



# Microsoft Excel 2010 Level 1

## ***Course Objectives***

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- Design and create a spreadsheet:  
Data, Labels, Formulas & Functions
- Successfully format spread sheets
- Present data in charts



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## Getting Started with Excel

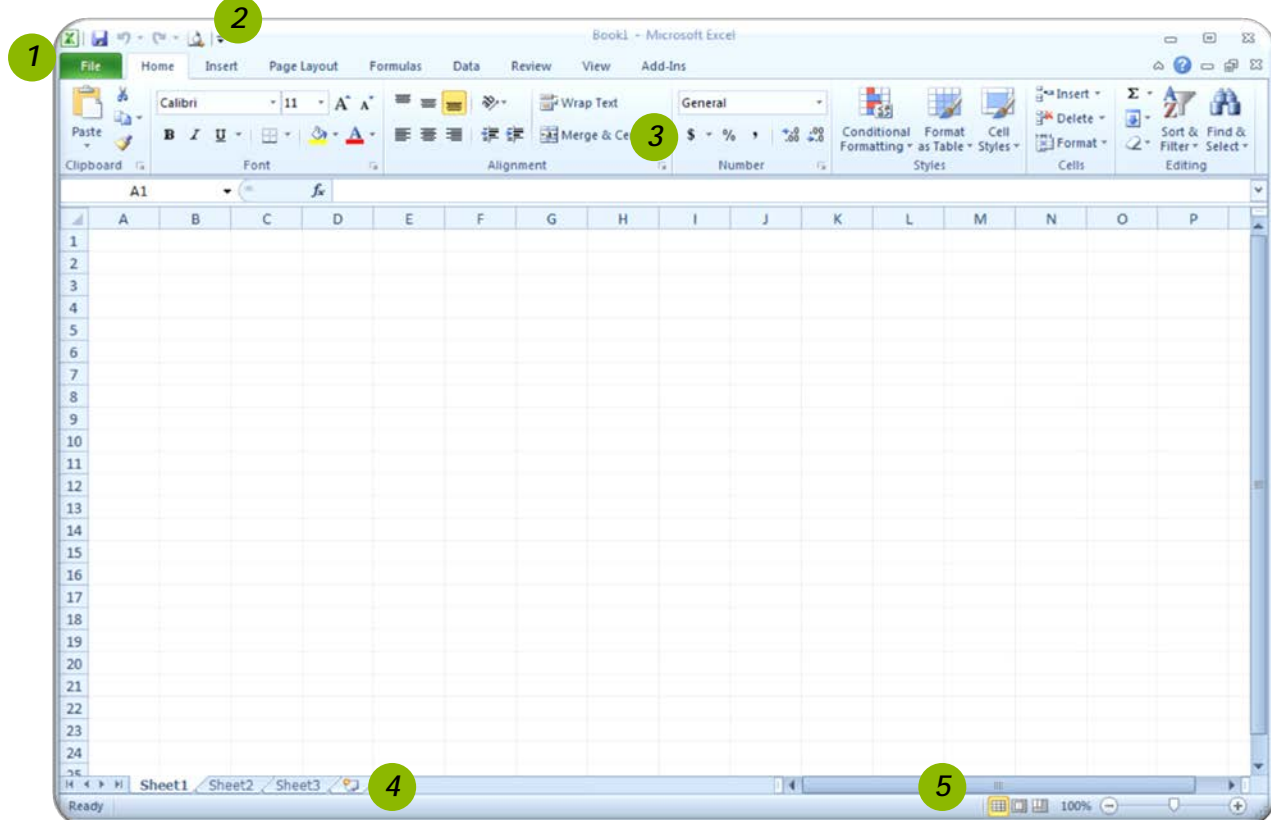
### Exercise 1

### Create a New Workbook

1. Double click on the Excel icon to start your spreadsheet session.



### Screen Overview



1	<b>File Tab</b>	This Tab replaces the 2007 Office Button and the 2003 File Menu providing access to <b>Backstage View</b> and the program control centre.
2	<b>Quick Access Bar</b>	Always visible and provides access to tools on Office Button.
3	<b>Ribbon</b>	Replaces the Menu Bar and offers a visual reference to all tools available in Word. Can be set to minimise when not actively in use.
4	<b>Status Bar</b>	Now offers a customised option to add and remove items.
5	<b>Worksheet Views</b>	Repositioned to right hand side and new magnification option via slider.

## Labels, Values, Formulas

**Labels** = Text

**Values** = Numbers

**Formulas** = Calculations (A **formula** always begins with an equal sign, '=')

### Exercise 2

### Adding Data to a worksheet

#### Step 1 – Adding Labels

	A	B	C	D	E	F
1		Board Games	Dolls & Prams	Computer Games	Lego	Totals
2	Brisbane					
3	Adelaide					
4	Sydney					
5	Melbourne					
6	Toowoomba					
7	Totals					

#### Step 2 – Adding Values

	A	B	C	D	E	F
1		Board Games	Dolls & Prams	Computer Games	Lego	Totals
2	Brisbane	1000	2000	1500	2500	
3	Adelaide	1500	2100	3000	2600	
4	Sydney	2000	2200	4500	2700	
5	Melbourne	2500	2300	6000	2800	
6	Toowoomba	3000	2400	7500	2900	
7	Totals					

### Exercise 3

### Adding Formulas to a worksheet

#### Step 3 - Formulas

You can use cells in formulas to calculate results in a number of ways:

	A	B	C	D	E	F
1		Board Games	Dolls and Prams	Computer Games	Lego	Totals
2	Brisbane	1000	2000	1500	2500	=B2+C2+D2+E2
3	Adelaide	1500	2100	3000	2600	=SUM(B3,C3,D3,E3)
4	Sydney	2000	2200	4500	2700	=SUM(B4:E4)
5	Melbourne	2500	2300	6000	2800	
6	Toowoomba	3000	2400	7500	2900	
7	Totals	=SUM(B2:B6)				

## Autofill

You can use the **AutoFill** tool to fill data into worksheet cells. You can also have Excel automatically continue a series of numbers, number and text combinations, dates, or time periods, based on a pattern that you establish.

### Exercise 4

### Autofill

1. Enter formula to Autosum on cell **B7**
2. Move to bottom right hand corner to display 'Autofill' mouse pointer. **+**
3. Drag across cells **(C7:E7)**

5	Melbourne	2500	2300
6	Toowoomba	3000	2400
7	Totals	10000	
8			

## Cell References

### Relative References

Excel adjusts the cell references and copies a formula **relative** to the answer cell  
By default cell references will be relative cell references **unless you specify otherwise**

### Absolute References

There will be times when you want to compare a range of values to a specific cell. Absolute cell references are denoted with \$ preceding each col/row reference. i.e. **\$F\$4**

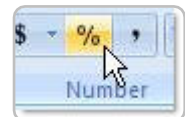
### Exercise 5

### Using Absolute cell references

We want to find out what percentage each stores' sales were from the total sales.  
We need to consider **absolute** references in our formula to specify a value in a fixed location to be used in our calculations.

1. Enter heading "**%of Total Sales**" in column G
2. Enter the formula **=F2/F7** in cell **G2**
3. Click the % button in **Number** group

E	F	G
Lego	Totals	% of Totals
2500	7000	=F2/F7
2600	9200	
2700	11400	
2800	13600	
2900	15800	
13500	57000	



**Note:** These are relative cell references and may give unexpected results when we use **Autofill**. To ensure we always refer to the 'total sales' figure in our calculations this cell has to be an **absolute** reference

E	F	G
Lego	Totals	% of Totals
2500	7000	12%
2600	9200	=F3/F8
2700	11400	#DIV/0!
2800	13600	#DIV/0!
2900	15800	#DIV/0!
13500	57000	

1. Go to cell **G2**
2. Click in **F7** reference in formula
3. Press the function key **F4** to change the reference to **Absolute; \$F\$7**
4. Autofill down

E	F	G
Lego	Totals	% of Totals
2500	7000	12%
2600	9200	#DIV/0!
2700	11400	#DIV/0!
2800	13600	#DIV/0!
2900	15800	#DIV/0!
13500	57000	

**Note:** Using absolute cell references means this formula can be duplicated accurately.

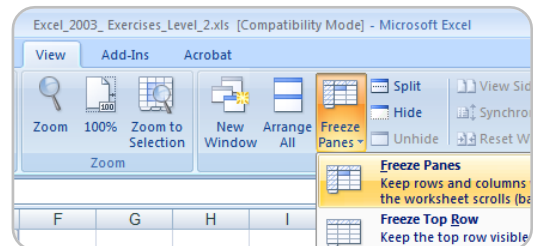
The formulas could be entered manually in each cell but Autofill will save time and provide consistent results.

F	G	G
Totals	% of Totals	% of Totals
7000	=F2/\$F\$7	12%
9200	=F3/\$F\$7	16%
11400	=F4/\$F\$7	20%
13600	=F5/\$F\$7	24%
15800	=F6/\$F\$7	28%

## Exercise 6

## To Freeze panes

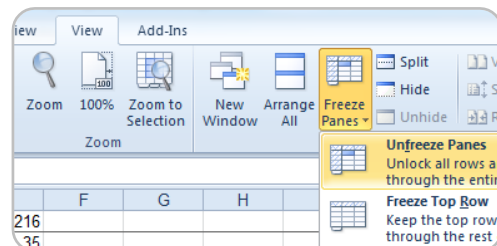
1. On the **View** tab,
2. Click the arrow beside **Freeze Panes**
3. Click **Freeze Panes**



## Exercise 7

## To Unfreeze panes

1. On the **View** tab,
2. Click the arrow beside **Freeze Panes**
3. Click **Unfreeze Panes**



## Functions

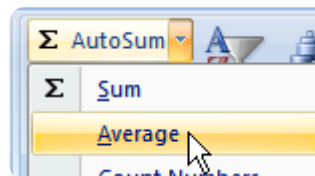
A **function** is a **predefined formula** that performs a particular type of computation. All you have to do to use a function is supply the values that the function uses when performing its calculations - these are the **arguments of the function**.

### Exercise 8

### Using functions in formulas

Using the **Average** function from **command button**

1. Add cell labels  
**Average,**  
**Maximum,**  
**Minimum**
2. Go to cell **B9**
3. Click on Home tab on the ribbon
4. Click the arrow alongside the Autosum button
5. Select '**Average**'
6. Check the range and change if necessary
7. Press enter



9	Average	=AVERAGE(B2:B6)
10	Maximum	
11	Minimum	

Using the **Maximum** function on the **formula bar**

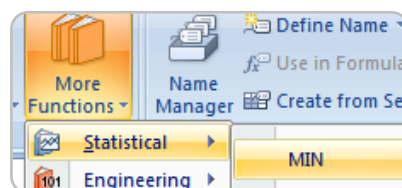
1. Go to cell **B10**
2. Click the **Fx** button on the formula bar
3. In the dialogue box, click on the '**MAX**' function
4. Click **OK**
5. Indicate the range for the Maximum value
6. Click on **OK**



9	Average	2000
10	Maximum	=MAX(B2:B6)
11	Minimum	

Using the **Minimum** function from **Ribbon**

1. Go to cell B11
2. Click on **Formula** tab on the ribbon
3. Click more **Functions** command button
4. Hover mouse over **Statistical**
5. Click on **MIN** function
6. Type in the range B2:B6
7. Click on OK



9	Average	2000
10	Maximum	3000
11	Minimum	=MIN(B2:B6)

To complete these formulas for all columns  
The **Autofill** tool, **+**, can be used to drag across **C9:E11**

9	Average	2000
10	Maximum	3000
11	Minimum	1000

## Formatting Cells

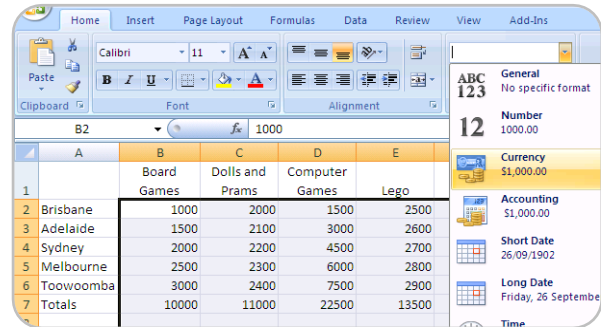
The presentation of information can be adjusted by using the ribbon to format individually selected elements or by applying a theme to a whole worksheet.

### Exercise 9

### Manually Formatting cells

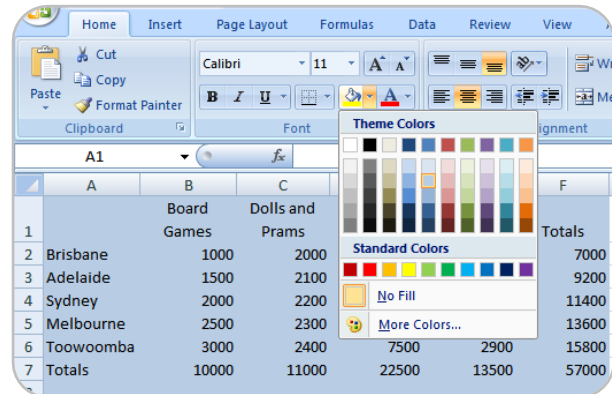
#### NUMBER formats

1. Select the cell or range of cells you want to change: **B2:F11**
2. Go to the **number** group on the ribbon
3. Click the down arrow alongside the general number format
4. Hover your mouse over the formats displayed
5. To apply a format, click once on your chosen option.



#### CHARACTER Formats

1. Select the cell or range of cells you want to change: **A2:F11**
2. Go to the **font** group in the ribbon
3. Click the colour command
4. Hover your mouse over the formats displayed
5. To apply a format, click once on your chosen option

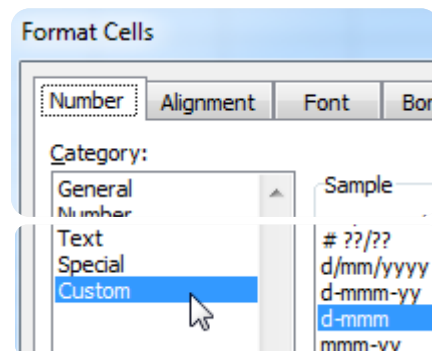
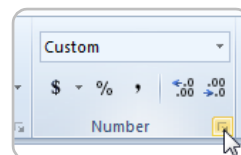


#### DATE Formats

Format a date to the day it represents.

1. Enter your birth date into a cell
- Note** This will show the default format dd/mm/yyyy
2. Select this cell
3. On the **Home** tab,
4. Click on the **number** group dialogue box launcher
5. Select the custom option
6. Enter the format 'dddd'

**Note:** This will present your birth date as a day



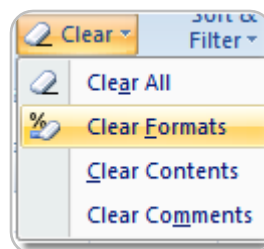


## Exercise 10

## Remove Formatting

To return data to the original formats

1. On the **Home** tab
2. Go to the editing group
3. Click on **Clear**
4. Select '**Clear Formats**'



## Cell Comments

You may want to provide additional information about cell content. You can do this by adding a comment which is hidden from view until selected.

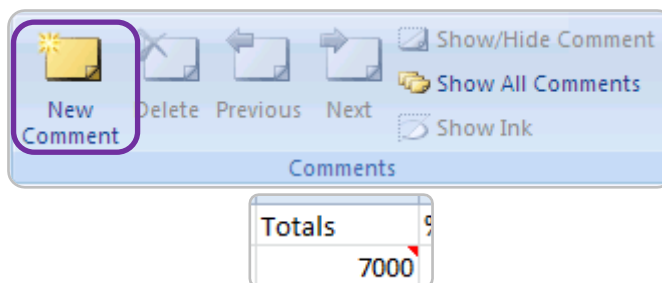
## Exercise 11

## Adding a cell Comment

To add a comment

1. Select the '**Adelaide**' cell
2. Click on the **Review** tab
3. Click **New Comment**
4. Type a comment such as  
"This store opened last month"

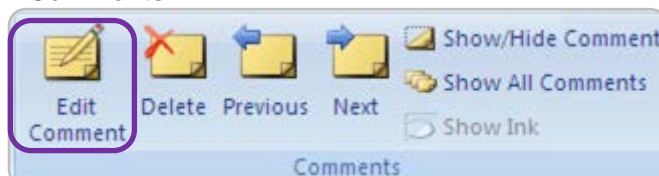
**Note:** The comment will be displayed as a small red triangle in the cell



**Note:** To keep a comment visible with the cell, you can select the cell that contains the comment and then click **Show/Hide Comment** in the Comments group on the **Review** tab. To display all comments with their cells on the worksheet, click **Show All Comments**.

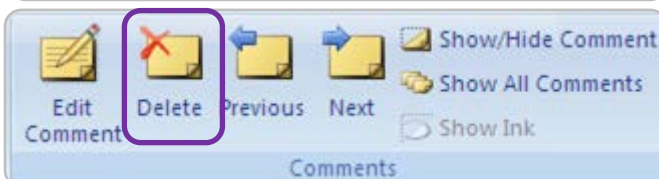
**Edit a comment**

1. Click the **Review** tab
2. Click **Edit Comment**.



**Delete a comment**

1. Click the **Review** tab
2. Click **Delete**.



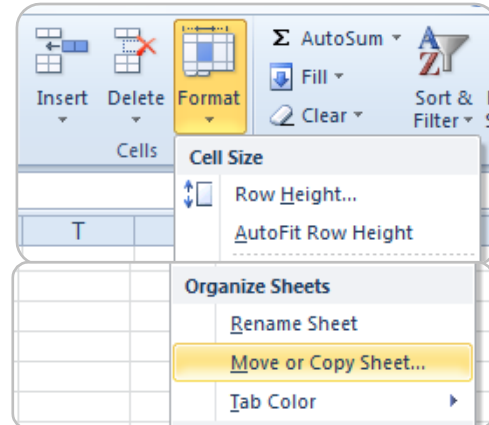
## Moving and Copying Data

- When you **move** a formula, the cell references within the formula do not change no matter what type of cell reference that you use.
- When you **copy** a formula, the cell references may change based on the type of cell reference that you use.

### Exercise 12

### Rename, move or copy a worksheet

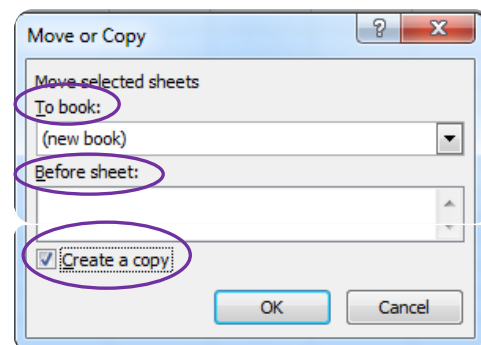
- Go to the **Home** tab,
- In the **Cells** group, click **Format**
- Under **Organize Sheets**, click **Move or Copy Sheet**.



**To book;** allows you to choose where the sheet should move to.

**Before sheet;** allows you to indicate where the selected sheet should sit.

**Create a copy;** allows you to copy the worksheet rather than move

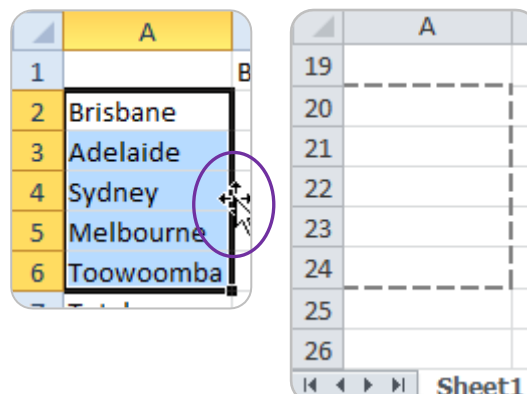


### Exercise 13

### Move Data

To **move** a cell or range of cells

- Select the cells to move: **A2:A6**
- On the **Home** tab, click Cut
- Go to destination cell; **A20**
- Click **Paste**
- Or...
- Point mouse on the border of the selection
- Drag the cell or range of cells to another location.





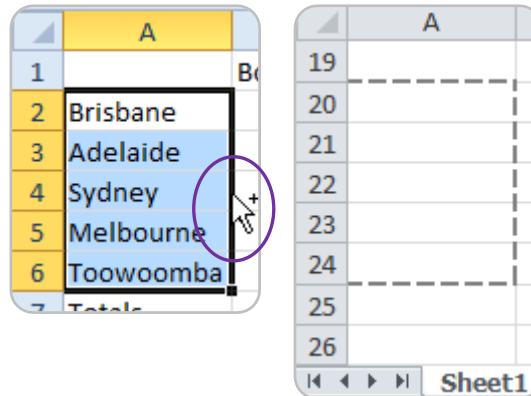
**Note:** you can only drag the selection on the same worksheet

## Exercise 14

## Copy Data

To **copy** a cell or range of cells

1. Select the cells to copy: **A20:A26**
2. On the **Home** tab, click Copy 
3. Go to destination cell; **A2**
4. On the Home tab, click **Paste** 
- Or...
5. Point mouse on the border of the selection
6. Hold CTRL key
7. Drag the cell or range of cells to another location.





**Note:** you can only drag the selection on the same worksheet

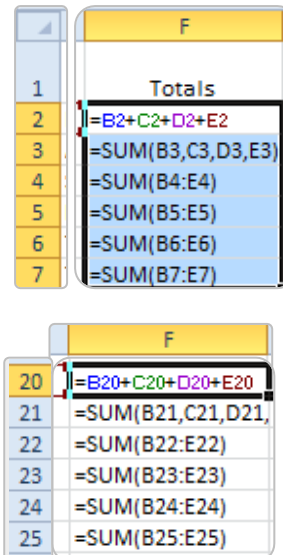
## Exercise 15

## Copy formulas

To **copy** a cell or range of cells containing formulas

1. Select the cells to copy: **F2:A6**
2. On the **Home** tab, click Copy 
3. Go to destination cell; **F20**
4. On the Home tab, click **Paste** 

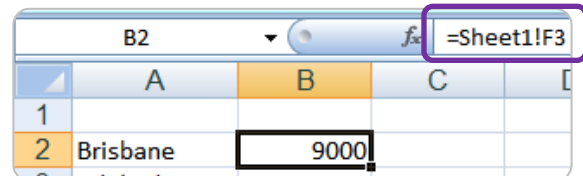
**Note:** With relative cell references the destination of the pasted formulas is important...



## Exercise 16

## Create a Dynamic Link

1. Go to **Sheet 3** or **Summary** sheet
2. Click in cell **B2**
3. Enter **=**
4. Go to **Sales** sheet
5. Click on the cell you want the data from **F2**
6. Press **Enter**



**Note:** Check the formula bar for the cell content. The link refers to

	Formula	Tab Name	Cell
2	Brisbane	9000	Brisbane =Sheet1!F3
3	Adelaide	9470	Adelaide =Sheet1!F4
4	Sydney	11250	Sydney =Sheet1!F5
5	Melbourne	15790	Melbourne =Sheet1!F6
6	Toowoomba	20170	Toowoomba =Sheet1!F7

With the relative cell references used, **Autofill** down for other branches

## Sparklines

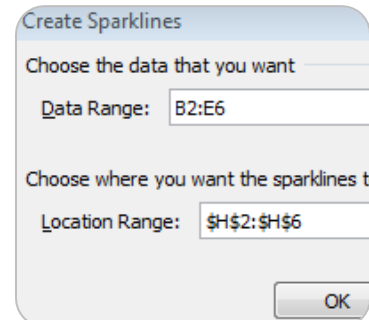
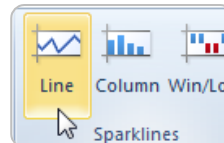
Sparklines is a new tool in Excel 2010 which helps you discover patterns or trends that can lead to more informed decisions and improve your ability to analyse large data sets. You can create a visual summary of your data using tiny charts that fit within a cell alongside your text data with new Sparklines.

### Exercise 17

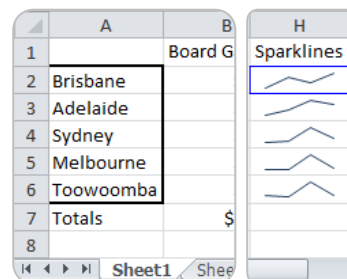
### Insert Sparklines

#### To Insert Sparklines

1. Select the cells to display the sparklines, **H2:H6**
2. Click on the **Insert** Tab
3. Click **Line** in Sparklines group



4. Select the range to be analysed, **B2:E6**
5. Click on **OK**



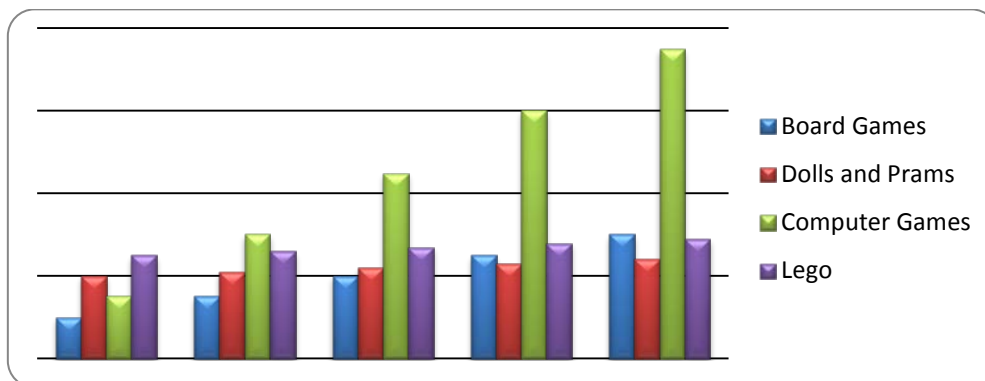
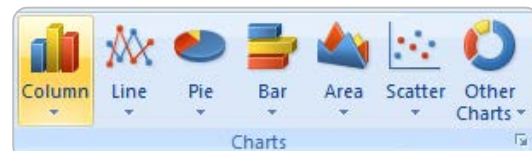
## Charting

### Exercise 18

### Create a Chart

#### To Create a chart

1. Select the cells you wish to chart (In exercise file – **A1:E6**)
2. Click on the **Insert** Tab
3. Select a chart type



**Note:** To quickly create a default chart, select the data that you want to use for the chart, then press **ALT+F1** – this displays the chart as an embedded chart or **ALT+F11** – this displays the chart on a separate chart sheet.

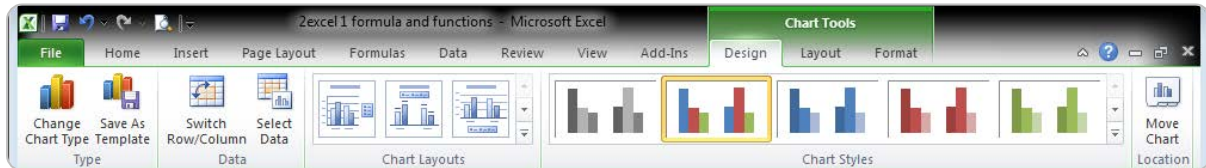
## Formatting a Chart

### Exercise 19

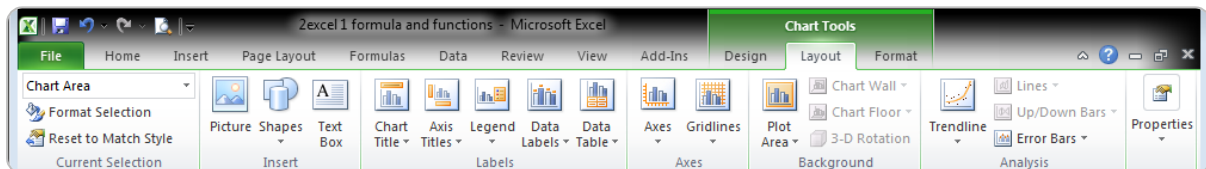
### Modify a chart

1. Click on the inserted chart  
**Note:** You will see a **contextual tab** above the ribbon
2. Click on the tab to access the appropriate tools  
**Note:** You can change the Chart **Design**, Chart **Layout** and Chart **Format**
3. Apply changes to chart as required

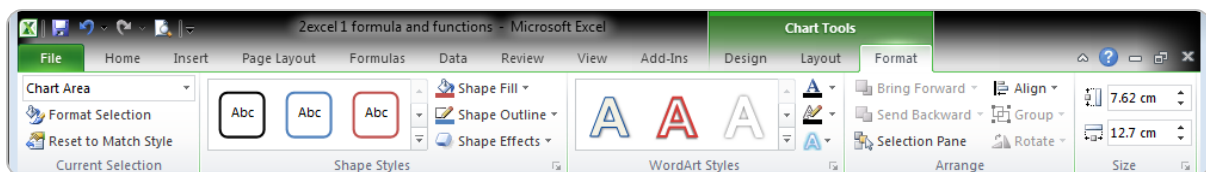
### Chart Design



### Chart Layout



### Chart Format



## Printing

### Exercise 20

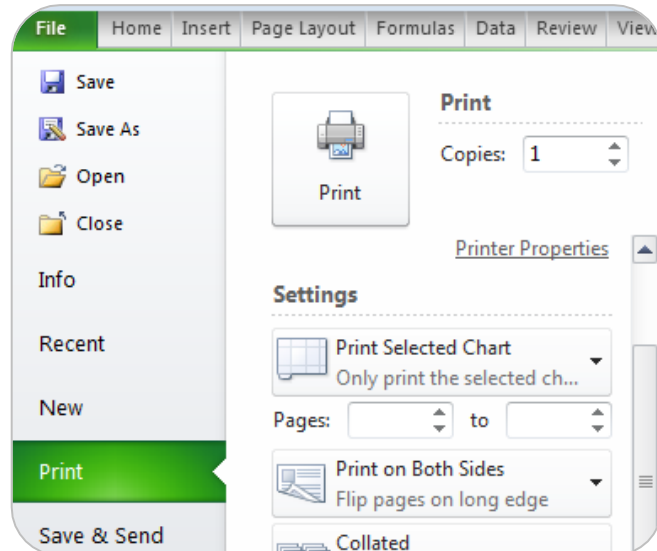
### Preview and Print a Worksheet

#### To preview a worksheet

1. Click **File** tab in ribbon
2. Select **Print** option

**Note** You will be presented with a Print preview of the worksheet and options to choose the print settings.

**Note:** To return to your worksheet, simply click on the **Home** tab



### Exercise 21

### Defining a print area

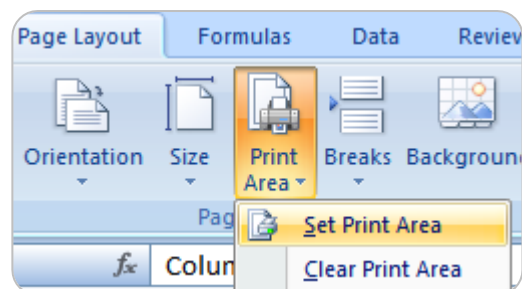
#### Set a print area

1. Select the cells to define the print area. (**A1:F11**)
2. Go to the **Page Setup** group on the **Page Layout** tab
3. Click **Print Area**,
4. Click **Set Print Area**.

**Note** The print area that you set is saved when you save the workbook.

#### Clear a print area

1. Click anywhere on the worksheet
2. Go to the **Page Setup** group on the **Page Layout** tab
3. Click **Clear Print Area**.



## Excel Help Facility



If you need help with any application tools you can get assistance by clicking the help button on the ribbon. This is located at the right hand side of the screen.

