.
- Open the workbook called **Sales 2006** and also a workbook called **Sales 2007**. You now have three open workbooks.

Switching between workbooks

• To switch to a particular Excel workbook, click on the relevant Excel Workbook icon displayed within the Windows **Taskbar** (across the bottom of the screen).

```
📓 Sales 2005, xlsx 🛛 🗿 Sales 2006, xlsx 🛛 🗿 Sales 2007, xlsx
```

TIP: You can use the **Alt+Tab** keyboard shortcut to switch between open programs.

• Close all open workbooks.



Saving a workbook using another name

• Open the workbook called Sales 2005.

Click on the **Microsoft Office Button** and the select the **Save As** command.



• In the **File name** section enter a new file name, in this case called **My**

Backup. Click on the **Save** button. You now have two copies of the same file, both containing the same information. This can be useful for making backups of your data or for retaining copies of a workbook with different versions of the data in each file.

Saving a workbook using a different file type

• Click on the **Microsoft Office Button** and the select the **Save As** command.

The **Save As** dialog is displayed. Click on the **down arrow** within the **Save as type** section of the dialog box. You can select the required file type from the drop down displayed.

File name:		Sales 2005.xlsx	~
	Save as type:	Excel WorkDook (*:xlsx)	Y
Tools -		Excel Workbook (*.xlsx) Excel Macro-Enabled Workbook (*.xlsm) Excel SP-2003 Workbook (*.xlsh) Excel SP-2003 Workbook (*.xls)	^
		XML Data (*.xml) Single File Web Page (*.mht; *.mhtml)	~

TIP: If you want to email a copy of an Excel 2007 workbook to someone that
 A has an earlier version of Excel, such as Excel 2003, then you may need to save the file in the Excel 97-2003 Workbook file format.

Alternatively, people with earlier versions of Excel can download additional free software from Microsoft allowing them to open and view (but not necessary edit), files created using Excel 2007.

• Other file type options include:

Text file:

Saving your worksheet as a plain text file will remove all the formatting you have added to your worksheet (such as bold, italics & underlining). It will also remove any pictures or other features such as tables. Only plain text will be saved. Be very careful about using this option.

l					
l		File <u>n</u> ame:	Book1.xlsx	~	
l		Save as <u>t</u> ype:	Excel Workbook (*.xlsx)	*	
	Tools		Excel Template (*.xltx) Excel Macro-Enabled Template (*.xltm) Excel 97-2003 Template (*.xlt) Text (Tab delimited) (*.txt)	^	Cancel
			Unicode Text (*.txt) XML Spreadsheet 2003 (*.xml)	~	

Template:

You normally save a workbook as a workbook file. You can however save a workbook as a template. This means that you can create new workbooks in the future, based on the templates you create.

		File <u>n</u> ame:	Buuk1.xbx	*	
		Save as <u>t</u> ype:	Excel Workbook (*.xlsx)	*	
	Tools 🔻		Single File Web Page (*.mht; *.mhtml) Web Page (*.htm; *.html) Evcel Tempate (*.ytv)	^	Cancel
L			Excel Macro-Enabled Template (*.xltm) Excel 97-2003 Template (*.xlt) Text (Tab delimited) (*.txt)	~	

CSV file:

This saves table data in a form that can be used by other programs. It is short for **Comma Separated Value**.

	File <u>n</u> ame:	Book1.x	lsx				4	~	
	Save as <u>t</u> ype:	Excel W	orkbook (*.xl	sx)			•	*	
 Tools 🔹)	Text (MS CSV (Ma CSV (MS DIF (Dat	5-DOS) (*.txt cintosh) (*.cs -DOS) (*.csv :a Interchang) ;v) e Format) (*.	.dif)			C a	ncel
		SYLK (Sy Excel Ad	/mbolic Link) (Id-In (*.xlam)	*.slk) I			•	v	

• Close any open dialog boxes and close all open worksheets.



Help

Getting help

Click on the

Microsoft Office Excel Help icon (towards the top-right of the screen).





- The **Excel Help** window is displayed.
- As you can see a wide range of help topics are displayed. Click on what's new link. You will see the following.

•Click on the

What's new in Microsoft Office Excel 2007

link. You will see the following.

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	- 🔎 Search 🕞	
Excel Help and How-to		^
Browse Excel Help		
What's new	Getting help	
Accessibility	File conversion and compatibility	
Workbook management	Worksheet and table basics	
Formula and name basics	Function reference	
Importing and analyzing data	Filtering, sorting, and conditionally formatting data	
Summarizing, consolidating, and outlining data	Validating data	
Importing data	PivotTable reports and PivotChart reports	



TIP: Click on the **Maximize** button within the top-right part of the dialog



 Spend a little time browsing what's new within this version of Excel.
 For instance if you click on the **Results Orientated User Interface** link you will see the following.

• When you have finished experimenting, close the **Excel Help** window.



Searching for Help

•You can search for help on a topic of particular interest. Press **F1** to display the **Excel Help** window. Within the text box near the top of the Excel Help window, type in a word or words relating to the help you need. For instance, to display help about printing, type in the word '**printing**'

(← → ∞ (↓) ▲ ▲ ▲ ◆ € Printing Printing 0 Search →	🕐 Excel Help	
Printing - O Search	🔄 🏵 🙁 🗇 🖆 🕯	🛱 Aš 🧼 🔍
rinding Search •	Printing	🝷 🔎 Search 🝷

- Click on the Search button next to the text input box. You will see a range of topics related to printing. Clicking on any of these topics will display more information about printing.
- Close the Excel Help

Window when you have finished

experimenting.

The Help 'Table of Contents'

• Press **F1** to display the Excel Help window. Click on the **Table of Contents** icon (the book icon displayed within the Excel Help window toolbar).





Excel Help			
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• You will now see a Table of Contents displayed down the left side of the Excel Help window.

Printing a Help topic

• Display an item of interest within the Excel Help window. Click on the **Print** Icon displayed within the Excel Help toolbar.

Excel Help
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• Close all open dialog boxes before continuing.

Alt key help

- Press CTRL+N to open a new blank workbook
- Click on the **Home** tab.

• Press the **Alt** key and you will see numbers and letters displayed over icons, tabs or commands, towards the top of your screen.



- If you type in a number or letter you will activate a command. For instance in the example shown, the number **1** is displayed over the **Save** icon. Type in **1** and you will see the **Save As** dialog box displayed. Close this dialog box.
- Press the **Alt** key again and you will see an **N** displayed over the **Insert** tab. Pres **N** and you will see the contents of the **Insert** tab displayed.

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Using Excel 2007

Selection techniques

Why are selection techniques important?

• Often when you want to do something within Excel you need to select an item first. This could involve selecting a cell or multiple cells. It many need you to select a row, a column or even the entire table.

Selecting a cell

Create this table

		А	В	С	D	E	F	G
h	1							
	2							
	3		Country	Sales 2003	Sales 2004	Sales 2005	Sales 2006	Sales 2007
	4		India	102	129	189	193	201
	5		Canda	98	120	121	132	143
	6		Usa	109	110	109	102	94
	7		United Kingdom	92	99	98	95	85
	8		Austrialia	92	95	96	92	83
	9		New Zealand	32	43	54	74	84
	10		China	67	79	83	88	93
	11							

Selecting a range of connecting cells

We want to select the cells from C3 to G3. To do this click on the first cell within the range, i.e. C3. Then press down the Shirt key (and keep it held down). Click on cell G3. When you release the Shift key the cell range will remain selected, as illustrated.

Selecting a range of non-connecting cells

• Sometimes we need to select multiple cells that are not next to each other, as in the example below, where **C3**, **E3** and **G3** have been selected.



To do this click on the first cell, i.e. **C3**. Then while keeping the **Ctrl** key pressed click on the cells **E3** and **G3**. When you release the **Ctrl** key the cells will remain selected.

Selecting the entire worksheet

 To select the entire worksheet, click on the intersection between the column and row referencing numbers.



Selecting a row

/

• To select a row, say the row relating to Canada, click on the relevant row number displayed down the left side of the worksheet.

_								
3	C	ountry	Sales 2003	Sales 2004	Sales 2005	Sales 2006	Sales 2007	
4	Ir	ndia	102	129	189	193	201	
5	C	anada	98	120	121	132	143	
6	- U	ISA	109	110	109	102	94	_

Selecting a range of connecting rows

• To select the rows relating to Canada, USA, UK and Australia. First click on the row number next to **Canada** (i.e. **5**). Press down the **Shift** key and keep it

pressed. Click on the row number relating to **Australia** (i.e. **8**). When you release the **Shift** key the multiple rows remain selected.

3		Country	Sales 2003	Sales 2004	Sales 2005	Sales 2006	Sales 2007	
4		India	102	129	189	193	201	
5		Canada	98	120	121	132	143	
6		USA	109	110	109	102	94	
7		United Kingdom	92	99	98	95	85	
8		Australia	92	95	96	92	93	
9	-	New Zealand	32	43	54	74	84	
10		China	67	79	83	88	93	

Selecting a range of non-connected rows

 Click on the row number 3 and press down the Ctrl key. Click on row number 5, then row number 7 and finally number 9. Release the Ctrl key and the rows will remain selected.

2						
3	Country	Sales 2003	Sales 2004	Sales 2005	Sales 2006	Sales 2007
4	India	102	129	189	193	201
5	Canada	98	120	121	132	143
6	USA	109	110	109	102	94
7	United Kingdom	92	99	98	95	85

Selecting a column

• To select the column containing data relating to **2003**, click on the column header C, as illustrated.

	А	В	С	D	E	F	G	
1								
2								
3		Country	Sales 2003	Sales 2004	Sales 2005	Sales 2006	Sales 2007	

Selecting a range of connecting columns

To select the columns relating to the sales figures for 2003-2006, first select column C. Press the Shift key and while keeping it pressed select column F. When you release the Shift key the columns will remain selected.





Selecting a range of non-connecting columns

To select the columns relating to 2003, 2005 and 2005, first select the column C. Press the Ctrl key and keep it pressed. Select column E and then select column G. Release the Ctrl key and the columns remain selected.

	А	В	С	D	E	F	G
1							
2							
3		Country	Sales 2003	Sales 2004	Sales 2005	Sales 2006	Sales 2007

• Close the workbook without saving any changes you may have made.

Manipulating rows and columns

Inserting rows into a worksheet

• We need to insert a row for **Japan** between the row for **Canada** and the row for the **USA**. Select the row for the **USA**, as illustrated.

4	india	102	129	189	193	201
5	Canada	98	120	121	132	143
6	USA	109	110	109	102	94
7	United Kingdom	92	99	98	95	85
8	Australia	92	95	96	92	93

• Right click over the selected row and from the popup menu displayed select the **Insert** command.

6	USA	109	V	
7	United Kingdom	92	60	cu
8	Australia	92	43	<u>С</u> ору
9	New Zealand	32	E	<u>P</u> aste
10	China	67		Paste <u>Special</u>
11	Pakistan	24		Insert
12	Mexico	12		<u>D</u> elete
13				Clear Contents
14			_	

• The table will now look like this.

3		Country	Sales 2003	Sales 2004	Sales 2005	Sales 2006	Sales 2007	
4		India	102	129	189	193	201	
5		Canada	98	120	121	132	143	
6								
7	I	USA	109	110	109	102	94	
8		United Kingdom	92	99	98	95	85	
-								

• Click on cell **B6** and type in the word '**Japan**'. Enter the following sales figures for **Japan**.

Country	Sales 2003	Sales 2004	Sales 2005	Sales 2006	Sales 2007
India	102	129	189	193	201
Canada	98	120	121	132	143
Japan	89	93	102	109	120

Inserting columns into a worksheet

• We want to insert a column for sales figures in 2002, which needs to be inserted before the **2003** column. Select the column relating to **2003**, as illustrated.

1 Image: Country intervention 3 Country intervention Sales 2003 Sales 2004 Sales 2005 Sales 2006 Sales 2006		А	В	С	D	E	F	G
2 3 Country Sales 2003 Sales 2004 Sales 2005 Sales 2006 Sales 200	1							
3 Country Sales 2003 Sales 2004 Sales 2005 Sales 2006 Sales 200	2							
	3		Country	Sales 2003	Sales 2004	Sales 2005	Sales 2006	Sales 2007

• Right click over the selected column and from the popup menu displayed select the **Insert** command. The column will be inserted, as illustrated.

	А	В	С	D	E	F	G	Н	
1									•
2									
3		Country		Sales 2003	Sales 2004	Sales 2005	Sales 2006	Sales 2007	
		···		Surce Loos	54125 2001	54125 2005	54125 2000	Surce Leer	

• Enter the following data into the column.

	А	В	С	D	E	F	G	н
1								
1								
2								
3		Country	Sales 2002	Sales 2003	Sales 2004	Sales 2005	Sales 2006	Sales 2007
4		India	93	102	129	189	193	201
5		Canada	89	98	120	121	132	143
6		Japan	74	89	93	102	109	120
7		USA	92	109	110	109	102	94
8		United Kingdom	86	92	99	98	95	85
9		Australia	84	92	95	96	92	93
10		New Zealand	23	32	43	54	74	84
11		China	54	67	79	83	88	93
12		Pakistan	23	24	34	43	54	73
13		Mexico	10	12	24	20	23	32

Deleting rows within a worksheet

• Select the row relating to **Canada**. Right click over the selected the popup menu displayed select the **Delete** command.



4		-	uiu	 ±0/2	127	
5	[ſ	v	Cut	 18	120	
6	-	80	cui	9	93	
7		43	<u>С</u> ору	9	110	
8			<u>P</u> aste	2	99	
9			Paste <u>Special</u>	2	95	
10			Insert	2	43	
11			<u>D</u> elete	7	79	
12			Clear Contents	4	34	

• The row is deleted without any additional warning.



TIP: To delete multiple connected rows, just the **Shift** key trick to select multiple rows and then right click to delete the rows. To delete multiple non- connected rows, use the **Ctrl** key trick to select the multiple rows and then right click to delete the rows.

Deleting columns within a worksheet

• Select the column relating to **Sales 2007**. Right click over the selected column and from the popup menu displayed select the **Delete** command. The column is deleted without any additional warning.



TIP: To delete multiple connected columns, use the **Shift** key trick to select multiple columns and then right click to delete the columns. To delete multiple non-connected columns, use the **Ctrl** key trick to select the multiple columns and then right click to delete the columns.

Modifying column widths

 Select a column, such as the Country column Right click over the selected column and from the popup menu displayed select the Column Width command.

-						
3	Country	X	Cu <u>t</u>	4	Sales 2005	S
4	India	h	Copy	29	189	
5	Japan	r.	Paste	93	102	
6	USA		Paste Special	10	109	
7	United I		Incat	99	98	
8	Australia		insert	95	96	
9	New Zea		Delete	43	54	
10	China		Clear Co <u>n</u> tents	79	83	
11	Pakistan		Format Cells	34	43	
12	Mexico		<u>C</u> olumn Width	24	20	
13			<u>H</u> ide			
14			Unhide			
10		_				

• The **Column Width** dialog box is displayed which allows you to set the column width. Click on the **Cancel** button to close the dialog box.

Microsoft Excel



Column Width 🛛 ? 🔀						
<u>C</u> olumn width:	14.86					
ОК	Cancel					

Modifying column widths using 'drag and drop'

 Move the mouse pointer to the line between the header for column B and column C, as illustrated below.

			>		
	А	В		С	
1			1		
2					
3		Country		2003	Sale
4		India		93	

• Press the mouse button and keep it pressed.

The pointer changes to a black cross with double arrows when placed on the line between two columns.

• Move the mouse pointer left or right to make the column narrower or wider. Release the mouse button and the column width will change as required.

Automatically resizing the column width to fit contents

 Resize all the columns so that they are too narrow to properly display the data contained within the columns. Your screen will look similar that the illustration below.

	А	В	С	D	E	F	G	Н	
1									S
2									_
3		Country	Sales 2	Sales 200	Sales	Sales 2	Sales 20	Sales 20)07
4		India	93	102	129	189	193	201	
5		Japan	74	89	93	102	109	120	

To automatically resize each column width to fit the contents, select all the columns containing data. Double click on the junction between one of the column header headers within the selected columns.

Modifying row heights

- Select one or more rows and then right click over the selected row(s). From
- the popup menu displayed select the **Row Height** command.



The **Row Height** dialog is displayed allowing you to set the exact row height, as required.



17

TIP: If you click between any two row headers, you can drag the row height up or down as required, to modify the row height.

• Save your changes and close the workbook.

Manipulating cells and cell content

Copying a cell or range contents within a workbook.

Create this table

	D2 🔫	● f _×	113.98		
	А	В	С	D	E
1	Component Number	No in stock	Value each item	Total Value in stock	
2	100846	2	56.99	113.98	
3	1000332	0	28.38	0	
4	1000622	5	12.74	63.7	
5	1000847	2	32.99	65.98	
6	1000743	5	18.99	94.95	
7					

- Select a cell, range, row or column to copy. In this case select the range ${\bf B4}$ to ${\bf E4}.$

	А	В	С	D	E
1	Stoc	k Levels			
2					
3					
4		Component number	No in stock	Value each item	Total value in stock
5		100846	2	56.99	113.98

• Press **Ctrl+C** to copy the selected range to the Clipboard.



TIP: To copy a selected item to the Clipboard, click on the Home tab and then click on the Copy icon in the Clipboard group on the Ribbon.

 Click at the location you wish to paste the data to. In this case click on cell **B14** and press the **Ctrl+V** keys to paste the data from the Clipboard.







Microsoft Excel



TIP: To copy a selected item to the Clipboard, click on the **Home** tab and then click on the **Paste** icon, in the **Clipboard** group on the **Ribbon**.

• Your data will now look like this.

4	Component number	No in stock	Value each item	Total value in stock
5	100846	2	56.99	113.98
6	100332	0	28.38	0
12				
13				
14	Component number	No in stock	Value each item	Total value in stock



TIP: You can use the same technique to copy entire rows or columns. Pressing **Ctrl+A** will select everything within a worksheet and allow you to copy the entire worksheet contents to the Clipboard when you press **Ctrl+C**.

Deleting cell contents

• Select the range that you wish to delete the contents of. In this case select the range **B10:E10**, as illustrated.

9	100743	5	18.99	94.95
10	100934	1	12.99	12.99
11				

• Press the **Del** key and the cell contents will be deleted.



TIP: You can use the same technique to delete entire rows or columns. Pressing **Ctrl+A** will select everything within a worksheet will allow you to delete the entire worksheet contents when you press the **Del** key.

Moving the contents of a cell or range within a workbook

• Select the range to wish to move and then cut it to the Clipboard. In this case select the data, as illustrated.

Component number	No in stock	Value each item	Total value in stock
100846	2	56.99	113.98
100332	0	28.38	0
100622	5	12.74	63.7
100847	2	32.99	65.98
100743	5	18.99	94.95

 Press the Ctrl+X keys to cut the selected data to the Clipboard. Click at the location you wish to move the selected data to, in this case click in cell B15, and press Ctrl+V, to paste the data.

TIP: You can use the same technique to move entire rows or columns.

• Save your changes and close the workbook.

Editing cell content

• It is easy to edit existing data within a cell or to replace existing data within a Cell. Open a workbook called **Editing**.

 Click on cell B3. Double click in front of the word 'Region' and insert the Word 'Sales' followed by a space. Press the Enter key to commit your changes to the cell.

• Click on cell **B7**. Double click on the word '**West**', to select it and then over

type the selected word with the word '**Central**'. Press the **Enter** key to commit your changes to the cell.

Undo and Redo

• Click on the **Undo** icon (top-left of your screen) to reverse the last action. Try it now.

• Click on the **Redo** icon (top-left of your screen) to reapply the last action. Try it now.



• Save your changes and close the workbook.

Copying the contents of a cell or range between worksheets (within the same workbook)

- Create this table in the figure.
- Select a cell, range, row or column to copy. In this case select the range B3:C8. Your screen will look something like this:
- Press Ctrl+C to copy the selected range to the Clipboard. worksheet tab (called Projections).

22	
22 I4 ↓ →	N 2007 Sales Projections
Ready	

You will now see the contents of the second, empty worksheet displayed.

 Click at the location you wish to paste the data to. In this case click on cell C4 and press the Ctrl+V keys to paste the data from the Clipboard. You have successfully copied selected data from one worksheet to another worksheet within the same workbook.

BEFORE CONTINUING: Click on the Undo icon to undo this copy. The

 $\ensuremath{\textbf{Undo}}$ icon is displayed towards the top-left of your screen. Leave the

workbook open and carry on to the next section.

		B3	- (*	f Region		
		А	В	С	D	E
	1	2007				
	2					
	3		Region	Sales		
	4		Europe	727,463		
	5		Africa	343,745		
	6		Asia	283,174		
	7		Australia	287,636		
1	8		America	831,173		
	9					





Moving the contents of a cell or range between worksheets (within the same workbook)

- Switch back to the first worksheet within the workbook called **Worksheet** manipulation.
- Select a cell, range, row or column to move. In this case select the range **B3:C8.**
- Press **Ctrl+X** to cut (move) the selected range to the Clipboard.
- Click on the second worksheet tab (called **Projections**).

22	
22 I4 ↓ ▶	2007 Sales Projections 100
Ready	

You will now see the contents of the second, empty worksheet displayed.

- Click at the location you wish to paste the data to. In this case click on cell C4 and press the Ctrl+V keys to paste the data from the Clipboard. You have successfully moved selected data from one worksheet to another worksheet within the same workbook.
- Save your changes and close the workbook.

Moving the contents of a cell or range between worksheets (in different workbooks)

- Save the previous table as **Between workbooks 1**
- Change the Font color of the table and Save as Between workbooks 2.
- Display the contents of the **Between workbooks 1** workbook.



NOTE: To switch between multiple open workbooks, click on the **View** tab and from within the **Windows** section of the Ribbon, click on the **Switch Windows** icon. This displays a drop down list allowing you to select the worksheet that you want to switch to.

		Bet	ween work	dooks 2.5	dsx - M	icrosof	t Excel								14		х
w	View	Dev	eloper	Acrobat											• -	137	×
ar	Q Zoom	100%	Zoom to Sclection	New Window	Arrange All	Freeze Panes	Split Hide	D View S 고급 Synchr	ide by Side onous Scrolling Window Position	Save Workspace	Sw	vitch dows ~	Macros				
		Zoom						Window			\checkmark	<u>1</u> Betv	veen work	books 2.x	lsx		
												2 Betv	veen work	books 1.x	Isx		*
	F	G	Н	1		J	K	L	M	N	0		р	Q	R		-

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 Within the between workbooks 1 workbook, select a cell, range, row or column to move. In this case select the range B3:C8. Your screen will look something like this:

	B3	- (*	f _* Region		
	А	В	С	D	E
1	2007				
2					
3		Region	Sales		
4		Europe	727,463		
5		Africa	343,745		
6		Asia	283,174		
7		Australia	287,636		
8		America	831,173		
9					

- Press **Ctrl+X** to cut (move) the selected range to the Clipboard.
- Switch to the second workbook (called **Between workbooks 2**).
- Click at the location you wish to paste the data to. In this case click on cell **C4** and press the **Ctrl+V** keys to paste the data from the Clipboard. You have

successfully moved selected data from one workbook to another Workbook.

Copying the contents of a cell or range between worksheets (in different workbooks)

- Select the data in the second workbook.
- Press **Ctrl+C** to copy the selected data to the Clipboard.
- Switch back to the first workbook.
- Click where you wish to paste the data to.
- Press **Ctrl+V** to paste the data from the Clipboard.

You have now copied selected data from one workbook to another workbook.

AutoFill

- Open a workbook called AutoFill.
- Click on cell B3 which contains the word Monday. Move the mouse pointer to the bottom-right corner of this cell and the mouse pointer shape will change to the shape of a small black cross. When the mouse pointer changes shape, press the mouse button down, and while keeping it pressed move slowly down the page. When you release the mouse button you will see that Excel has 'AutoFilled' the range you dragged across with days of the week.

• Click on cell **C3** which contains the word **January**. Use the AutoFill feature to Automatically create a column containing all the months of the year.

• Select the cell range **D3:D4**. Use **AutoFill** to extend the series down the page. As you will see the series becomes **1,2,3,4,5,6,7** etc.





- Select the cell range **E3:E4**. Use **AutoFill** to extend the series down the page. As you will see the series becomes **2,4,6,8,10** etc.
- Save your changes and close the workbook.

Copying a data range using AutoFill

- Write these data .
- Select the range **B2:B24**.

	B2	• (0	f _x	lame
	А	В	С	D
1				
2		Name		
3		Agustín		
4		Amerigo		
5		Birgit		
6		Christa		
7		Dennis		
8		Enrique		
9		Ernst		
10		George		

- Move the mouse pointer to the bottom-right corner of this range and the mouse pointer shape will change to the shape of a small black cross. When the mouse pointer changes shape, press the mouse button down, and while keeping it pressed move slowly to the right, by two columns.
- When you release the mouse button you will see that Excel has 'AutoFilled'

the range	you	dragged	across	with	data,	as
illustrated	belo	w.				

• Save your changes and close the workbook.

	А	В	С	D	
1					
2		Nome			
3		Agustín			
4		Amerigo			
5		Birgit			
6		Christa			
22		Tom			
23		Tom			
24		Valentino			
25					
26				L de a	

	122	• (*	f_x		
4	A	В	С	D	E
1					
2		Name	Name	Name	
3		Agustín	Agustín	Agustín	
4		Amerigo	Amerigo	Amerigo	
5		Birgit	Birgit	Birgit	
6		Christa	Christa	Christa	
7		Dennis	Dennis	Dennis	
8		Enrique	Enrique	Enrique	
9		Ernst	Ernst	Ernst	
10		George	George	George	
		0.11	ar 11	er 1 1	

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-

		-	
Student Name	Grades		
Ashraf		450	
Ibrahim		550	cr
Mosab		560	S 0
Mortada		123	ott
Mohammed		145	
Mohand		588	XC
Ibrahim samy		678	el
Haytham		485	
Ahmed		478	



A to Z icon.

Sorting a cell range

Create this table

• Click on the **Sort Z to A** icon and see what will be happen?

• Click within the data contained within column **B**.

 Click on the Data tab and from within the Sort & Filter group, click on Sort



• Save your changes and close the workbook.

Searching

Searching and replacing data

 in the previous table Press Ctrl+F to start the Search utility (or click on the Home tab, then click

on the **Find & Select** icon, from the menu displayed select the **Find** command).

This will display the **Find and Replace** dialog box, as illustrated.

Find and Replace	? 🛛
Fin <u>d</u> Replace	
Find what:	~
	Options >>
	Find All Eind Next Close

• Within the **Find what** section of the dialog box, enter the word ' Ibrahim '. Click on the **Find Next** button and you will find the next occurrence of the word ' Ibrahim'.

- Keep pressing on this button to find all occurrences within the worksheet.
- Click on the **Replace** tab within the **Find and Replace** dialog box.

Find and Replace
Find Replace
Find what:
Replace with:
Op <u>t</u> ions >>
Replace <u>All</u> Replace Find All Find Next Close

- Within the Find what section type in the word ' Ibrahim '.
- Within the **Replace with** section type in the word 'Said'.
- Click on the **Find Next** button and once found click on the **Replace** button.
- Carry on replacing all occurrence of the word **Ibrahim** with the word **Said**.
- Close the Find and Replace dialog box.
- Save your changes and close the workbook.

Worksheets

Switching between worksheets

• Save the previous file as Worksheets.

• You are looking at the first worksheet within the workbook. You can confirm this by looking at the worksheet tabs at the bottom-left of your screen.



• To switch to another worksheet click on either the Sheet2 or Sheet3 tab.

Renaming a worksheet

• Click on the **Sheet1** tab to display the first worksheet. Double click on the **Sheet1** tab and you will be able to type in a new name. In this case type in the name

2003 and then press the **Enter** key to confirm the change, as illustrated.



• Double click on the **Sheet2** tab and rename it **2004**.

• Double click on the **Sheet3** tab and rename it **2005**. Your tabs will now look like this:



Good practice with naming worksheets

• By default worksheets are called Sheet1, Sheet2 and Sheet3. You should use meaningful names for your worksheets, especially if you are using multiple worksheets within a workbook. This can make a complicated workbook much

easier to understand.

Inserting a new worksheet

 Click on the 2005 worksheet tab to select it. Right click over the tab and from the popup menu displayed, click on the Insert command.

14		Insert	
15			
16		Delete	
17		<u>R</u> ename	
18		Move or Copy	
19	ą	<u>V</u> iew Code	
20	2	Protect Sheet	
21		Tab Color 🔶	
22		Hide	
23		Unhide	
24		<u>o</u>	
Select All Sheets			
2003 2004 200	1 5 <u>_</u>		
Ready 🔚			

• The **Insert** dialog is displayed. Make sure that the **Worksheet** object is selected within the dialog box.

Insert	$\overline{\mathbf{X}}$
General Spreadsheet Solutions	
Worksheet Chart MS Excel 4.0 International Macro Sheet MS Excel 5.0 Dialog	Preview Preview not available.
Templates on Office Online	OK Cancel

 Click on the **OK** button and a new worksheet will be inserted just before the selected worksheet, as illustrated.



Deleting a worksheet

• Make sure that the new tab that you have just inserted is selected. Right

click on the tab and from the popup menu displayed select the **Delete**

command. The new worksheet will be deleted.



Copying a worksheet within a workbook

 Select the 2003 tab. Right click on the tab and from the popup menu displayed select the Move or Copy command.



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 The Move or Copy dialog box is displayed. As we want to copy rather than move, click on the Create a copy check box. In the Before sheet section of the dialog box, select which worksheet you wish to insert the copy in front of. In this case select 2005.

Move or Copy	
Move selected sheets <u>T</u> o book:	
Worksheets.xlsx	Ş
Before sheet:	
2003 2004	t
2005	Þ
(move to end)	
Create a copy	
OK Cancel	

 When you click on the **OK** button a copy of the first worksheet will be inserted, as illustrated.



• Delete this copied worksheet before continuing.

Moving a worksheet within a workbook

• Select the **2003** tab. Right click on the tab and from the popup menu

displayed select the Move or Copy command.

• The **Move or Copy** dialog box is displayed. In the **Before sheet** section of the dialog box, select which worksheet you wish to insert the moved worksheet in front of. In this case select **2005**.



• When you click on the **OK** button the worksheet will be moved, as illustrated below.



- Before continuing, rearrange the worksheets in the correct order.
- Save your changes and close the workbook.

Copying or moving worksheets between workbooks

 Open a workbook called Between workbooks 2. Leave this workbook Open.

21	
I	2006 Sales 2007 Sales 2
Ready 🛅	

• Open a workbook called Between workbooks 1.

- Click on the worksheet tab for **2006 Sales**.
- Right click on the **2006 Sales** tab and from the popup menu displayed select the **Move or Copy** command.

11 12 13	Insert Delete
14	Move or Copy
15	😺 View Code
17	Protect Sheet
18	Tab Color
19	<u>H</u> ide
20	Unhide
21	Select All Sheets

• The **Move or Copy** dialog box is displayed.

Move or Copy
Move selected sheets <u>T</u> o book:
Between workbooks 1.xlsx
Before sheet:
2005 Sales 2006 Sales 2007 Sales (move to end)
Create a copy
OK Cancel

 Click on the down arrow in the To book section of the dialog box. From the drop down list, select the workbook called Between wordbooks 2, as illustrated below.

Move or Copy	? 🗙
Move selected sheets <u>T</u> o book:	
Between workbooks 1.xlsx	*
(new book) Between workbooks 1.xlsx Between workbooks 2.xlsx	
	~
	~
Create a copy	
ОК Са	ncel

• Use the **Before sheet** section of the dialog box to determine where in the second workbook the worksheet will be copied to.

Before sheet:	
2005 Sales	
2006 Sales	
2007 Sales	
(move to end)	

• Click on the **Create a copy** check box.



Create a copy

- Click on the **OK** button.
- Switch to the second workbook and you should see a copy of the worksheet inserted into the workbook.



TIP: Experiment with moving a worksheet between workbooks using the same method, but this time do not click on the **Create a copy** check box.



• When you have finished experimenting save the changes in both your workbooks and close all open files.



Formatting

Font Formatting

• The font formatting options are located on the **Home** tab within the **Font** group.

Font type

- Open a workbook called Font formatting.
 Select the range C3:G3. Click on The down arrow within the Font section and select a different font type, such as Arial.
- Experiment with applying different fonts to your data.





Font size

• Select the range **B3:B12**. Click on the **down arrow** within the **Font Size**

section and select a different font size.





TIP: You can also select a range and use the **Increase Font Size** and **Decrease Font Size** icons.



Bold, italic, underline formatting

• Select the range **C4:G12** and experiment with applying bold, italic and underlining formatting using the icons illustrated below.





TIP: You can easily apply double underline formatting. To do this click on the **down arrow** next to the **Underline** icon. Select the **Double Underline** command.





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Microsoft Excel

Calibri		• 11 • A A
BI	U	- <u>- A</u> - <u>A</u> - <u>I</u>
	U	Underline
2	₽	Double Underline

Cell border formatting

 Select the range B3:G12. Click on the down arrow next to the Border icon. A drop down is displayed from which you can select the required border. Select All Borders.

2	BIU·		• 🌺 • 🗛 • 📑 🖷 ቹ	>	
۵.	Fe	Bor	ders		
33	- (Bottom Border		
	В		To <u>p</u> Border		Γ
ol	ume by counti	63	Left Border		T
			<u>R</u> ight Border		
	Country		No Border	05	1
	India		All Borders	89	
	Canada		Outside Borders	21	
	USA		Thick Dox Dorder	09	
	United Kingo		Bottom Double Border	98	
	Australia		Thick Bottom Border	96	
	New Zealand		Top an <u>d</u> Bottom Border	R2	
	Pakistan		Top and Thick Bottom Border	43	
	Mexico		Top and Double Bottom Border	20	
		Dra	w Borders		
		1	Draw Border		

• Your data will now look like this.

Country	Sales 2003	Sales 2004	Sales 2005	Sales 2006	Sales 2007
India	102	129	189	193	201
Canada	98	120	121	132	143
USA	109	110	109	102	94
United Kingdom	92	99	98	95	85
Australia	92	95	96	92	93
New 7ealand	32	43	54	74	<mark>84</mark>
China	67	79	83	88	93
Pakistan	24	34	43	54	73
Mexico	12	24	20	23	32

• Click on the **Undo** icon (top-left of your screen) to undo this formatting.



• Spend a little time experimenting with applying different types of borders. Remember that you can use the **Undo** icon to undo any formatting that you apply.



TIP: Experiment with applying border formatting effects, such a thick or double edged border effects.

Formatting the background color

 Select the range B3:G3. Click on the Fill Color icon. Move the mouse over a color and you will see the color formatting previewed within your data. Click on a color to apply it.





TIP: Be careful when applying background fill colors as it may make any text within the range difficult to see. Avoid using similar text colors and background fill colors.

Formatting the font color

- Select the range B3:B12. Click on the down arrow next to the Font Color icon. This will display a drop down from which you can select the required color. Experiment with applying different font colors.
- Save your changes and close the workbook.

Alignment formatting

 The alignment options are contained within the Alignment group on the Home tab.

Aligning contents in a cell range



 Open a workbook called Alignment. Select the range C3:G12. Click on the Center icon to centre the cell contents in this range. Try applying left and then right alignment formatting. Use the alignment icons illustrated below.



Centering a title over a cell range

 Click on cell C2 and type in the word 'Sales'. We want to centre this within the range C2:G2. To do this, select the range C2:G2 and then click on the Merge and Center icon.



• Your screen will now look like this.

			Sales		
Country	2003	2004	2005	2006	2007
India	102	129	189	193	201
Canada	98	120	121	132	143
USA	109	110	109	102	94
United Kingdom	92	99	98	95	85



Cell orientation

• Select the range **C3:G3**. Click on the **Orientation** icon. You will see a drop down menu allowing you to format the cell orientation.

l	≫⁄		General
ſ	≫⁄~	Angle C <u>o</u> u	nterclockwise
	ઝ	An <u>gl</u> e Cloc	kwise
	↓a b	Vertical Tex	d 🚽
	-đ	Rotate Text	t <u>U</u> p
	18-	Rotate Text	t <u>D</u> own
	æ,	For <u>m</u> at Cel	l Alignment

• Select the Angle Counterclockwise command. Your data will now look like this.

Country	2003	2004	2005	2006	2001
India	102	129	189	193	201
Canada	98	120	121	132	143
USA	109	110	109	102	94

• Experiment with applying some of the other orientation effects.

Text wrapping

• Click on cell **B14**. Type the following txt into cell **B14**.

All revenues are pre- tax profits.

• When you press the **Enter** key you will see that the text does not 'fit' into the cell.

13		
14	All revenues are pre	e- tax profits.
15		

• Select cell **B14** and click on the **Wrap Text** icon.



• The cell will now look like this.

13		
	All revenues are	
14	pre- tax profits.	
15		

• Save your changes and close the workbook.

Aligning cell contents vertically

- Create this table and save it as **alignment**. As you can see the cell contents are aligned to the bottom of the cell.
- Select the data as illustrated.
- Click on the **Home** tab and from within the **Alignment** section select the required vertical alignment option.
- Experiment with applying each of the three vertical alignment options.

Top Alignment Middle Alignment Bottom Alignment

- After you have finished experimenting, set the alignment to Middle Alignment.
- Save your changes and close the workbook.

Format Painter

- create any table and format it and save it as Format painter.
- Click within the upper table and click on the **Format Painter** icon. This icon is contained within the **Clipboard** group of the **Home** tab.
- Once you click on the Format Painter icon, you will notice that the shape of the mouse pointer changes to the shape of a paintbrush. You can now apply the formatting within the cell that you clicked on, to another range within the worksheet.
- Click on cell **B14**, and while keeping the mouse button pressed, move the
- mouse pointer to cell **G23**. Release the mouse button and the formatting will be copied to the second range within your worksheet, as illustrated.
- Save your changes and close the workbook.

1						
2	Country	Sales 2003	Sales 2004	Sales 2005	Sales 2006	Sales 2007
3	India	102	129	189	193	201
-4	Canada	98	120	121	132	143
5	USA	109	110	109	102	94
6	United Kingdom	92	99	98	95	85
7	Australia	92	95	96	92	93
8	New Zealand	32	43	54	74	84
9	China	67	79	83	88	93
10	Pakistan	24	34	43	54	73
11	Мехісо	12	24	20	23	32
12						
13						
13	Country-	Bales 2000	Sales 2004	Sales 2008	Sales 2000	Bales 2007
13 ** 15	Geneticy- India	Bales 2000 102	129	Bales 2008 189	5alao 2000 193	Bales 2007 201
13 ** 15 **	Country- India Canada	Eases 2000 102 08	Eules 2001 129 130	Eules 2008 189 121	Cales 2000 193 192	Eales 2007 201 443
13 ** 15 16 17	Country- India Canada USA	Eales 2007 102 00 109	5-100 2004 129 130 110	Enley 2005 189 124 109	Enles 2000 193 192 102	Enles 2007 201 143 94
13 ±4 15 ±6 17 ±0	Connetry India Canada USA United Kingdom	5.000 2000 102 08 109 83	50000 2001 129 130 110 89	Euler 2008 189 131 109 08	Culos 2000 193 135 102 98	50100 2007 201 443 94 88
13 ** 15 ** 17 19 19	Geneticy India Canada USA United Kingdom Australia	Ealer 2003 102 08 109 202 82	0	0-24-7 5005 189 124 109 98 96	00100 8000 193 193 192 192 80 80 82	5=les 2007 201 443 94 94 98 93
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13 ±4 15 ±6 17 19 20 21	Conservey India Cana da USA Unitered Kingedone Australia Masee Zaalaned China	Eules 2009 102 000 109 000 00 00 00 00 00 00 00 00 00 00 00	Eules 2001 129 130 110 09 95 43 79	Eules 2005 189 131 109 099 96 54 63	Eules 2000 193 135 102 88 92 74 88	Eules 2007 201 145 94 88 93 83 83 83 83 83
13 14 15 16 17 19 20 21 22	Bennedry India Emenden USA United Kingebom Australia New Zealand China Pakietan	6.0000 2000 102 000 000 000 000 000 000 000 000	Euro 2001 129 130 110 00 85 43 79 24	Eules 2007 189 134 109 09 96 54 83 43	Euro 2000 193 135 102 08 98 92 74 88 88 88	Eales 2007 201 443 94 98 83 83 84 93 73







Sales Area

North

South

East

West

Review

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2005

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View

Alignment

2006

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ICDL Manual

Number formatting

Number formatting

• write any Numbers like 19573

and press Enter. Select this Cell. Click on the **down arrow** next to the **Number Format** control. You will see a drop down menu from which you can select the format. In this case select **Number**.

• This tells Excel that the data contained within this cell should always now be treated as a number, rather than say text or a date.

Decimal point display

• Click on the **Decrease Decimal** icon so that no decimal places are displayed.

General 👻					
9 -	%	,	*.0 .00	.00. →.0	
Number 🕞					

• The cell contents should now look like this.

Format this number to display no decimal places. 194593

- Write any number on C5 and C6
- Set the contents of cell **C5** to display **1** decimal point.
- Set the contents of cell **C6** to display **2** decimal points.



TIP: To increase the number of decimal points displayed, click on the **Increase Decimal** icon.



Applying and removing comma style formatting (to indicate thousands)

- write any Numbers like 1945968573
- Click on the **Comma Style** icon (within the **Number** section of the **Home** tab) to format the number using commas.

Gener	al			*
•	%	,	•.0 .00	.00. →.0
	Num	ber		- Gi

		≤ 8
ABC 123	General No specific format	Â
12	Number 194593.12	
	Currency £194,593.12	
E21	Accounting £194,593.12	

Microsoft Excel



• Your number should now look like this.





NOTE: To remove comma style formatting, click on the **Number format** icon (within the **Number** section of the **Home** tab).

• Select the **General** or **Number** format option, as illustrated.



• The cell contents will now be displayed without comma style formatting.

Currency symbol

- Write this number into Cell C10, C11 and C12
- Select cell C10 and format it to display the British Pound symbol. To do this click on the down arrow next to the Currency icon and select the £ option.



• Select cell **C11** and format it to display the **Dollar** symbol.

 Select cell C12 and format it to display the Euro symbol. Your data will now look like this.

£	234.98
\$	234.98
€	234.98



ICDL Manual

Date styles

- Click on cell B17 and type in the text 'The date today is'. Click on cell C17 and type in today's date. When you press the Enter key you may find that the style of the date changes automatically.
- Right click over cell C17 and from the popup menu displayed select the Format Cells command.

¥	Cu <u>t</u>	
Ð	<u>С</u> ору	
2	<u>P</u> aste	CI
	Paste <u>S</u> pecial	20
	Insert	of
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۳.,	Insert Co <u>m</u> ment	
7	Format Cells	
	Pick From Drop-down List	
	Name a <u>R</u> ange	
2	<u>H</u> yperlink	

• This will display the **Format Cells** dialog box.

Format Cells	? 🗙
Number Alignment Font Border Fill Protection Category: General 07-Mar-07 07-Mar-07 Currency 07-Mar-07 0.00E 0.00E+00 Pace 0.00E+00 ##0.0E+0 #??? Special 0.00E+00 #???? dd/mm/yyyy dd-mmm-yy 0.00E+0 #????? Guston #????? dd/mm/yyy dd-mmm-yy 0.00E+0 #????? Mumber #????? dd/mm/yyy dd-mmm-yy dd-mmm-yy Immethe Jobsecial #????? #????? Type the number format code, using one of the existing codes as a starting point. Type the number format code, using one of the existing codes as a starting point.	Delete
ОК	Cancel

• Within the **Category** section of the dialog box, select the **Date** category. Select the required format from the **Type** section of the dialog box.

Format Cells		? ×
Number Alignment F Category: General Aumber Currency Accounting Date Time Percentage Fraction Scientific Text Special Custom	Font Border Fill Protection Sample 07/03/07	



• Click on the **OK** button to apply the date format. Experiment with applying different types of date format to the cell.

Percentages

- Click on the cell C15.type number 17 and press enter
 To change this number from 17 to 17%, type in 17%
 and press the Enter key. You will then see the contents displayed as illustrated below.
- Save your changes and close the workbook.

Applying Percentage formatting to a cell or range

create these two tables:

	G4 🔫 🕘 刘	£ 0.1					
	A	В	С	D	E	F	G
1							
2							
3	Full price	55				Full price	55
4	Precentage	10				Precentage	0.1
5	value of discount	550				value of discount	5.5
6	Sales price after discount	-495				Sales price after discount	49.5
7							

 Click on cell C4 to select it. To apply percentage formatting to this cell, click on the Home tab and from within the Number section, click on the Percentage icon.

hatting.xlsx - Microsoft E
robat
[Comment
General
\$ 🗸 %
Number 🕞

• You will see the following, which is not quite the result we were expecting.

	C5	√ ∫ _x =C3*C4	Ļ	
	А	В	С	
1				
2				
3		Full price	55	
4		Percentage discount	1000 %	
5		Value of discount	550	
6		Sale price after discount	-495	
7				



17%

As you have just seen, if a cell contains numbers, BEFORE you apply percentage formatting to the cell, then the numbers in the cell are multiplied by 100.

 Click on cell G4.To apply percentage formatting to this cell, click on the Home tab and from within the Number section, click on the Percentage icon. The cell is empty so you will not see any change. However if you enter the number 10, to cell G4 you will see the following.

F	G
Full price	55
Percentage discount	10%
Value of discount	5.5
Sale price after discount	49.5

As you have just seen numbers that are typed into the cells after you have apply the percentage formatting are treated differently to cells already containing data.

• Save your changes and close the workbook.

Freezing row and column titles

Freezing row and column titles

• create this table and save it as **Freezing**.

	G18 🔻 💿	f_{x}			
	А	В	С	D	E
1	Component code	Color	Number in stock	Value of each component	Total value of stock
2	100001	Red	2	22.99	0.00
3	100002	Red	2	11.50	23.00

- Scroll down through the data and you will see that the title row, which contains a description of each columns contents, scroll out of sight. This makes it difficult to remember what the data in each column represents, if you cannot see the column title row.
- Make sure that you can see the title row displayed, as illustrated.
- To freeze the top row so that it remains in sight at all time, click on the **View** tab and from within the **Window** group on the Ribbon, click on the **Freeze Panes** command.

View	De	veloper				
Q Zoom	100%	Zoom to Selection	Rew Window Contemporate All Contemporate	Split Hide	100 101 101	Save S Workspace Wit
	Zoom			Wind	wot	



• From the drop down list displayed, click on the **Freeze Top Row** command.



• Scroll down through the data. As you can see the top row stays visible at all times now.

	А	В	С	D	E
1	Component code	color	Number in stock	value of each component	total value of stock
2	100001	Red	2	22.99	0.00
3	100002	Red	2	11.50	23.00

• To unfreeze the top row, click on the **View** tab and from within the **Window** group on the Ribbon, click on the **Unfreeze Panes** command.

	Rew 1	Window	Split	100	
	📑 Arran	ge All	🗌 Hide	Шţ	
	Freez	e Panes 🔻	🗖 Unhide	<u>+</u> +	Save Si Workspace Win
	200 00000	Un <u>f</u> reeze	e Panes		
		Unlock a through	II rows and o the entire w	olumn orkshe	s to scroll et.
e		Freeze To Keep the through	op <u>R</u> ow top row visi the rest of th	ble wh ne wor	lle scrolling ksheet.
2		Freeze Fi Keep the	i <mark>rst <u>C</u>olumn</mark> first column	visible	while scrolling
2.	00	through	the rest of th	ne wor	ksneet.



TIP: You can use the same technique to freeze the first column, so that when you scroll to the right it is always visible. To do this you would select the **Freeze First Column** command.



• Save your changes and close the workbook



Formulas and Functions

Formulas

Creating formulas

create this table and save it as
 Formulas. Click on cell E3.

	А	В	С	D
1				
2		Component Code Number	Number in stock	Value of each item
3		100847	2	22.99
4		100846	4	34.99
5		100645	9	12.95
6		100837	1	13.59
7		100846	0	9.25
8		100243	2	5.24
9		100773	5	40.5

- In cell **E3** we need to create a formula that will calculate the value of the stock for that particular component. To do this we need to multiply the contents of cell **C3** by the content of cell **D3**.
- All formulas within Excel start with the 'equals' symbol.

Type in the following formula. **=C3*D3**

TIP: the ***** symbol means 'times'.

Press the **Enter** key and you will see the result of the calculation in cell **E3**.

• Click on cell **E3** and you will see the formula displayed in the bar above the worksheet.

Font		- U	ŀ
+ (9	f_{x}	=C3*D3	
В			С

Good Practice: The easy way to create formulas

1- Click on cell **E4** and type in the **equals sign.**





• Press the **Enter** key and you see the result of the calculation. This method may seem more complicated at first but when you are creating complex formulas, you will find this method is actually easier and helps to reduce errors, such as typing incorrect cell references.

Copying formulas

- Click on cell E4.
- Move the mouse pointer to the bottom-right border of this cell and you will Notice that the mouse pointer changes to the shape of a small, solid black cross. When you see this shape change press the mouse button and while
- keeping the mouse button depressed, drag down to cell **E9**. Release the mouse button and you will see the formula copied down this range. If you look at the formula in each cell of the range the cell references are automatically adjusted to match each row, i.e. row 8 contains the formula

=C8*D8, while row 9 contains the formula =C9*D9. Your screen

will now look like this.

• Save your changes and close the workbook.

Operators

- Operators sound complicated. In reality they are items such as:
- + (plus)
- (minus)
- / (divide)
- * (multiply)

You use operators as part of your formulas. There are other operators but these are the commonly used ones.

Using operators in formulas

- create a new workbook and save it as Formula operators.
- Click on cell C3 and enter the following which will add the number 3 and 7:

=3+7

Press the **Enter** key and you will see the result displayed in the cell.

• Click on cell **C4** and enter the following which will subtract the number **4** from the number **18**:

=18-4

Press the **Enter** key and you will see the result displayed in the cell.

• Click on cell **C5** and enter the following which will divide the number **20** by the number **4**:

=20/4

272

Press the **Enter** key and you will see the result displayed in the cell.

• Click on cell **C6** and enter the following which will multiply the number **4** by the number **9**:

=4*9

Press the **Enter** key and you will see the result displayed in the cell.

• Save your changes and close the workbook.

Formula error messages

• When writing formulas it is easy to make a mistake: listed below are some common error messages.

######

The contents of the cell cannot be displayed correctly as the column is too narrow.

#REF!

Indicates that a cell reference is invalid. This is often displayed when you delete cells which are involved in a formula.

#NAME?

Excel does not recognise text contained within a formula.

#DIV/0!

This indicates that you have tried to divide a number by zero (0).

Relative & absolute cell referencing

Relative cell referencing within formulas

• Create this workbook and save it as **Cell referencing**.

	STDEV $\checkmark (\checkmark \checkmark f_x = B3*C3$									
	А	В	С	D	E	F				
1	tax	10%								
	Broduct	Quantity	Unit Drico	Total	Total after					
2	Product	Quantity	Unit Price	TOLAT	Tax					
3	Keyboard	5	20	=B3*C3						
4	Mouse	6	120	720						
5	Hard disk	4	475	1900						
6	Screen	2	500	1000						
7	Matherboard	3	1024	3072						
0										

Click on cell D3. We need to insert the formula for multiplying items in column C by the items in columns D. Type in the following formula:
 =B3*C3





- Press the **Enter** key and you will see the result of the calculation in cell **D3**.
- Click on cell D3, and move the mouse pointer to the bottom-right corner of cell D3, and when the pointer changes to the shape of a small black cross, press the mouse button, and keep it pressed down. Drag down the page to cell D7 and then release the mouse button.
- If you click on cell **D5** you will see the following **=B5*C5**.
- If you click on cell **D6** you will see the following **=B6*C6**. And so on
- As you can see the referencing is completely relative.

Absolute cell referencing within formulas

• Click on cell **E3**. We need to enter a formula that will take the Total and then add 10% to the Total to give a total After Tax

The 10% figure has been entered into cell **B1**.

• Type in the following formula into cell E3.

=D3+D3*B1

Press Enter

• Click on cell **E3**, and move the mouse pointer to the bottom-right corner of cell **E3**, and when the pointer changes to the shape of a small black cross, press the mouse button, and keep it pressed down. Drag down the page to cell **E7** and then release the mouse button. The data will look something like this.

	E3	- (9	f_x	=D3-	+D3*B1	
	Α	В	С		D	E
1	tax	10%				
2	Product	Quantity	Unit Price		Total	Total after Tax
3	Keyboard	5		20	100	110
4	Mouse	6		120	720	#VALUE!
5	Hard disk	4		475	1900	11400
6	Screen	2		500	1000	7000
7	Matherboard	3		1024	3072	15360
0						

As you can see something has gone very wrong

• Click on cell **E4** and you can see what the problem is. The formula contained within this cell is:

=D4+D4*B2

Part of the cell reference points to cell **B2** (which if you check is Text). The problem is that because of the relative nature of the formula, the component that



should always refer to the contents of the cell in B1

- Select the range **E4:E7** and press the **Del** key to delete the cell contents.
- Click on cell **E3** and we will try again. Press on the text **B1** and Press F4 from keyboard so it will be like that

=D3+D3*\$B\$1

The dollar signs make the reference to cell **B1** absolute.

 Try extending the formula to fill the range down to E7. This time you should find that the delivery charges are calculated correctly.

	E10	-	f_{x}			
	А	В	С	D	E	F
1	tax	10%				
	Droduct	Quantity	Unit Drice	Total	Total after	
2	Product	Quantity	Unit Price	Total	Tax	
3	Keyboard	d 5 20		100	110	
4	Mouse	6	120	720	792	
5	Hard disk	4	475	1900	2090	
6	Screen	2	500	1000	1100	
7	Matherboard	3	1024	3072	3379.2	
8						 +



TIP: You have seen relative and absolute referencing. You can also have mixed references, which contain an absolute and a relative reference.

• Save your changes and close the workbook.

Functions

What is a function?

• A function allows you to calculate a result such as adding numbers together, or finding the average of a range of numbers.

Common functions

• Some commonly used functions include:

AVERAGE: Used to determine the average value of the selected cells contents.

COLUMNS: Used to return the number of columns within a reference.

COUNT: Used to count how many numbers are in the list.



COUNTA: Used to count the number of cells that are not empty and the values within the list of arguments.

COUNTBLANK: Used to count empty cells within a cell range.

MAX: Used to return the maximum number from a list.

MIN: Used to return the minimum number from a list.

ROUND: Used to round off numbers to a specified number of decimal points.

SUM: Used to add the contents of selected cells.

To display the available functions, press **Ctrl+N** to display a blank workbook and then click on the **Formulas** tab and within the **Function Library** group click on the **Insert Function** icon.



This will display the **Insert Function** dialog box.

Insert Function			? 🛛
Search for a function:			
Type a brief descripti Go	ion of what you want to d	o and then click	Go
Or select a <u>c</u> ategory:	Most Recently Used	~	
Select a functio <u>n</u> :			
SUM AVERAGE IF HYPERLINK COUNT MAX SIN SUM(number1,nun Adds all the numbers i	n ber2,) in a range of cells.		
Help on this function		ОК	Cancel



NOTE: Depending on the configuration of your PC the **Function Library** group of the **Formulas** tab may look slightly different, as illustrated below. The options however are identical.





Sum function

• Create a new workbook , create these sheets save it as **Functions**.



• Click on the **Sum** worksheet tab. Create this table.

	SUM	- (° × √ f	=SUM(C4:C7)	
	А	В	С	D
1				
2				
3		Sales Region	No of sales	
4		North	34	
5		South	11	
6		East	84	
7		West	38	
8		TOTAL	=SUM(<mark>C4:C7</mark>)	
9			SUM(number1, [number	r2],)

• Click on cell **C8**. In this cell we need to sum the values in the column above.

• Click on the **Formulas** tab and within the **Function Library** group click on the **AutoSum** icon.

Σ AutoSum -



TIP: Click on the **AutoSum** icon, not the **down arrow** beside the icon.

- You will see the following displayed on your screen.
- Press the **Enter** key and you will see the AutoSum result in cell **C8**.
- Click on cell **C8**, and you will see the function displayed in the bar just above your worksheet.

	C8	▼ (¶	=SUM(C4:C7)
	А	В	С
1			
2			
3		Sales Region	No of sales
4		North	34
5		South	11
6		East	84
7		West	38
8		TOTAL	167
0			

- As you can see the function is:=**SUM(C4:C7)**
- This function tells Excel to sum the values in the range **C4:C7**.

Average function

26

• Click on the **Average** worksheet tab. Create this table

14	4	+ +		Sum	Averag	ge 🦯	Max 🖉 Mi	n 🖌 Ci	ount	10	ount	a 🦯	Cou	ntblar	nk
R	ead	y			×.	0		1912		0.8		- 555			
	0)6		- (4 -) :	;					Functio	ons.				
		"	Hom	e Insert	Page L	ayout	Formulas	Data	Revie	ew	Viev				
	-	f.,	ΣΑ	utoSum 💌	👔 Logi	ical *	🔁 Lookup 8	Reference	2 -	A	<u>R</u> e				
	J	x	Σ	<u>S</u> um		t	🔞 Math & 1	rig *		Name	$f_{\rm X}^{=}$				
	Fun	ction		Average		& Time	r 🎁 More Fui	nctions *	M	lanager	F				
				<u>C</u> ount Numb	oers	Library	Library			De					
				Max		f_X									
		4		M <u>i</u> n		В			С						
	1			More <u>F</u> uncti	ons										
	2		_			,									
	3			Sales Re	gion			N	lo of	sales					
	4			North						34					
	5			South						11					
	6			East						84					
	7			West						38					
	8			Average	no. of	sales	per regio	n]				

• Click on cell **C8**. In this cell we want to display the average number of sales within the regions.

If

- Click on the Formulas tab and within the Function Library group click on the arrow next to the AutoSum icon. You will see a drop down list displayed. Click on the Average command.
- You will see the following displayed on your screen.

	SUM ▼ (X ✓ fx =AVERAGE(C4:C7)						
	А	В	C D				
1							
2							
3		Sales Region	No of sales				
4		North	34				
5		South	11				
6		East	84				
7		West	38				
8		Average no. of sales per region	=AVERAGE(<mark>C4:C7</mark>)				
9			AVERAGE(number1, [number2],)				

- Press the Enter key and you will see the average value displayed in cell C8.
- Click on cell **C8**, and you will see the function displayed in the bar just above your worksheet.



	C8	✓ f _* =AVERAGE(C4:	C7)
	А	В	С
1			
2			
3		Sales Region	No of sales
4		North	34
5		South	11
6		East	84
7		West	38
8		Average no. of sales per region	41.75

As you can see the function is:=AVERAGE(C4:C7)

• This function tells Excel to sum the average in the range **C4:C7**.

Max function

• Click on the Max worksheet tab. And create this table

26	
I I I I Sum ∕ Average	Max Min Count Counta Countblank If
Ready 🛅	

SUM → (× ✓ f =MAX(C4:C7)					
	А	В	С		
1					
2					
3		Sales Region	No of sales		
4		North	34		
5		South	11		
6		East	84		
7		West	38		
8		Highest no of sales in a region	=MAX(<mark>C4:C7</mark>)		
9			MAX(number1, [number2],)		

- Click on cell **C8**. In this cell we want to display the highest number of sales within a region.
- Click on the Formulas tab and within the Function Library group click on the down arrow next to (or under) the AutoSum icon. You will see a drop down list displayed. Click on the Max command.



- You will see the following displayed on your screen.
- Press the **Enter** key and you will see the maximum value displayed in cell **C8**.

• Click on cell **C8**, and you will see the function displayed in the bar just above your worksheet.

	C8	 ✓ ∫_x =MAX(C4:C7) 	
	А	В	С
1			
2			
3		Sales Region	No of sales
4		North	34
5		South	11
6		East	84
7		West	38
8		Highest no of sales in a region	84

As you can see the function is: **=MAX(C4:C7)**

• This function tells Excel to display the maximum value within the range C4:C7.

Min function

- The MIN function will display the minimum number within a range.
- Click on the Min worksheet tab. create this table

	SUM		
	А	В	С
1			
2			
3		Sales Region	No of sales
4		North	34
5		South	11
6		East	84
7		West	38
8		Minimum no of sales in a region	=MIN(<mark>C4:C7</mark>)
9			MIN(number1, [number2],)

- Click on cell **C8**. In this cell we want to display the lowest number of sales within a region.
- Click on the Formulas tab and within the Function Library group click on the down arrow next to (or under) the AutoSum icon. You will see a drop down list displayed. Click on the Min command.



• You will see the following displayed on your screen.

- Press the **Enter** key and you will see the minimum value displayed in cell **C8**.
- Click on cell **C8**, and you will see the function displayed in the bar just above your worksheet.

	C8	 ✓ ∫_x =MIN(C4:C7) 	
	А	В	С
1			
2			
3		Sales Region	No of sales
4		North	34
5		South	11
6		East	84
7		West	38
8		Minimum no of sales in a region	11

As you can see the function is: =MIN(C4:C7)

• This function tells Excel to display the minimum value within the range C4:C7.

Count function

- The **Count** function will count up the number of cells which contain numbers.
- Click on the **Count** Worksheet tab. Create this table

	А	В	С	D	
1					
2		Delegates attending the	meeting		
3					
4		Delegate country	Present	Not present	
5		Australia	1		
6		Brazil	1		
7		Canada	1		
8		China		1	
э		Cyprus	1		
10		Greece	1		
11		India	1	1	
12		Ireland	1		
13		New Zealand	1		
14		Pakistan	1		
15		South Africa	1		
16		Turkey		1	
17		UK	1		
18		USA	1		
19		=(COUNT(C17:C1	.8)	
20		ſ	COUNT(value1, [value	2],)	

- Click on cell C19. In this cell we want to display the number of cells in the column above that contain a number.
- Click on the Formulas tab and within the Function Library group click on
- the down arrow next to (or under) the AutoSum icon. You will see a drop down list displayed. Click on the **Count** Numbers command.



• You will see the following displayed on your screen.



WARNING: In all the previous examples, there was a column containing values immediately above the cell into which we inserted the function. In this case some of the cells within the column are empty and Excel, as you can see has only applied the Count function to the range **C17:C18**. The reason for this is that the next cell up, i.e. cell **C16** is empty.

We need to tell Excel that the range we are interested in, actually extents from **C5:C18**.

To do this, click on cell **C18** and while holding down the mouse button drag up to cell **C5**. Then release the mouse button. Your screen should now look like this.

	Α	В	С	D				
1								
2		Delegates attending the	Delegates attending the meeting					
3								
4		Delegate country	Present	Not present				
5		Australia	1					
6		Brazil	1					
7		Canada	1					
8		China		1				
9		Cyprus	1					
10		Greece	1					
11		India	1	1				
12		Ireland	1					
13		New Zealand	1					
14		Pakistan	1					
15		South Africa	1					
16		Turkey		1				
17		UK	1					
18		USA	1					
19		=	COUNT(C5:C18	3)				
20			COUNT(value1, [va	lue2],)				

- Press the **Enter** key and you will see the count value displayed in cell **C19**.
- Click on cell **C19**, and you will see the function displayed in the bar just above your worksheet.

	C19 ▼ (<i>f</i> _x =COUNT(C5:C18)				
	А	В	C	D	
1					
2		Delegates attending the	meeting		
3					
4		Delegate country	Present	Not present	
5		Australia	1		
6		Brazil	1		
7		Canada	1		
8		China		1	
9		Cyprus	1		
10		Greece	1		
11		India	1	1	
12		Ireland	1		
13		New Zealand	1		
14		Pakistan	1		
15		South Africa	1		
16		Turkey		1	
17		UK	1		
18		USA	1		
19		Totals	12		



As you can see the function is:=COUNT(C5:C18)

• This function tells Excel to display the number of cells containing a value within the range **C5:C18**.



NOTE: If you made a mistake, click on cell **C19** and press the **Del** key. Then try again.

The COUNTA function

- Used to count the number of cells within a range that are not empty.
- Click on the **Counta** worksheet tab. Copy the previous table to this sheet.

23											
14 4 1+	H	Sum 🏑	Average	Max	Min	Count	Counta	Countblank	If	(1 02,	1
Ready	2										

- You will see data that contains a mixture of numbers (1) and letters (x). The Count function would only count up the number of cells containing numbers, whereas Counta will count the number of cells containing numbers and letters.
- Click on cell C19.
- Click on the More Functions icon (contained within the Function Library section of the Formulas tab).



 From the drop down displayed, select
 Statistical. From the submenu select Counta. This will display the Functions Arguments dialog box, as illustrated.

Function Arguments	? 🛛
COUNTA	
¥alue1	517:C18 (3) = {1;1}
Value2	= number
Coupts the pumber of cells	= 2
counts the number of cell.	
	Value1: value1, value2, are 1 to 255 arguments representing the values and cells you want to count. Values can be any type of information.
Formula result = 2	
Help on this function	OK Cancel

• If necessary move the dialog box to one side and then select the cell range **C5:C18**, as illustrated.

Function Arguments	
COUNTA Value1 55:C18 Value2	= {1;1} = number
Counts the number of cells in a range	= 2
Valu	ue1: value1, value2, are 1 to 255 arguments representing the values and cells you want to count. Values can be any type of information.
Formula result = 2	
Help on this function	OK Cancel

Click on the **OK** button and you will see the following.

	C19			
4	А	В	С	D
1				
2		Delegates attending the meeting		
3				
4		Delegate country	Present	
5		Australia	x	
5		Brazil	1	
7		Canada	1	
в		China		
э		Cyprus	x	
.0		Greece	1	
1		India	1	
2		Ireland	x	
.3		New Zealand	1	
.4		Pakistan	1	
.5		South Africa	x	
.6		Turkey		
.7		UK	1	
.8		USA	1	
9		Number of delegates attending:	12	

• As you can see the function has counted every instance of a number or letter within the specified cell range.

The COUNTBLANK function

- Used to count empty cells within a cell range.
- Click on the **Countblank** worksheet tab. Copy the previous table to this sheet.



- Click on cell **C19**.
- Click on the More Functions icon (contained within the Function Library section of the Formulas tab).



•From the drop down displayed, select **Statistical**. From the submenu select **Countblank**. This will display the **Functions Arguments** dialog box, as illustrated.

Function Arguments	? 🛛
COUNTBLANK Range 217:C18	[16] = {1;1}
Counts the number of empty cells in a specified ra	= 0 ange of cells, range from which you want to count the empty cells
Formula result = 0	
Help on this function	OK Cancel

• If necessary move the dialog box to one side and then select the cell range **C5:C18**, as illustrated.

Function Arguments
COUNTBLANK
Range C5:C18 💽 = {1;1}
= 0 Counts the number of empty cells in a specified range of cells.
Range is the range from which you want to count the empty cells.
Formula result = 0
Help on this function OK Cancel

• Click on the **OK** button and you will see the following.

	C19	C18)		
	А	В	С	
1				
2		Delegates attending the meeting		
3				
4		Delegate country	Present	
5		Australia	1	
6		Brazil	1	
7		Canada	1	
8		China		
9		Cyprus	1	
10		Greece	1	
11		India	1	
12		Ireland	1	
13		New Zealand	1	
14		Pakistan	1	
15		South Africa	1	
16		Turkey		
17		UK	1	
18		USA	1	
19		Number of delegates absent	2	ļ

• As you can see the function has counted every instance an empty cell within the specified cell range.



The Round function

- This function rounds a number to a specified number of digits.
- Click on the **Round** worksheet tab. Create this table.

С	D	E	F	G				
22.98476	23 Round to no decimal places							
22.98476		Round to 1 decimal place						



- Click on cell **D3**.
- Click on the **Formulas** tab.
- Click on the Math & Trig button and from the drop down displayed select the Round command, as illustrated.
 Functions.xlsx -



• This will display the **Function Arguments** dialog box.

Function Argum	ents ? X
ROUND	
Number	🐹 = number
Num_digits	🐹 = number
	=
Rounds a numbe	to a specified number of digits.
	Number is the number you want to round.
Formula result =	
Help on this func	ion OK Cancel



- Click within the **Number** section of the dialog box and enter the cell reference C3.
- Click within the Num digits section of the dialog box and enter the number
- **0**, as illustrated.

ROUND			
Number	C3	=	22.98476
Num_digits	0	=	0

• Your worksheet will now look like this. The data in cell **D3** displays no decimal places. Notice the syntax of the function code displayed above the data.

(<i>f</i> _x =ROUND(C3,0)								
С	D	E	F	G				
22.98476	23	3 Round to no decimal places						
22.98476		Round to 1 decimal place						

- Click on cell **D4** and set the cell to display the contents of cell **C4** using **1** decimal place.
- Click on cell **D5** and set the cell to display the contents of cell **C5** to **2** decimal places.

What are 'IF functions'?

• Excel has a number of functions which allow us to evaluate values and make decisions based on the result of the evaluation. The **IF() FUNCTION** is one of these.

IF() SYNTAX

The format (Syntax) of the IF() function is as follows:

IF(LOGICAL_TEST, ACTION_IF_TRUE, ACTION_IF_FALSE)

LOCICAL TEST

LOGICAL_TEST	Logical operators		Values for Evaluation A=10 B=5	Result
The logical test evaluates an			C=15 D=10	FALOF
averagion to see if it passes		= (Equal to)	A=B	FALSE
expression to see if it passes			A=D	TRUE
the test, i.e. is		> (Greater than)	A>B	TRUE
TRUE or door not pace the			A>C	FALSE
TRUE OF UDES HOL Pass the		< (Less than)	A <b< td=""><td>FALSE</td></b<>	FALSE
test, i.e. is FALSE			A <c< td=""><td>TRUE</td></c<>	TRUE
		>= (Greater than or Equal to)	A>=B	TRUE
			A>=D	TRUE
			A>=C	FALSE
		<= (Less than or Equal to)	A<=B	FALSE
			A<=C	TRUE
			A<=D	TRUE



• ACTION_IF_TRUE

Action_if_true can be a value or an operation. Whichever, the result is placed in the cell which contains the IF() Function if the logical_test is true.

ACTION_IF_FALSE

Action_if_false can be a value or an operation. Whichever, the result is placed in the cell which contains the IF() Function if the logical_test is false.

Using the IF function

• Click on the If worksheet tab. Create these tables

	٨	В	с	D	E	F	G	н		J
1										
2										
3										
4										
5										
6				SUBJE	CTS					
7		STUDENTS	Mathematics	English	History	Geography			Average grades	Passed?
8		Hadiya	68	78	59	59			66	
9		Dai	69	69	69	67			69	
10		Aaron	76	78	79	87			80	
11		Rowan	67	86	58	65			69	
12		Aaliyah	85	77	87	78			82	
13		Gabriela	59	68	78	89			74	
14										

- In cells **J8:J13** we need to display the word **PASS** or **FAIL**, depending on whether the average is over **70%**.
- Click on the cell **J8**.
- Click on the Logical icon within the Function Library group of the Formulas tab.





TIP: Remember that depending on the configuration of your PC, the **Function Library** may look like this.

• This will display a drop down list. Select the **IF** command.



	fr	Σ AutoSum *	<u>ا ج</u>	ogical 🔪 🛛 🙀 Look	up & Reference *
e. Ir	JA Sart	🔂 Recently Used *		AND	& Trig *
Fui	nction	🝺 Financial 🔹		FALSE	Functions *
		I		IF	
		J ▼ (IFERROR	
	Α	В		NOT	D E
1				OP	
2					
3				TRUE	
4			f _x	Insert <u>F</u> unction	

• This will display the **Function Arguments** dialog box.

Function Argumen	ts	? 🛛		
[IF				
Logical_test	=	logical		
Value_if_true	=	any		
Value_if_false		any		
= Checks whether a condition is met, and returns one value if TRUE, and another value if FALSE. Logical_test is any value or expression that can be evaluated to TRUE or FALSE.				
Formula result =				
Help on this function		OK Cancel		

• In the **LOGICAL_TEST** section of the dialog box, we enter the logical test, i.e. **I8>70**

In the VALUE_IF_TRUE section of the dialog box, we enter the word PASS. In the

VALUE_IF_FALSE section of the dialog box, we enter the word **FAIL**.

- Your dialog box will now look like this.
- Click on the **OK** button to continue. Your screen will now look like this.

Function Argumen	ts 🔹 💽		
[IF			
Logical_test	18>70 💽 = FALSE		
Value_if_true	"PASS" = "PASS"		
Value_if_false	"FAIL" FAIL"		
= "FAIL" Checks whether a condition is met, and returns one value if TRUE, and another value if FALSE. Value_if_true is the value that is returned if Logical_test is TRUE. If omitted, TRUE is returned. You can nest up to seven IF functions.			
Formula result = FAIL			
Help on this function	OK Cancel		

		SUBJE	CTS			
STUDENTS	Mathematics	English	History	Geography	Average grades	Passed?
Hadiya	68	78	59	59	66	FAIL
Dai	69	69	69	67	69	
Aaron	76	78	79	87	80	
Rowan	67	86	58	65	69	
Aaliyah	85	77	87	78	82	
Gabriela	59	68	78	89	74	

• Use the normal Excel drag techniques to extend this function to the cells **I9:J13**. Your screen will now look like this.

		SUBJE	CTS			
STUDENTS	Mathematics	English	History	Geography	Average grades	Passed?
Hadiya	68	78	59	59	66	FAIL
Dai	69	69	69	67	69	FAIL
Aaron	76	78	79	87	80	PASS
Rowan	67	86	58	65	69	FAIL
Aaliyah	85	77	87	78	82	PASS
Gabriela	59	68	78	89	74	PASS

• Save your changes and close the workbook.

Do this Example: calculate Total after Discount

That if the total greater than or equal 7500 SR then discount the total 10% otherwise put the total.

	E2	• (•	f_{x}			
	А	В	С	D	E	F
1	Product	Unit price	Quantity	Total	Total after Discount	
2	Hard disk	200 SR	1	200 SR		
3	Laptop	4,000 SR	2	8,000 SR	;	
4	Mobile	500 SR	3	1,500 SR		
5	Keyboard	20 SR	4	80 SR		
6	Screen	450 SR	5	2,250 SR		
7	Processor	1,025 SR	3	3,075 SR		
8						

Use If Function.

- Click on Cell E2
- Click on the Logical icon within the Function Library group of the Formulas tab.

isert	Page Layout	Formulas	Data	R
1 -	😥 Logical 🛪	🔁 Lookup &	& Reference	e 🔻
Used •	🔁 Text -	Math & 1	ſrig *	
· •	音 Date & Time 🕶	More Fu	nctions -	

You can calculate by using this concept **Total after discount =** total-total*10%

Or **Total after discount =** total*90%

Or Total after discount= total *.9

Function Arguments					8 x
IF					
Logical_test	D2 >=7500	8	🛐 = FALS	E	
Value_if_true	D2-D2*10%	E	= 180		
Value_if_false	D2	Ē	= 200		
= 200 Checks whether a condition is met, and returns one value if TRUE, and another value if FALSE. Value_if_false is the value that is returned if Logical_test is FALSE. If omitted, FALSE is returned.					
Formula result = 200 S	SR.				
Help on this function				ОК	Cancel

Or

Function Arguments				? <mark>x</mark>
IF				
Logical_test	D2 >=7500	🔣 = FALSE	E	
Value_if_true	D2*.9	= 180		
Value_if_false	D2	= 200		
Checks whether a cond	tion is met, and returns o Value_if_true is the TRUE	= 200 ine value if TRUE, and and value that is returned if Lo is returned. You can nest	ther value if FALSE. ogical_test is TRUE. up to seven IF func	If omitted, tions.
Formula result = 200 S	R			
Help on this function			ОК	Cancel

- Press ok
- And fill the other cells from E3:E7



CHARTS

Inserting a column chart

• Create a new workbook and save it as **Chart**, create this table

	A1	- (0	f 3
	А	В	С
1	Region	No.Sales	
2	North	34	
3	South	23	
4	East	65	
5	West	23	Į
6			



• Copy this table in all sheets

•If necessary, click on the **Column Chart** worksheet tab (at the bottom-left of your screen).

26							
14	+	•	Column	Chart	L	Line	C

- Click within the table of data.
- Click on the **Insert** tab and you will see the **Charts** group displayed within the Ribbon.
- Click on the **Column** icon and you will see a drop down displaying a range of column chart options.
- Click on the first option, the 2-D
 Clustered format, as illustrated.
- You will see the following chart inserted into your worksheet.







Microsoft Excel



• Click on the **Undo** icon (top-left of your screen), and experiment with inserting other types of column chart such as a **3-D chart**, as illustrated below.



Inserting a line chart

• Click on the Line Chart worksheet tab at the bottom of your screen.



• Experiment with inserting different types of line chart. An example is illustrated below.



Inserting a bar chart

• Click on the **Bar Chart** worksheet tab at the bottom of your screen.



• Experiment with inserting different types of bar chart. An example is illustrated below.



Inserting a pie chart

• Click on the **Pie Chart** worksheet tab at the bottom of your screen.

Ready

• Experiment with inserting different types of pie chart. An example is illustrated below.



• Save your changes and close the workbook.



Resizing a chart

- Open a workbook called **Chart Manipulation**.
- To resize a chart click on it to select it.
- Move the mouse pointer to one of the four corners of the chart. You will notice that
 the mouse pointer changes to the shape of a diagonal line with an arrow at each end.
 When you see the mouse pointer change, press the mouse button and while keeping
 the button pressed move diagonally across the screen. Move away from the centre of
 the chart to make the chart larger and toward the centre of the chart to make the
 chart smaller. When you release the mouse button the chart will be resized.

Deleting a chart

- Select the chart and press the **Del** key.
- Save your changes and close the workbook.

Chart title or labels

• Open a workbook called Modifying charts.

• If necessary, click on the **Modifying a Chart** worksheet tab (at the bottomleft of your screen).



• You can see a column chart displayed within the workbook. Select the chart title, as illustrated.

No. of sales

• Press the **Del** key to remove the chart title. Your chart will now look like this.



• To insert a chart title, click on chart and then click on the **Layout** tab. Click on the **Chart Title** icon within the **Layout** Ribbon.



• Select the required option from the drop down list displayed, such as **above Chart**.



• Your chart title is once again displayed, as illustrated.





TIP: To modify the chart title text, click within the **Chart Title** and simply edit the text in the normal way. You can also apply text formatting to the Chart Title as required. An example is shown below.





Changing the chart background color

• Click on the chart to select it. Right click over an empty part of the chart background, and you will see a popup menu displayed.

¥	Cu <u>t</u>
	<u>С</u> ору
8	Paste
2	Reset to Match Style
Α	<u>F</u> ont
ab I	Change Chart Type
F	S <u>e</u> lect Data
b	Move Chart
	3-D <u>R</u> otation
Ð	<u>G</u> roup ▶
۹.	Bring to Front
ъ.	Send to Bac <u>k</u>
	Assig <u>n</u> Macro
	Eormat Chart Area

• Click on the Format Chart Area command.



TIP: If you do not see this command, right click on a different, empty part of the chart, until you do see this command.

• You will see the Format Chart Area dialog box displayed.



• If necessary, click on the **Solid fill** button and you will see extra controls displayed within the dialog box.



• Click on the **down arrow** next to the **Color** control and select a light color from the options displayed.

Format Chart Area 🔹 😰 🔀			
Fill Border Color Border Styles Shadow 3-D Format	Fill No fill Solid fill Gradient fill Picture or texture fill Automatic Color: Transpa Theme Colors Dark Blue, Text 2, Lighter 80% Standard Colors		
	More Colors		

• Click on the **Close** button to apply the color, as illustrated below.



Changing the column, bar, line or pie slice colors in a chart

• Click on the second worksheet tab, called Column Chart.



• Click on one of the columns within the chart. You should see all the columns are selected, as illustrated.



ICDL Manual Microsoft Excel No. of sales 70 60 50 40 30 No. of sales 20 10 0 North South East West

• Right click over one of the selected columns and from the popup menu displayed select the **Format Data Series** command.

2	Delete Reset to Match Style
ab.	Change Series Chart Type
₽.	S <u>e</u> lect Data
	3-D <u>R</u> otation
	Add Data La <u>b</u> els
	Add T <u>r</u> endline
	Format Data Series

• This will display the Format Data Series dialog box.

Format Data Series				
Series Options Fill Border Color Border Styles Shadow 3-D Format	Series Options Series Qverlap Separated O% Gap Width			
	No Gap Large Gap 150% Plot Series On Primary Axis Secondary Axis			

• Click on the **Fill** command within the dialog box, as illustrated.





• Click on the **Solid fill** command and extra controls will be displayed, as illustrated.

Format Data Series				
Series Options Fill Border Color Border Styles Shadow 3-D Format	Fill No fill Solid fill Gradient fill Picture or texture fill Automatic Invert if negative Yary colors by point Color: Iransparency: 0%			

• Click on the **down arrow** in the **Color** section and select a color for your columns.




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Microsoft Excel

• When you click on the **Close** icon the selected color will be applied, as illustrated.



- Click on the Line Chart worksheet tab and change the color of the line.
- Click on the **Bar Chart** worksheet tab and change the color of the bars.
- Click on the **Pie Chart** worksheet tab to display the pie chart. The whole point of a pie chart is that each segment of the pie chart should be a different color. Bearing this is mind click once on the pie chart to select all the segments within the pie chart. Then click again on a particular segment to select just that segment. At this point you can then right click and change

the color of just that segment. An example is illustrated below.



• Save your changes and close the workbook.

Modifying the legend fill color

- create a new workbook and save it as **Legend**.
- Select the legend within the chart, as illustrated.



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• Right click over the selected legend and from the popup menu displayed select the **Format Legend** command.



• This will display the **Format Legend** dialog box, as illustrated.



• Select the Fill tab. Select the Solid fill button and you will see the following.

Format Legend	? 🔀
Legend Options Fill Border Color Border Styles Shadow	Fill ○ No fill ③ Solid fill ④ Gradient fill ④ Picture or texture fill ④ Automatic Color: ② ▼ Transparency: □ 0% ♦

• Click on the **down arrow** in the **Color** control and select a color as illustrated below.



- -7

Home

Type

Change

Save As Chart Type Template

Format Legend	? 🛛
Legend Options Fill Border Color Border Styles Shadow	Fill No fil Solid fil Gradient fil Picture or texture fil Automatic Color: Transpa Theme Colors Dark Blue, Text 2, Lighter 60% Standard Colors More Colors



- Click on the **Close** button to apply the formatting and close the dialog box.
- If you have time try experiment with some of the other options within the Fill section of the **Format Legend** dialog box, such as **Gradient Fills** or adjusting the fill transparency.

	,		
Transparency:		87%	\$

• Save your changes and close the workbook.

Changing the chart type

Chart Type dialog box.

• Open a workbook called **Changing charts**. This workbook contains a column chart.

Click on the chart to select it. Click on the **Design** tab. Click on the Change Chart Type icon displayed within the Type group of the **Design** Ribbon.







- S
 - Select a different type of chart, such as a **Bar** chart and then click on the **OK** button.



- Experiment with applying different types of chart.
- Save your changes and close the workbook.

Modifying charts using the Layout tab

- Open a workbook called Formatting Charts.
- Select the chart and then click on the Layout tab.
- The Layout tab includes many options for controlling how the various chart elements are displayed.

	Chart Tools	,	
iew	Design	Layout	Format

 Click on the Chart Title button in the Labels group of the Ribbon. A menu will be display allowing you to control where or if the chart title is displayed. The default is Above Chart, try selecting the other options and observe the effect on the chart.



• Click on the **Axis Titles** button in the **Labels** group of the Ribbon. A menu will be display allowing you to control how the labels for each axis are displayed. Experiment with some of the available options and view their effect on the chart.





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- Click on the Legend button in the Labels group of the Ribbon. A menu will be display allowing you to control where the chart legend is displayed. Experiment with some of the
- you to control where the chart legend is displayed. Experiment with some of the available options and view their effect on the chart.
- Click on the Data Labels button in the Labelsgroup of the Ribbon. A menu will be displayed allowing you to choose if labels should be applied to data in the chart.
- Click on the **Show** option. The chart should now look something like this.

Notice that each column is now labeled with its value.

- Click on the **Data Table** button in the **Labels** group of the Ribbon. A menu will be display allowing you to show the data used to create the chart.
- Click on the Show
 Data Table with
 Legend Keys option.
 A small table will be
 displayed below the
 chart containing the
 relevant data.





d Ni

Axes

None

Gridlines

Do not show a Data Table

but without Legend Keys

Show Data Table below the chart

Show Data Table with Legend Keys Show Data Table below the chart and include Legend Keys More Data Table Options...

Show Data Table

n n

Data

Table 1

d De l



ICDL Manual



Microsoft Excel

000

Chart

Wall -

2

Plot

Area

ICDL Manual

 Click on the Gridlines button in the Axes group of the Ribbon. A menu will be display allowing you to control how the gridlines for each axis are displayed. Experiment with some of 	Gridlines Flot Chart Chart Area V Wall V Floor V Rc Primary Horizontal Gridlines V H I J K	3-D Image: Chart I 3-D Trendline Lines Up/Down Error * Bars * Bars * Bars * Image: Chart I Chart I Image:
view their effect on the chart.	sales	Minor Gridlines Display Horizontal Gridlines for Minor units
		Major & Minor Gridlines Display Horizontal Gridlines for Major and Minor units More Primary Horizontal Gridlines Options

• Close the workbook and save any changes you may have made.

Copying and moving charts within a worksheet

- Open a workbook called **Copying and moving charts 1**.
- Click on the chart to select it.
- To move the chart within the worksheet, click on the chart and drag the chart to a new position in the worksheet.
- To copy the chart within the worksheet, click on the chart to select it and press
 Ctrl+C to copy the chart to the Clipboard. Deselect the chart and then press Ctrl+V to paste the chart from the Clipboard. You should now see two copies of the chart. You can move them so that they are not layered on top of each other.

Copying and moving charts between worksheets

- Click on the chart to select it.
- To copy the chart to another worksheet within the workbook, click on the chart to select it and press **Ctrl+C** to copy the chart to the Clipboard.
- Click on the **Sheet2** tab at the bottom of the worksheet.

2.5	
26	
I I I I I Sheet1	Sheet2 Sheet3 🖓
Ready 🛅	

- Press Ctrl+V to paste the chart from the Clipboard. You can move the chart if required within this worksheet.
- To move the chart to another worksheet within the workbook, click on the Sheet1 tab at the bottom of the worksheet. Click on the chart to select it and press Ctrl+X to cut (i.e. move) the chart to the Clipboard.
- Click on the **Sheet3** tab at the bottom of the worksheet.
- Press **Ctrl+V** to paste the chart from the Clipboard. You can move the chart if required within this worksheet.



Copying and moving charts between workbooks

- Select a chart within the workbook. Press **Ctrl+C** to copy the chart to the
- Clipboard. Open a second workbook called **Copying and moving charts 2**. Press **Ctrl+V** to paste the chart into the second workbook.
- **NOTE**: To move a chart between workbooks, use the same procedure, but **Cut** rather than **Copy** the chart, using the **Ctrl+X** keyboard shortcut for cutting a selected item to the Clipboard.
- Close all open workbooks and save any changes you have made.



Customizing Excel

Modifying basic Excel options

• You can customize the way Excel looks and performs. To do this click on the **Microsoft Office button** and within the dialog box displayed click on the **Excel Options** button (bottom-right of the dialog box).

:	Excel Options	X	Exit Excel

• This will display the **Excel Options** dialog box.

Excel Options	[?]	×
Excel Options Popular Formulas Proofing Save Advanced Customize Add-Ins Trust Center	Change the most popular options in Excel. Top options for working with Excel Show Mini Toolbar on selection Enable Live Preview Show Developer tab in the Ribbon Always use ClearType Color scheme: Blue ScreenTip style: Show feature descriptions in ScreenTips	
Resources	Create lists for use in sorts and fill sequences: Edit Custom Lists When creating new workbooks Use this font: Body Font Font size: 11 Default giew for new sheets: Normal View Include this many gheets: 3	[
	Personalize your copy of Microsoft Office User name: David Murray Choose the languages you want to use with Microsoft Office: Language Settings	
	OK Cancel	

• You can use this to customize items such as the type of font used, the font size used and the number of worksheets displayed within a new workbook.

When creating new workbooks	i	
Use this fo <u>n</u> t:	Body Font	*
Font size:	11 💌	
Default view for new sheets:	Normal View 🔽	
Include this many <u>s</u> heets:	3	

• Try altering the number of worksheets contained within a new workbook to 4 rather than 3.

Include this many <u>sheets</u>: 4

¥



Then close the dialog box and press **Ctrl+N** to create a new workbook. You should see 4 worksheets, as illustrated.



Close the new workbook without saving any changes you have made. Reset the

default for new workbooks, back to 3 worksheets per workbook.

• Re-open the **Excel Options** dialog box and view the **Popular** options.

Towards the bottom of the dialog box you will see a section allowing you to personalise your copy of Microsoft Office. If there is no name displayed here,

insert your name. If someone else's name is displayed, replace it with your name. This '**user name**' information can be used by many application programs

to automatically insert your details in to a document.

Personalize your copy of Microsoft Office		
<u>U</u> ser name:		

• Click on the **Save** option (displayed down the left side of the dialog box).

cel Options	
Popular Formulas Proofing	Customize how workbooks are saved. Save workbooks
Save	Save files in this format: Excel Workbook (*.xlsx)
Advanced	Save AutoRecover information every 10 📚 minutes
Customize	Auto <u>R</u> ecover file location: C:\Documents and Settings\David Murray\Application Data\Microsoft\Excel\ Datawit file location: C:\Documents and Settings\David Murray\Application Data
Add-Ins	Default fije location.
hust Center	Autorecover exceptions for:
Resources	Disable AutoRecover for this workbook only
	Offline editing options for document management server files
	Save checked-out files to:
	Server drafts location: C:\Documents and Settings\David Murray\My Documents\SharePoint Drafts\
	Preserve visual appearance of the workbook
	Choose what colors will be seen in previous versions of Excel: ①Colors

You can use this page to set the default folder location to be used when saving your workbooks. Make a note of the path displayed within the **Default file location** section.

Default file location:

C:\Documents and Settings\David Murray\My Documents

Change this to C:\ and then click on the OK button., which will mean that in future Excel will, by default open files from the root folder and also save files to the root folder.



To see the effect of the new default folder location, press **Ctrl+O** to display the **Open** dialog box. You will notice that by default the root folder is displayed (C:\).

Use the method outlined above to reset the default folder back to its original location.

- As you can see there are lots more useful options that you can customize to make your use of Excel easier and more productive. If you have time investigate some of the other customization options available.
- Before you move on, click on the **Resources** button (within the left part of the dialog box). As you can see this has an option that allows you to check for updates.

Excel Options	
Popular Formulas	Contact Microsoft, find online resources, and maintain health and reliability of your Microsoft Office programs.
Proofing	get updates Check for Updates
Save	Get the latest updates available for Microsoft Office.
Advanced	run Microsoft Office Diagnostics
Customize	Diagnose and repair problems with your Microsoft Office programs.
Add-Ins	contact us
Trust Center	Let us know if you need help, or how we can make Microsoft Office better.
Resources	activate Microsoft Office
	Activation is required to continue using all the features in this product.
	go to Microsoft Office Online
	Get free product updates, help, and online services at Microsoft Office Online.

- Close the dialog box before continuing. Minimizing the Ribbon
- Sometimes you want 'more writing space'. To help achieve this you can right click over the Ribbon and from the popup menu displayed, click on the Minimize the Ribbon command.

Page Layout

1	 -
	Add to Quick Access Toolbar
	Customize Quick Access Toolbar
	Show Quick Access Toolbar Below the Ribbon
-	Mi <u>n</u> imize the Ribbon

• The Ribbon display will change from this.

Home

Insert

	d 4) + (** -) +			E	look2 - Microsoft Excel			
	Hom	e Insert Page La	yout Formu	las Data H	Review	View Developer			
8	*	Calibri 🔹 11	- [A [*] ∧ [*]] [≡	· = = »··	đ	General 🔹		G*= Insert ▼	Σ
Paste	3	B <i>I</i> <u>U</u> →	≫ • <u>A</u> • [≣		• • •	· % , .00 .00 .00 .00 .00 .00 .00 .00 .00 .	Conditional Format Cell Formatting * as Table * Styles *	Format *	2-
Clipboard	6	Font	15	Alignment	l5i	Number 🕞	Styles	Cells	
To th	is.								
-	VIC	1 1 1 - (1 -) ,					Rook - Microso	ft Evcol	

Data

Review

View

Developer

Formulas



• To display the Ribbon again, right click over any of the tab commands and from the popup menu displayed, re-click on the Minimize the **Ribbon** command (to remove the tick).

AutoCorrect options

- Microsoft Excel has an AutoCorrect facility that allows common typing errors to be automatically corrected. For instance if you type in 'the' instead of 'the', Microsoft Excel will automatically correct your spelling error.
- To open the AutoCorrect dialog box, click on the Office Button (top-left of your screen). Click on the **Excel Options** button at the bottom of the dialog box.

 Click on the Proofing option, and then click on the AutoCorrect Options button.



This will display the **AutoCorrect** dialog box.

A	utoCorrect: English (United Kingdom)	x
	AutoCorrect AutoFormat As You Type Smart Tags	
	Show AutoCorrect Options buttons	
	 ✓ Correct TWo INitial CApitals ✓ Capitalize first letter of sentences ✓ Capitalize names of days ✓ Correct accidental use of cAPS LOCK key 	
	Replace text as you type	וור
	Replace: With:	1
	teh the	Ī
	<u>A</u> dd <u>D</u> elete	
	OK Cancel	





- As you can see this has a number of options such as the ability to correct words where you have accidentally typed in the first two letters in capitals. It will also automatically capitalise the first letter within a sentence and also the first letter within a table cell and the days of the week. A very useful feature is to automatically correct the effect of accidentally pressing the **Caps Lock** key.
- In the lower part of the dialog box is a scrollable section which tells you what Microsoft Excel will act on and change automatically.
- Add some words that you commonly spell incorrectly, into the **Replace** section of the dialog box, along with the correct spelling in the **With** section of the dialog box.



Printing

Worksheet Setup

Worksheet margins

• Open a workbook called **Print setup**.

• Click on the **Page Layout** tab, and from within the **Page Setup** group of the Ribbon, click on the **Margins** icon.

nsert	Page Layout	Fo	rmulas	Data	Review	Viev
Margins	Orientation	Size	Print Area *	Breaks	Background	Print Titles
		Pag	ge Setup			G

 This will display a drop down from which you can select Normal, Wide or Narrow.

Margins Ori	entation	Size	Print Area *	Breaks	Back
	Normal Top: Left: Header:	1.91 cm 1.78 cm 0.76 cm	Botto Right Foot	om: 1.91 t: 1.78 er: 0.76	cm cm cm
	Wide Top: Left: Header:	2.54 cm 2.54 cm 1.27 cm	Botto Right Foot	om: 2.54 t: 2.54 er: 1.27	cm cm cm
	Narrow Top: Left: Header:	1.91 cm 0.64 cm 0.76 cm	Botto Right Footo	om: 1.91 t: 0.64 er: 0.76	cm cm cm
Custo	m M <u>a</u> rgin	IS			

 Clicking on the Custom Margins command displays the Margins tab within the Page Setup dialog box. You can use this dialog box to set custom top, bottom, left and right margins.

Jour		
Page Setup		? 🔀
Page Margins Header	r/Footer Sheet	
	<u>T</u> op:	Header:
Left: 1.8 🗢		Right:
Center on page Horizontally Uertically	Bottom:	Eooter:
	Print Prin	nt Preview Options



TIP: You can also use this dialog box to set Header and Footer values, as well as options to centre the table on the page vertically and / or horizontally. Experiment with setting margins.



TIP: Be sure not to make the margin size to small or you may have problems printing the worksheet.

Worksheet orientation

• Click on the **Page Layout** tab, and from within the **Page Setup** group of the Ribbon, click on the **Orientation** icon. You can select either **Portrait** or **Landscape** orientation, as illustrated.

nsert	Page Lay	out	For	mulas	Data	a Review	View
Margin	orientat	ion	Size	Print Area ∗	Breaks	Background	Print Titles
• (Por	trait	Setup			Fa.
		Lan	decana	5			D
le (Lan	luscape	stock	۲	Value of ea	ch comp
00001 8	Red				2		

• Try setting the orientation to Landscape. To see the effect in **Print Preview** mode, press the **Ctrl+F2** keyboard shortcut. To return to the previous view, click on the **Close Print Preview** icon.



• Before continuing reset the orientation back to **Portrait**.

Worksheet page size

 Click on the Page Layout tab, and from within the Page Setup group of the Ribbon, click on the Size icon. You can select the required page size from the drop down options displayed, as illustrated.



Header

& Footer

Headers and footers

 Click on the **Insert** tab and from within the **Text** group of the Ribbon, click on the **Header & Footer** icon.

• You will see the Header area displayed at the top of the worksheet, as illustrated.



Microsoft Excel

Header				
Component code	Color	Number in stock	Value of eac	h component
100001	Red	2		22.99
100002	Red	2		11.50

- Type in the text for you header, such as 'Stock Levels for January'.
- If you scroll down the page you will see the message '**Click to add footer**' displayed at the bottom of the worksheet.

|--|

• Click within the footer area and type in your name. As example is illustrated below.

100048 Green	3	2.00	
100049 Green	4	2.10	
	David Murray		
Footer		_	

• To modify a header or footer at any time just click over an existing header or footer and edit as required.



TIP: Remember that to see headers and footers, you may need to click on the **View** tab and then click on the **Page Layout** icon.

• To change back to the normal view click on the **View** tab and then click on the **Normal** icon.





Header and footer fields

• When you are inserting or editing a footer or header, you will notice that you see the **Header and Footer Tools** Ribbon. Within this Ribbon is the **Header & Footer Elements** group, as illustrated below.



- You can use the icons in this section in insert an Excel field, such as the Page Number. The great thing about fields is that they automatically update when required. For instance if you insert a **Page Number** field, then as you add more pages, the page number displayed on each page will increment.
- Another very useful field is the **File Name** field. This displays the file name
- of the document in your header or footer, when you print, and is very useful when you have printed out a copy of a worksheet and then several months

later are trying to remember the file name you used to save the worksheet as.



NOTE: When you insert a field, such as the **File Name** field, you may see the field code rather than the actual file name. When you print the worksheet however, this code is replaced by the actual file name.

- The **File Path** will display the file name and also the path to the folder in which the file is stored.
- Experiment with inserting different fields into your header or footer.
- Make sure that you have experimented with all of the following field types:





NOTE: To remove a header or footer field, select the field you wish to remove and press the **Del** key.



Scaling your worksheet to fit a page(s)

• Click on the **Microsoft Office Button** and then click on the **arrow** next to the **Print** command. From the submenu, select **Print Preview**.

New	Preview and print the document
<u> </u>	Print
Open	other printing options before printing.
	Quick Print
Convert	Send the document directly to the default printer without making changes.
	Print Preview
Save	Preview and make changes to pages before printing.
Save <u>A</u> s 🔸	
Save <u>A</u> s ►	printing.
Print	

- If you look at the bottom-left of the screen you will notice that in the example shown, the data requires a total of 4 pages to print.
- To close the **Print Preview** view, click on the **Close Print Preview** button



 Excel has a facility that lets you determine how many pages you want the data to print over. If required you can shrink the size of the data so that it all fits on one page. It may be hard to read due to the small type size, but you can do this. Click on the **Page Layout** tab and within the **Scale to Fit** group to display the following options.

Width:	Automatic 👻		
Height:	Automatic 👻		
🖳 Scale: 100% 🛟			
Scale to Fit 🛛 🖗			

- Click on the **down arrow** to the right of the **Width** control, and select **1 page**.
- Click on the **down arrow** to the right of the **Height** control, and select **1 page**



Microsoft Excel

• Display the worksheet in **Print Preview** view and you should see that the



worksheet will now print on a single page.

Preview: Page 1 of 1

- Close the **Print Preview** view.
- Save your changes and close the workbook.

Preparing to print a worksheet Visually check your calculations

- Open a workbook called **Printing**.
- Click on cell **E2**. Clearly the formula within this cell is wrong. The formula it contains is **=C2*F2**

It should be: **=C2*D2**

Fix the formula.

Always visually check over worksheet data and try to look for formula calculation results that do not make sense.

Displaying gridlines when printing

 To see how the worksheet will look when printed view the worksheet in Print

Preview view. To do this click press **Ctrl+F2**. As you can see the worksheet will print without displaying gridlines.

empeonent code	Celer	Number in stock	Value of each component	
10000	. Ref	2	22.99	
10000	8.85	2	11.50	
10000	Red	2	31.99	
10000	Red	2	22.67	
10000	Net I		10.50	
10000	N CO		11.00	
10000	G/COA		11.50	
10000			12.00	
10000	General		12.00	
10001	German		15.50	
10001	Crean D		14.00	
10001	Grann I	2	14.50	
10001	dire en		15.00	
10001	Crean C	,	18.50	
10001	Crean D		36.00	
10001	t Blue		36.50	
10001	t thus	3	17.00	
10001	t Sive		17.80	
1000.2	a si us		18.00	
10004			18.50	
10001				
10002				
10001			17.04	
10002	and a		21.94	
10002	and its	_	5.99	
10002	f ed	22	2.65	
10002	Red I		2.50	
10003	net .	3	2.50	
10003	n edi		2.30	
1000.5	t fel		1.90	
10003	ned .	3	1.70	
10003	Red	1	1.50	
1000.8	Red	1	1.50	
10005	GACON		1.10	
10003			0.00	
10003	Carlon		1.10	
10004	Green	1	1.20	
10004	Groon	;	1.50	
10004	Creen L		1.40	
10004	Green		1.50	
10004	Groon		1.60	
10004	Green		1.70	
1000-4	Groon	7	1.60	
10004	Creen.	12	1.90	
10004	Green		2.00	
10004	Green	-	2.10	

• Click on the **Close Print Preview** button to exit from the Print Preview mode.



• Click on the **Page Layout** tab. Within the **Sheet Options** group, click on the **Print** check box under the **Gridlines** heading, as illustrated.

Gridlines	Headings			
View	View			
V Print	Print			
Sheet Options 👘 🖟				

• View the worksheet in **Print Preview**

(C 1	and the second	
Compoonent code	Lolor	NUMBER IN STOCK	Value of each component
100001	Red	2	22.99
100002	** *	,	11 50
100005	Red	2	31.99
100004	Red	2	22.87
100005	Red	4	10.50
100008	Red	6	11.00
100007	Green	8	11.50
100005	Green	2	12.00



Microsoft Excel

view by pressing **Ctrl+F2**. As you can see the worksheet will now print displaying gridlines.

- Exit the Print Preview view.
- Before continuing, re-click on the **Print** Gridlines check box so that the worksheet will print without displaying gridlines.

Printing titles on every page when printing

• View the worksheet in **Print Preview** view by pressing **Ctrl+F2**. As you can see the top row, containing the column titles is displayed on the first page.

Compoonent code	Color	NUmber in stock	Value of a	ach component
100001	Red		2	22.99
100002	REA .		2	11.50
100005	Red		2	51.99
100004	Red		2	22.87
	-			

• Press the **Page Down** key to view the second page. As you can see the columns are displayed without a top row explaining what each column relates to.

100050 White	11	2.20	
100051 White	1	2.50	
100052 White	1	2.40	
100055 White	4	2.50	
100054 White	4	2.60	

• We need to fix this as it would be very inconvenient to print out a long report and always have to refer to the first page to know what each column relates to. Close the **Print Preview** view.

Print

Titles

• Click on the **Page Layout** tab. Within the **Page Setup** group, click on the **Print Titles** icon, as illustrated.



- This will display the Page Setup dialog box.
- If necessary move dialog box so that you can see the title row within the worksheet.





T

TIP: To move a dialog box, click on the **Title Bar** at the top of the dialog box and while pressing the mouse button, drag with the mouse. When you release the mouse button the dialog box will have moved.

Page Setup		? 🛛
Page Margins Heade	r/Footer Sheet	
Print <u>a</u> rea: Print titles		E
Rows to repeat at top:		
Columns to repeat at left:		
Print ☐ Gridlines ☐ Black and white ☐ Draft guality ☑ Row and column headin Page order ④ Down, then over ④ Over, then down	Comments: Cell errors as: gs	(None)
	Print	Print Preview Options
		OK Cancel

• Click in the **Rows to repeat at top** box, within the dialog box.

Print titles	
<u>R</u> ows to repeat at top:	1

• Click within the top row and your dialog box will look like this.

Page Setup		? 🛛
Page Margins Heade	r/Footer Sheet	
Print <u>a</u> rea: Print titles		
<u>R</u> ows to repeat at top:	\$1:\$1	
<u>C</u> olumns to repeat at left:		I
Driph		

- Click on the **OK** button to close the dialog box.
- Press **Ctrl+F2** to see the worksheet in **Print Preview** view. As you would expect the title row is displayed across the top of the data.

Compoonent code	Color NU	mberinstock Value of e	ech component
100001	Red	2	22.99
100002	REG .	2	11.50
100003	Red	2	51.99
100004	Red	2	22.87
100005	Red	4	1050
100006	Red		11.00
100007	Green	8	11.50
100008	Green	9	12.00
100009	Green		12.50
100010	Grecon	7	15.00
100011	Green	4	13.50

• Press the **Page Down** key to view the second page, and now, as you can see this page also displays a title row at the top of the data.



Microsoft Excel

Compoonent code	Color	NUmber instock Value of each component	t
100050	while		2.20
100051	White	1	2.30
100052	White	1	2.40
100053	White	4	2.50
100054	White	4	2.60
100055	White	5	2.70
100056	White	8	2.50
100057	White	3	2.90
100058	White	4	3.00
100059	White	5	3.10
100060	White	2	3.20
100061	White	8	3.30
100062	White	5	3.40

• Press **Esc** to exit from Print Preview view.



TIP: You can use the same technique the repeat both rows and columns on every page.

Printing the Excel row and column headings

 Click on the Page Layout tab. Within the SheetOptions group, click on the Print check box under the Headings, as illustrated.

Gridlines	Headings			
View	View			
Print Print				
Sheet Options 🛛 🖻				

• Press **Ctrl+F2** to view the worksheet in **Print Preview** view. As you can see the row and column heading are displayed, and would print like this.

	A		c	0
1	Compoonent code	Color	NUmber in stock	Value of each component
2	100001	Red	2	22.99
3	100002	REG.	2	11.50
4	100003	Red	2	51.99
5	100004	Red	2	22.87
6	100005	Red	4	10.50
7	100006	Red	6	11.00
	100007	Bergen		11 50

• Press **Esc** to exit from Print Preview view.

Spell checking

 Press F7 to start the spell checker (or click on the Review tab and click the

Spelling icon).

 You will see the **Spelling** dialog box displayed.
 Follow the onscreen prompts.

Spelling: English (U.S.)	? 🗙
Not in Dictionary:	
REd	Ignore Once
	Ignore All
	Add to Dictionary
Suggestions:	
Red A	⊆hange
Rid Redo	Change All
Reds	AutoCorrect
Dictionary language: English (U.S.)	
Options Undo Last	Cancel



Microso	ft Office Excel
(į)	Do you want to continue checking at the beginning of the sheet?
	Yes No

Previewing a worksheet

- Always view a workbook in **Print Preview** mode prior to printing it. It allows you a quick visual check over how the worksheet will look when printed.
- Click on the **Microsoft Office Button** and then click on the arrow next to the **Print** command. From the submenu, select **Print Preview**.
- •Save your changes and close the workbook.

Comparing workbooks side by side

• This feature allows you to compare two versions of a workbook, side by side. Open a document called **Side by Side 1**. Open a second document called **Side by Side 2**.

• Click on the **View** tab and click on the **View Side by Side** command (located within the **Window** group under the **View** tab).

ſ				Split	View Side by Side		
	New	Arrange	Freeze	Hide	Synchronous Scrolling	Save	Switch
	Window	All	Panes *	Unhide	Heset Window Position	Workspace	Windows *
l					Window		

This will display the two workbooks side by side. As you scroll down one worksheet, the other worksheet also scrolls down the screen. Try scrolling through each worksheet to practice using this feature.

• Close both worksheets before continuing.

Zooming the view

• Open a workbook called **Zoom**.

This workbook contains text of various sizes, and may be unreadable at the normal viewing zoom level. You can use the

Zoom control to magnify the display of data on the screen (or to reduce the size of data of the screen). You can see the **Zoom** slider control displayed at the bottom-right of your screen.



Zoom	? 🗙
Magnification —	
◯ 20 <u>0</u> %	
<u> 100%</u>	
<u> </u>	
○ <u>5</u> 0%	
<u> </u>	
Eit selection	٦
\bigcirc <u>C</u> ustom:	100 %
ОК	Cancel

Microsoft Excel

- Click on the **Plus** or **Minus** button, or drag the slider using the mouse to adjust the zoon levels.
- If you click on the **Zoom** value (100% in the example show above), you will display the **Zoom** dialog box. You can use this to set exact zoom levels.
- Before continuing set the **Zoom** level back to **100%** and close the workbook.

Printing options

- create any table , copy it many times and save it as **Printing options**.
- To print the entire worksheet, click on the **Microsoft Office button** and then click on the **Print** icon. This will display the **Print** dialog box.



TIP: The keyboard shortcut to display the **Print** dialog box is **Ctrl+P**.

Print		? 🔀
Printer Name:	~	Properties Find Printer
Where: USB001 Comment:	Copies	Print to file
Page(s) Erom: Io: Print what Selection Entire workbook		Collate
Active sheet(s) Table Ignore print areas Preview	ок	Cancel

• Within the **Print Range** group of the dialog box, the default is **All**. Use this option to print the entire worksheet.



• If you only want to print certain pages, click on the **Pages** button and then

specify the pages you want to print.



Copies Number of copies:	5
₽₽ ₿	Collate
ОК	Cancel

- If you want to print multiple copies of a worksheet, you can enter a number into the **Number of Copies** section of the dialog box. In the example illustrated we have chosen to print five copies.
- If you select a range of data, prior to opening the **Print** dialog box, then the **Selection** button will be active within the **Print What** group of the dialog box, allowing you to just print the selected range.

Princ what	
Selection	🔘 <u>E</u> ntire workbook
 Active sheet(s) 	🔿 Table
Ignore print areas	

• If your workbook contains multiple worksheets and you want to print all the individual worksheets, click on the **Entire workbook** button.

O Entire workbook

- Investigate these options, but do not actually print anything, as you should always try and minimize wasted paper.
- Click **Cancel** to close the **Print** dialog box.
- Click on the **Chart** worksheet tab. This worksheet contains a chart.

25		10.00	
14 4 9 91	Sheet1	Sheet2	Chart 🖉
Ready 🔮	3		

 Click once on the chart to select it. Press Ctrl+P to display the Print dialog box. You should see that the Selected Chart button is selected. Click on the OK button to print the chart.



• The chart should print like this:



TIP: If you print a worksheet, which contains a chart, then the chart will be printed as displayed within the worksheet. You only need to use the method outlined above, if you want to print the chart on a separate page to your worksheet data.



• Close the workbook and save any changes you may have made.