



## **Microsoft Excel Introduction**

A PREMIUM online training course

**Delegate Workbook**

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## 1. MODULE XL7-A-1: Getting Started with Excel

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**In this module you will learn:**

- What Microsoft Office Excel is all about
- Open and interact with Excel
- Close Excel
- Create new workbooks
- Open and close existing workbooks
- Save workbooks locally and how to save to the SkyDrive
- Recognize the different Excel file types
- Recognize and work with the active cell
- Select multiple cells
- Explore worksheets and workbooks
- Zoom in and out of a worksheet
- Open and use the Help interface
- Recognize the difference between online and offline Help
- Get help while in a dialog box

## Lesson A-1.1: Starting Out

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Microsoft Office Excel is a powerful and easy-to-use spreadsheet application. Nearly everyone who works with numbers has likely used Excel or some other spreadsheet application (such as Lotus 1-2-3) in one form or another. In this lesson, we will look at what's new in the 2013 version, how to open and close the program, and outline some of the things you will see in the program.

If you are new to Excel and spreadsheets in general, the vast array of features and controls can seem quite daunting. However, once we cover the workings of a spreadsheet and how to deal with the basics, you will be well on your way to becoming an expert in Excel!

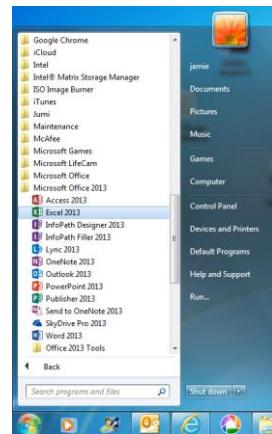
In Excel 2013 we now have more options for saving to the "cloud" such as Microsoft's "SkyDrive", this means your documents are kept on the Internet and can easily be retrieved when you are out and about working away from your office.

This course also covers older versions of Excel such as 2010 and 2007 so any differences will be pointed out as we go through the manual.

### Step-By-Step

In this exercise you will open Excel and experiment with some of the functionality.

1. Click Start → All Programs → Microsoft Office → Microsoft Excel 2013: (or your appropriate version).



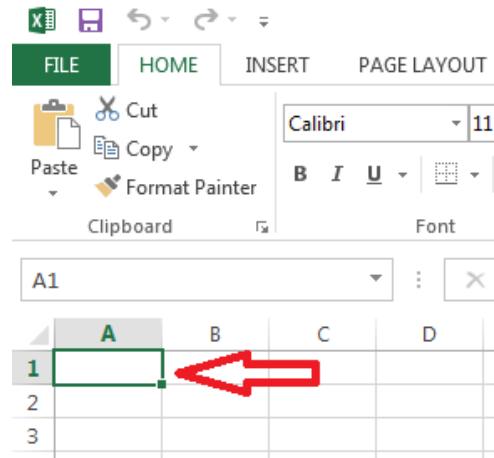
Excel will open and you will see a blank worksheet in front of you. If not double click Blank workbook.

2. The new workbook will open and contain three empty worksheets. Switch back and forth between the different worksheets by clicking the names "Sheet1," "Sheet2," and "Sheet3" in the bottom left-hand corner of the window:



Click "Sheet1" again before moving to the next step.

3. Look in the top left-hand corner of the working area. Cell A1 should have a thick green border around its cell border. Older versions have a different colour.



If A1 does not have this border, click your mouse anywhere inside the confines of the cell to select it.

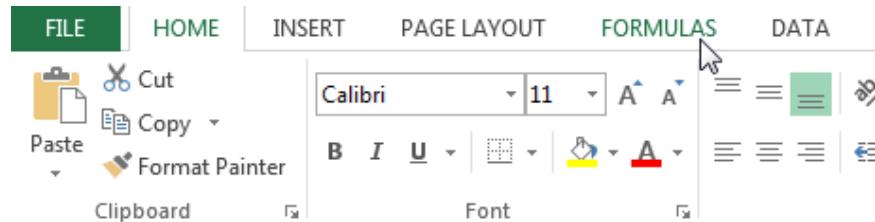
4. Type 100 and press Enter. When you press Enter, Excel will automatically move the thick border to A2:

	A
1	100
2	
3	

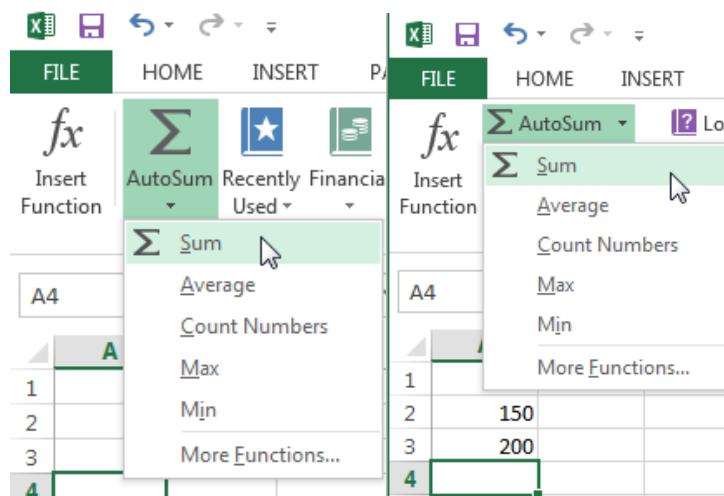
5. Now type 150 and press Enter. The thick border will move to A3. Finally, type 200 and press Enter. Your worksheet should now look like this:

	A
1	100
2	150
3	200
4	

6. Click the Formulas tab:



7. Click the AutoSum command arrow and then click Sum. (Depending on the size of your Excel window, the AutoSum command might look like the figure on the left or the right. Both commands do the same thing, except one is smaller to save space in the Excel window.)



8. When you click the Sum command, cells A1, A2, and A3 will have a flashing border around them. This means that the cells have been automatically selected for use with the Sum command.

You will also see “=SUM(A1:A3)” entered into cell A4. This is a formula that will add the values of A1, A2, and A3 together.

Press Enter:

	A	B	C
1	100		
2	150		
3	200		
4	=SUM(A1:A3)		
5		SUM(number1, [number2], ...)	

9. When you press Enter, the formula will be calculated and the value of the formula will be visible in cell A4:

A	B
1	100
2	150
3	200
4	450
5	

10. You have just performed your first calculation with Excel!  
Click the Close button in the upper right-hand corner.



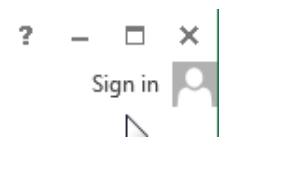
11. You will be prompted to save this workbook. Click Don't Save on this occasion

For Excel 2013 users:

You can now save your files to the local computer, a network drive or the “cloud”. In other words save your data to an Internet storage location such as Microsoft’s “OneDrive”.

In order to save to this location you will need to setup a Microsoft Account, this is free and simple to do. It replaces the previous Windows Live ID account or Hotmail accounts and now allows you to save to SkyDrive.

Click the Sign in button at the top left of Excel to sign in if you already have an account



### Sign in

Type the email address of the account you would like to use with Office.

Type your email address

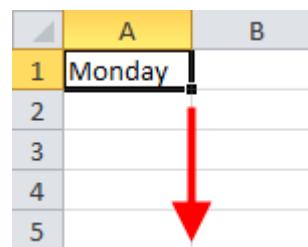
Next

If you don't have a Microsoft account you can create one via the Microsoft website.

## Skill Sharpener

<b>Objective</b>	To understand how to enter data in Excel.																				
<b>Briefing</b>	Before delving too far into Excel, you want to practice the best way to enter information.																				
<b>Task</b>	<p>Enter the sample data in each of the following ways.</p> <ul style="list-style-type: none"> <li>▪ Click inside A1 and type, and then click inside A2 and type, etc.</li> <li>▪ Click inside A1 and type, and then press Tab. What happens?</li> <li>▪ Click inside A1 and type, and then press Enter. What happens?</li> </ul> <p>Erase all data between each step. Do this by pressing Ctrl + A. (This will select everything in the worksheet.) Release Ctrl + A and then press Delete. This will erase all data in the worksheet.</p> <p>Which method do you find quickest for you?</p>																				
<b>Sample Data</b>	<table border="1"> <thead> <tr> <th></th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>549</td> <td>87</td> <td>4233</td> <td>6911</td> </tr> <tr> <td>2</td> <td>836</td> <td>4378</td> <td>257</td> <td>529</td> </tr> <tr> <td>3</td> <td>1320</td> <td>2189</td> <td>5239</td> <td>3289</td> </tr> </tbody> </table>		A	B	C	D	1	549	87	4233	6911	2	836	4378	257	529	3	1320	2189	5239	3289
	A	B	C	D																	
1	549	87	4233	6911																	
2	836	4378	257	529																	
3	1320	2189	5239	3289																	

<b>Follow-up Questions</b>	Erase all the data in the worksheet one last time. In cell A1, type “Monday” and press Enter. Click A1 again to make it the active cell, and then click and drag this small square straight down:
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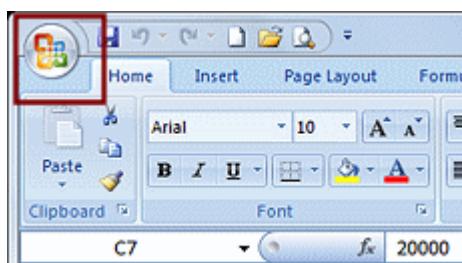
What happens?

## Lesson A-1.2: About Workbooks

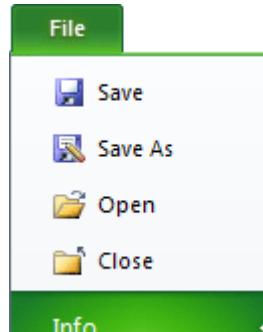
In the previous lesson, we learned how to open Excel and how to close it. We also received a brief introduction to Excel spreadsheets, cells, and the basics of the user interface.

Let's move on and talk a bit more about workbooks. In the last lesson, we learned that a workbook is synonymous with an Excel file. The workbook can contain one or more worksheets; a large grid of cells that contains data. Many people use the word "spreadsheet" to describe either a worksheet or a workbook, but we will stick with the proper names in order to differentiate between the two.

**Please note:** One key difference of Excel 2007 to later versions is the File tab. Excel 2007 uses the Office button in the top-left corner of the screen. The vast majority of the tools (and certainly the ones used in this course) are identical so you should be able to follow without any issue. For example, where you see File > Save As, 2007 users will need to go to the Office Button > Save As.



Office Button in Excel 2007

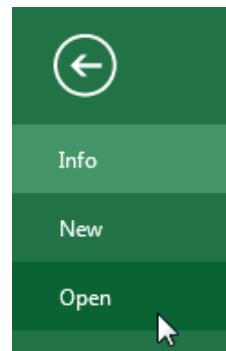


File tab in recent versions

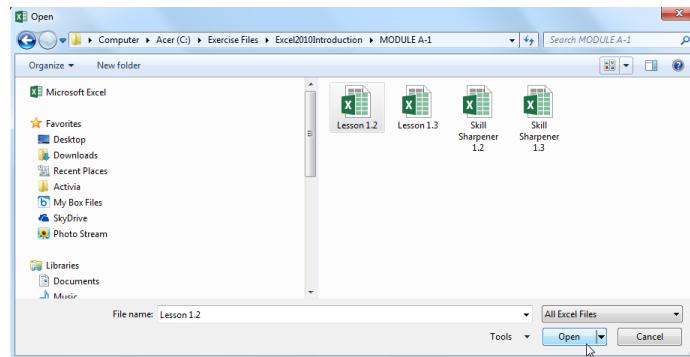
### Step-By-Step

In this lesson you will experiment with some of the different file formats.

1. Open Excel using the Start menu or a shortcut on your desktop.
  
  
  
2. Click File → Open:



3. When the Open dialog box appears, open the MODULE A-1 folder of your Exercise Files. Click the Lesson 1.2 file inside to select it and then click Open:



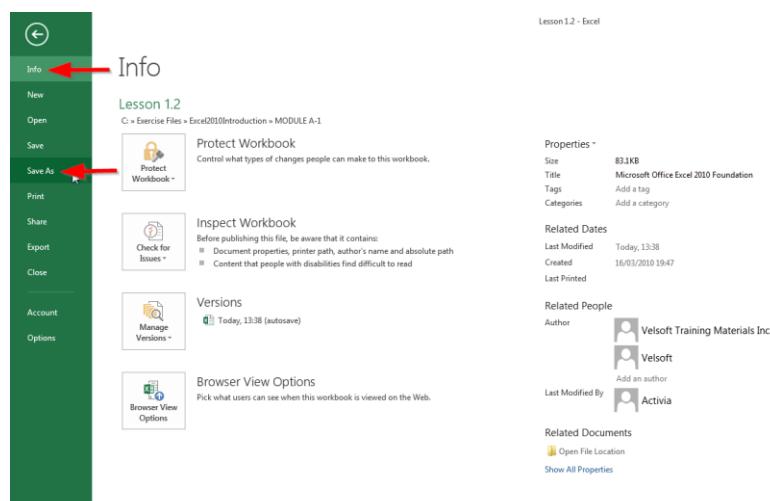
4. The file will open and show some data that has been entered into Sheet1:

	A	B	C	D	E	F
1	Region	Income	Accounts Receivable	Overhead	Depreciation	Net
2	Region 1	£1,000.00	£ 500.00	£ 100.00	£ 50.00	£ 1,350.00
3	Region 2	£1,020.00	£ 510.00	£ 150.00	£ 55.00	£ 1,325.00
4	Region 3	£1,040.00	£ 520.00	£ 200.00	£ 60.00	£ 1,300.00
5		£3,060.00	£ 1,530.00	£ 450.00	£ 165.00	£ 3,975.00
6						
7						

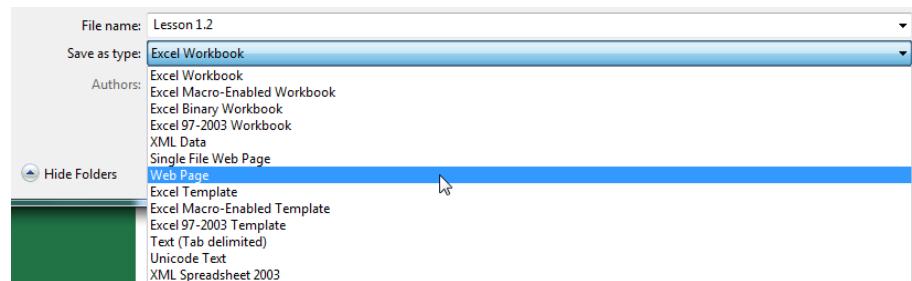
Sheet1   Sheet2   Sheet3   +

READY

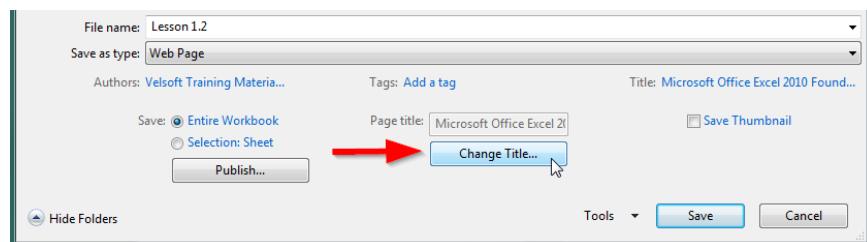
5. Click the File tab. Excel 2013 & 2010 automatically opens the Info tab which offers information about the file. Click Save As to continue:



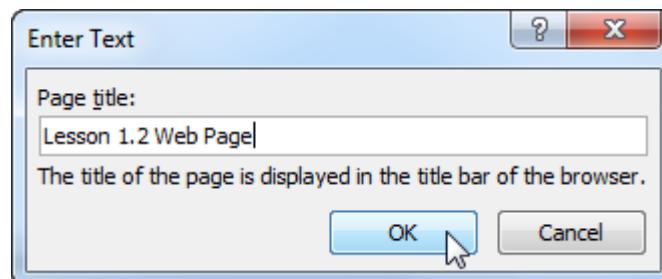
6. When the Save As dialog box opens, Excel automatically displays the directory where Lesson 1.2 is stored. Click the “Save as type” combo box to view available file types and then click Web Page:



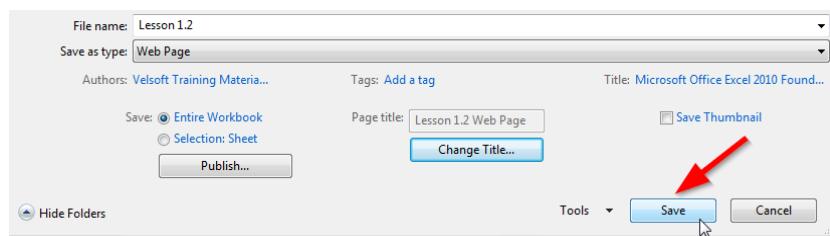
7. Once you choose this file format, the options at the bottom of the Save As dialog box will change slightly. Click the Change Title button:



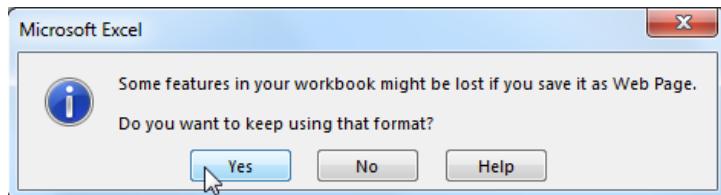
8. Another small dialog box will appear. Type “Lesson 1.2 Web Page” and click OK:



9. You will see this new title in the Page Title text field. Click Save to continue:



- 10.** You may see a warning appear stating that some elements of Excel 2013's file format may not be compatible with Web pages. This file only contains text, so we can ignore this warning. Click Yes to continue:

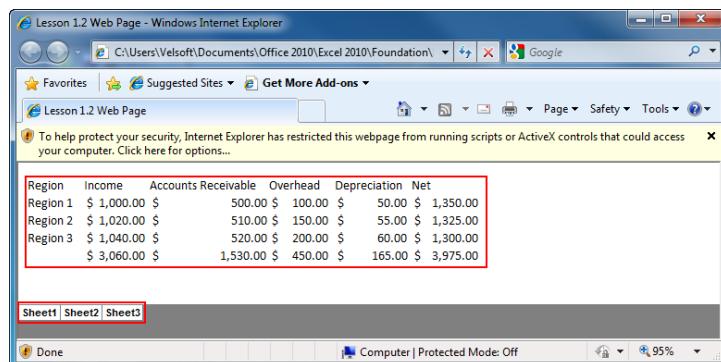


- 11.** Open Windows Explorer and browse to the MODULE A-1 folder of your Exercise Files. In this folder, you should see the following two files. The HTML file is the actual Web page, while the folder contains supporting files for the Web page.



Double-click the Lesson 1.2 HTML file to continue.

- 12.** Your default Web browser (in our case, Microsoft Internet Explorer 8) will open to display the information. The information in Sheet1 is shown and the other two sheet names are visible at the bottom of the Web page:

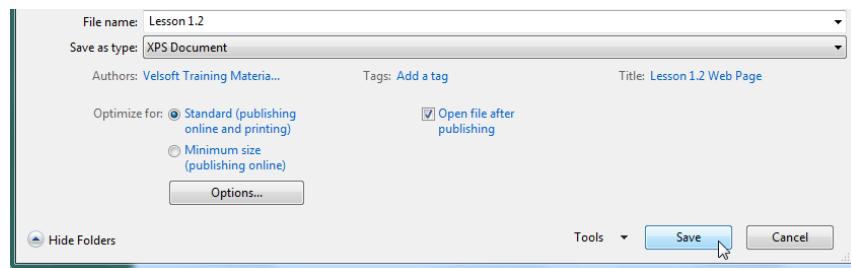


Do the other sheets contain any information?

- 13.** Close your Web browser and return to Excel. Click File → Save As again and this time choose XPS Document as the file type:



- 14.** Click Save to continue:



- 15.** Browse the contents of the MODULE A-1 folder. The new XPS document should now be visible:



Double-click the document to open it. What information do you see?

- 16.** Close Excel and Windows Explorer to complete this lesson.

## Skill Sharpener

<b>Objective</b>	To understand how to open an existing workbook, change its name, and save it in the same folder as the original.
<b>Briefing</b>	Your supervisor has asked you to create a copy of a workbook.
<b>Task</b>	Open the sample data file. Use the Save As command to save the file in Excel 97-2003 and XPS format. Name the files “Skill Sharpener 1.2 97-2003” and “Skill Sharpener 1.2 XPS” respectively.
<b>Hints</b>	If you get a warning stating that some components might not be saved correctly, save the files anyway. Open the original file and the new file to see what changes, if any, occurred.
<b>Sample Data</b>	 Skill Sharpener 1.2 Microsoft Excel Worksheet 24.4 KB



## **Lesson A-1.3: Exploring your Workbook**

Now that we are familiar with the basic concepts of workbooks, worksheets, cells, and file formats, it is time to learn how to explore and navigate your workbooks in greater detail.

In this lesson, you will learn how to switch between worksheets in a workbook, how to select cells in a worksheet, how to move around in a worksheet, how to use the active cell, and how to use Excel's zoom feature.

## Step-By-Step

In this exercise you will enter some data, make a selection, and practice using the zoom feature.

1. Open Excel and click File → Open to open Lesson 1.3. This file is found in the MODULE A-1 folder of your Exercise Files.
  2. From cells A3 to D7, enter some numbers:

	A	B	C	D	E
1	Lesson 1.3 - Exploring your Workbook				
2					
3	4534	5454	5848	7558	
4	13453425	6853	4845	84814	
5	31451345	43135	8959	98795	
6	134	688354	8648	1354186	
7	5543	44	89468	53	
8					

- 3.** Select cells B3:B7 by clicking and dragging your mouse:

	A	B
1	Lesson 1.3 - Ex	
2		
3	4534	5454
4	13453425	6853
5	31451345	43135
6	134	688354
7	5543	 44
8		

4. If the Home tab is not already visible, click it now. Click the Bold command to continue:



In older versions of Excel the layout is slightly different but the principle is the same.

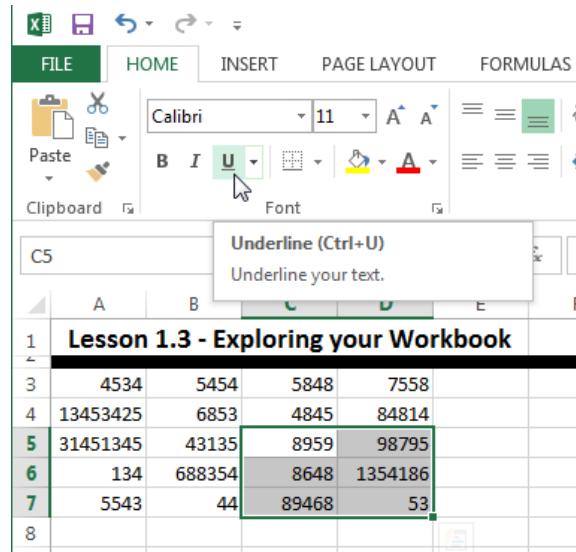
5. Click Cell C5:

	A	B	C	D	E
1	<b>Lesson 1.3 - Exploring your Workbook</b>				
3	4534	5454	5848	7558	
4	13453425	6853	4845	84814	
5	31451345	43135	8959	98795	
6	134	688354	8648	1354186	
7	5543	44	89468	53	
8					
9					

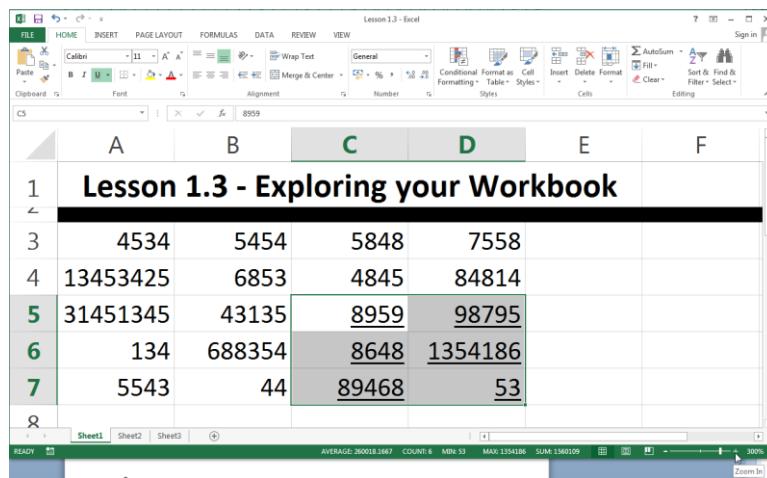
6. Press and hold the Shift key and then press the right arrow key. Press the down arrow key twice. Cells C5:D7 should now be selected:

	A	B	C	D	E
1	<b>Lesson 1.3 - Exploring your Workbook</b>				
3	4534	5454	5848	7558	
4	13453425	6853	4845	84814	
5	31451345	43135	8959	98795	
6	134	688354	8648	1354186	
7	5543	44	89468	53	
8					
9					

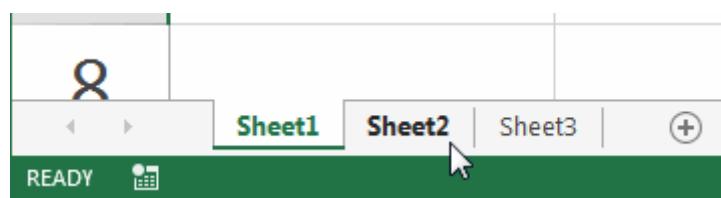
7. Click the Underline command:



8. Now click the + sign by the Zoom tool in the status bar. Keep clicking it until your screen is filled with the data in the worksheet. Make note of the Zoom level:

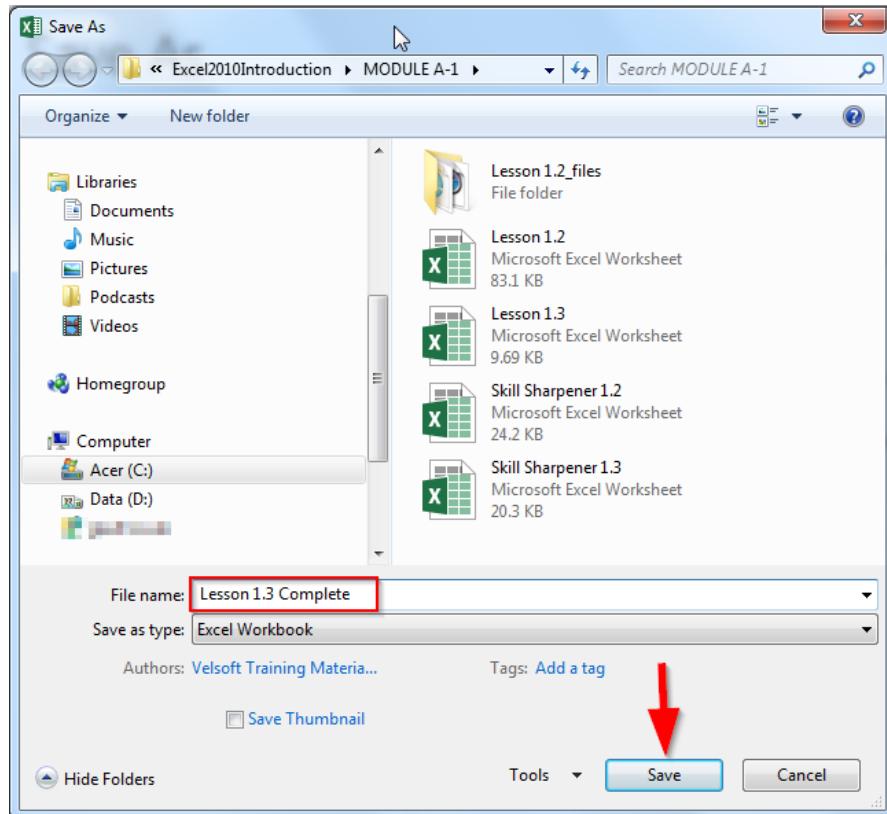


9. Click the Sheet2 tab at the bottom of the Excel window:



What is the zoom level in Sheet2? Now switch back to Sheet1. Is the zoom level where you left it?

10. Click File → Save As. Save the file as Lesson 1.3 Complete and then close Excel to complete this lesson:



## Skill Sharpener

<b>Objective</b>	To understand how to navigate within a workbook.
<b>Briefing</b>	You want to show your friend how to move around inside a workbook.
<b>Task</b>	Use arrow keys, sheet tabs, and Zoom to explore the sample workbook. Answer the questions in the provided cells of the Questions worksheet.
<b>Hints</b>	Don't forget about the shortcut keys for moving through a worksheet.
<b>Sample Data</b>	 Skill Sharpener 1.3 Microsoft Excel Worksheet 20.3 KB

## Lesson A-1.4: Getting Help with Excel

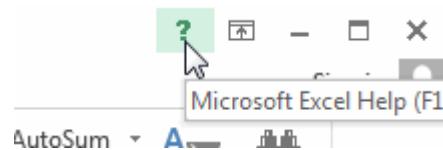
Before we get into the nuts and bolts of working with Excel, it is probably a good idea to learn about Excel's help features. Almost anyone who works with a program with many functions and options will find themselves needing help at some point. You may know exactly what you want to do, but not how to do it.

In this lesson, you will learn how to get help by using the Help file. You will also learn about online and offline Help. Knowing how to use these features can help you access the information and instructions you need to accomplish your Excel goals.

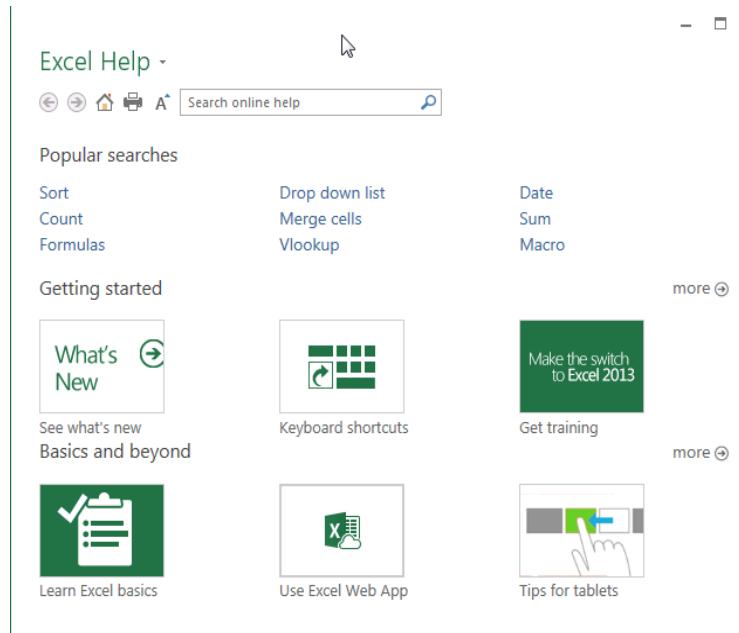
### Step-By-Step

In this exercise you will practice using the Help file.

- 1.** Open Excel. Click the Help icon in the upper right-hand corner of the window or press F1. In Excel 2010 & 2007 the icon is slightly different:



- 2.** After a moment, the Help file will appear:



3. Click in the search box at the top of the help file and type “create chart.” Press Enter to continue:



4. After a moment, some search results will appear. Click one of the search results that most closely matches the search term:

**Create a chart**

Article | Create a chart (graph) that's recommended for your data, almost as fast as using the chart wizard that's no longer available.

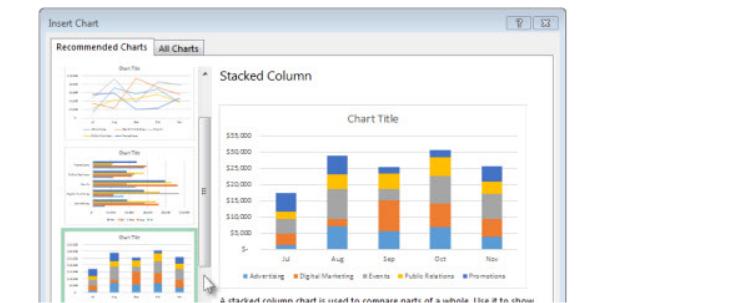
5. Further help is then available when an option is chosen depending on if you have a valid online web connection.

Exploring charts in Excel and finding that the one you pick isn't working well for your data is a thing of the past! Try the Recommended Charts command on the Insert tab to quickly create a chart that's just right for your data.

1. Select the data for which you want to create a chart.
2. Click Insert > Recommended Charts.



3. On the Recommended Charts tab, scroll through the list of charts that Excel recommends for your data, and click any chart to see how your data will look.



## Skill Sharpener

<b>Objective</b>	To understand how to search for instructions or information on any given Excel topic.
<b>Briefing</b>	Your manager has asked you to research the possibility of creating formatting that gives a visual representation of data. That is, if the data is below a certain threshold, it is highlighted with a  or flag of some sort.
<b>Task</b>	Research “formatting” and “conditional formatting.” (We will cover these topics later in the manual.)
<b>Hints</b>	Try using more (or maybe fewer!) keywords while searching for information.



## 2. MODULE XL7-A-2: The Excel Interface

---

**In this module you will learn how to:**

- Work with the Quick Access Toolbar
- Add and remove buttons on the Quick Access Toolbar
- Use the File (Backstage) menu

**You will also learn about the:**

- Home tab
- Insert tab
- Page Layout tab
- Formulas tab
- Data tab
- Review Tab

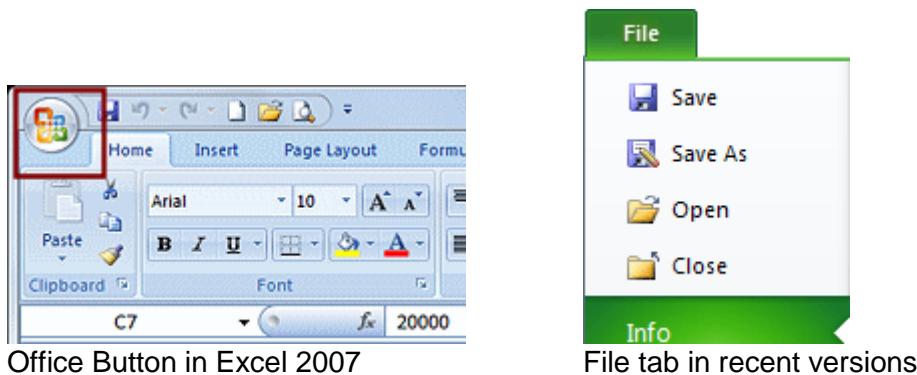
## Lesson A-2.1: The Quick Access Toolbar and File Menu

Excel's user interface does not rely on multiple toolbars and menus as past versions have. Instead, it offers a cleaner, more intuitive, tab-based layout. An important component of the interface is the Quick Access Toolbar (or the QAT for short). The Quick Access Toolbar is fully customizable and gives you access to the features that you rely on the most.

In this lesson, you will learn all about the QAT. You will learn about the default buttons, how to add and remove buttons, how to change the icon size, and how to customize the toolbar.

We will also explore the File menu, which offers the Backstage view. With this view, you can manage settings that control the file itself, not the components within the file.

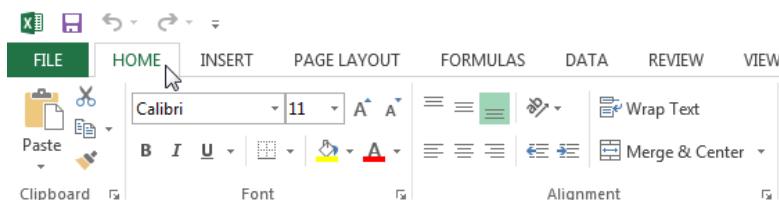
**Please note:** One key difference of Excel 2007 to later versions is the File tab. Excel 2007 uses the Office button in the top-left corner of the screen. The vast majority of the tools (and certainly the ones used in this course) are identical so you should be able to follow without any issue. For example, where you see File > Save As, 2007 users will need to go to the Office Button > Save As.



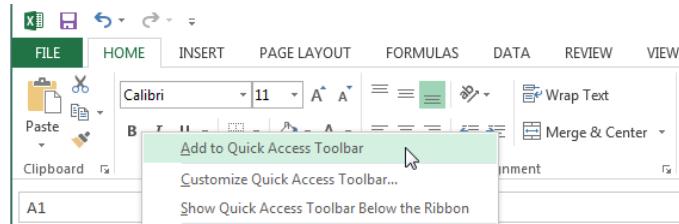
### Step-By-Step

In this exercise you will practice customizing the Quick Access Toolbar.

1. Open Excel and make sure the Home tab is visible:



2. Right-click the Bold command and click Add to Quick Access Toolbar:

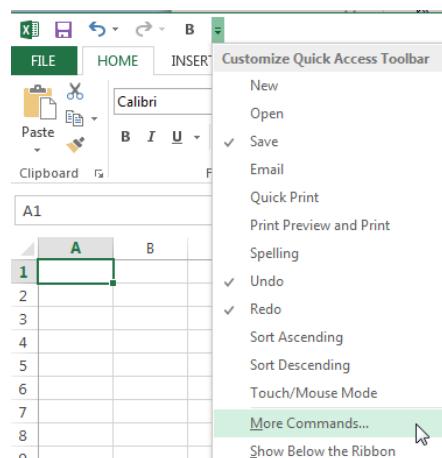


3. The command will now appear on the right-hand side of the toolbar:

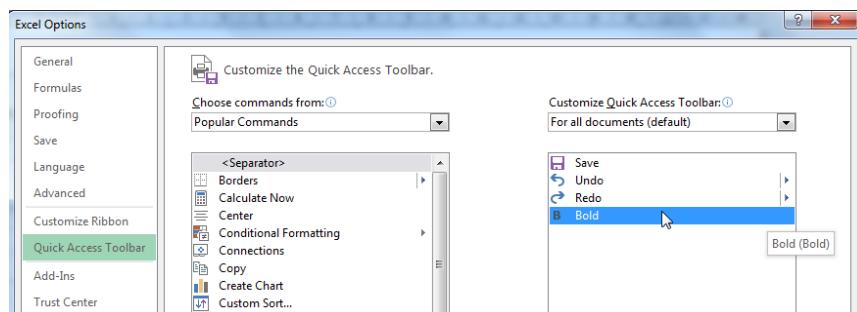


Move your mouse button over the different commands in the toolbar to see what each one is.

4. Next, click the pull-down arrow beside the toolbar and click More Commands:



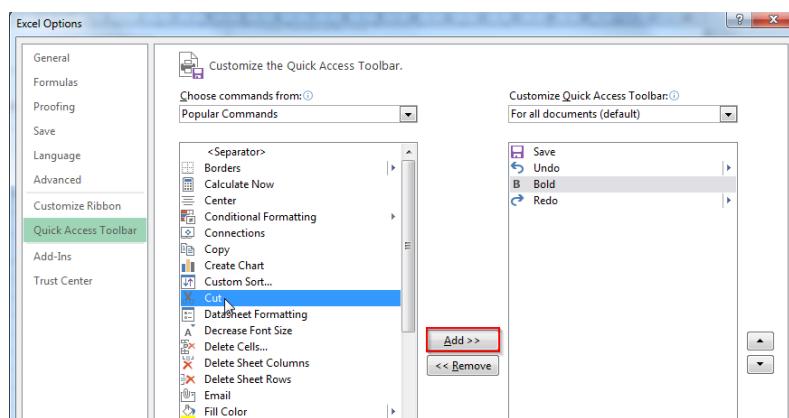
5. When the Excel Options dialog box appears, the Quick Access Toolbar link on the left will be highlighted. Click the Bold command under the Quick Access Toolbar heading:



6. Click the small up arrow to move this command between the Undo and Redo commands:



7. Using the list on the left, scroll up and down until you locate the Copy, Cut, and Paste commands. When you find one of them, highlight the command and click Add >. This will move the command underneath the Bold command:



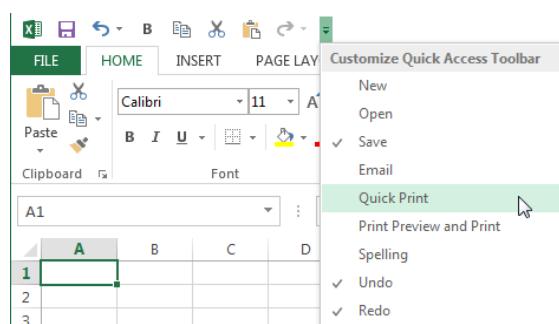
(Hint: there are three Paste commands in a row; add the first one only.)

Once you have added the commands, click OK to return to the Excel interface.

8. The Quick Access Toolbar should now look like this:



9. Click the pull-down arrow beside the Quick Access Toolbar and click Quick Print:

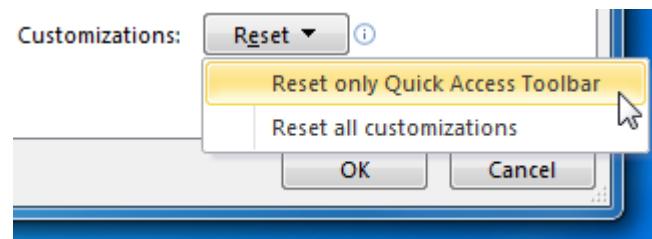


10. This command will be added to the end of the toolbar:

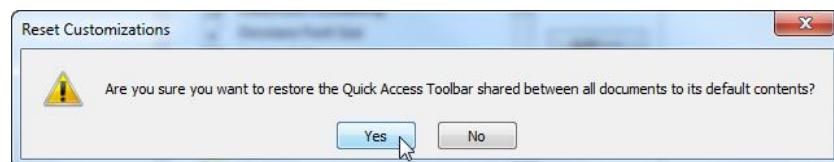


Click the pull-down arrow beside the Quick Access Toolbar once more and click More Commands.

11. When the Excel Options dialog box appears, click the Reset button at the bottom of the dialog. Click Reset only Quick Access Toolbar:



12. You will be asked to confirm your choice; click Yes to continue:



13. Click OK to close the Excel Options window and return to the interface. The Quick Access Toolbar should now look like this:



Close Excel to complete this lesson.

## Skill Sharpener

<b>Objective</b>	To practice customization of the Quick Access Toolbar.
<b>Briefing</b>	You want to add your most commonly-used commands to the QAT.
<b>Task</b>	Use the pull-down arrow beside the QAT and add four commands. Next, open the Excel Options dialog and add four more commands.
<b>Follow-up Questions</b>	<ul style="list-style-type: none"><li>▪ What are the different ways to organize icons in the QAT?</li><li>▪ What happens if you add more icons to the QAT than there is room in the title bar?</li><li>▪ What happens if you add the Separator “command” to the Quick Access Toolbar?</li><li>▪ How could you use Separators to help you?</li></ul>



## Lesson A-2.2: The Home Tab

In this lesson, and the rest of the lessons in this module, we will cover the command groupings in each tab. Before we go into the details of the Home tab, let's take a quick look at the structure of tabs.

### Step-By-Step

In this exercise you will practice using some features of the Home tab.

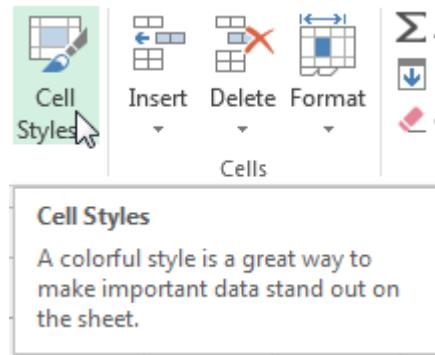
1. Open Lesson 2.2 from the MODULE A-2 folder of your Exercise Files.
  
2. Click and drag to select B3:E7:

A	B	C	D	E	
1	Unit Sales per Region				
2	North	South	East	West	
3	Product1	12000	45	500	401
4	Product2	2200	2000	700	400
5	Product3	13000	2356	200	4000
6	Product4	12050	2500	500	3030
7	Product5	1600	1860	400	1030

3. Click the combo box in the Number group on the Home tab. Select Accounting from the list of number formats:



4. Next, click the Cell Styles command in the Style group:



5. When the list of styles appears, move your mouse over the different styles to see how each affects the selected cells:

	A	B	C	D	E	F	G	H	I	J	K
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											

6. Select any style to apply to the selected cells. We have chosen 40% - Accent 2.

7. Select all region headers and click the Bold command:

8. Now select all product headers and italicize them:

	A	B	C	D	E	F
1		Unit Sales per Region				
2		North	South	East	West	
3	Product1	£12,000.00	£ 45.00	£ 500.00	£ 401.00	
4	Product2	£ 2,200.00	£2,000.00	£ 700.00	£ 400.00	
5	Product3	£13,000.00	£2,356.00	£ 200.00	£4,000.00	
6	Product4	£12,050.00	£2,500.00	£ 500.00	£3,030.00	
7	Product5	£ 1,600.00	£1,860.00	£ 400.00	£1,030.00	

9. Finally, select cells A1:E1 and then click the Merge & Centre command:

	A	B	C	D	E
1		Unit Sales per Region			
2		North	South	East	West
3	Product1	£12,000.00	£ 45.00	£ 500.00	£ 401.00
4	Product2	£ 2,200.00	£2,000.00	£ 700.00	£ 400.00
5	Product3	£13,000.00	£2,356.00	£ 200.00	£4,000.00
6	Product4	£12,050.00	£2,500.00	£ 500.00	£3,030.00
7	Product5	£ 1,600.00	£1,860.00	£ 400.00	£1,030.00

10. Your worksheet should now look something like this:

	A	B	C	D	E
1		Unit Sales per Region			
2		North	South	East	West
3	Product1	£12,000.00	£ 45.00	£ 500.00	£ 401.00
4	Product2	£ 2,200.00	£2,000.00	£ 700.00	£ 400.00
5	Product3	£13,000.00	£2,356.00	£ 200.00	£4,000.00
6	Product4	£12,050.00	£2,500.00	£ 500.00	£3,030.00
7	Product5	£ 1,600.00	£1,860.00	£ 400.00	£1,030.00

Click File → Save As and save the file as Lesson 2.2 Complete. Close Excel to complete this lesson.

## Skill Sharpener

<b>Objective</b>	To become comfortable using the commands in the Home tab.
<b>Briefing</b>	You have installed Excel 2013 and want to become familiar with some of the commands you will use from day to day.
<b>Task</b>	Open the sample data file and experiment with some of the commands on the Home tab: <ul style="list-style-type: none"><li>▪ Try out two different commands from each of the Font, Alignment, and Number groups.</li><li>▪ Apply two different styles to different selections of data.</li></ul>
<b>Hints</b>	Hover your mouse over a command before clicking it for a short description of what the command does.  If you don't like the way something turned out or if you aren't sure if a change you made makes sense, click the Undo command in the Quick Access Toolbar. This will revert the change made by the last command.
<b>Sample Data</b>	 Skill Sharpener 2.2 Microsoft Excel Worksheet 9.04 KB
<b>Follow-up Questions</b>	The Number group on the Home tab contains commands to increase or decrease the number of decimal places. Name some situations where you might want more or fewer decimal places or none at all.



## Lesson A-2.3: The Insert Tab

Next, let's explore the Insert tab. The commands here are used for inserting a variety of different objects into your spreadsheets including charts, illustrations, hyperlinks, and symbols.

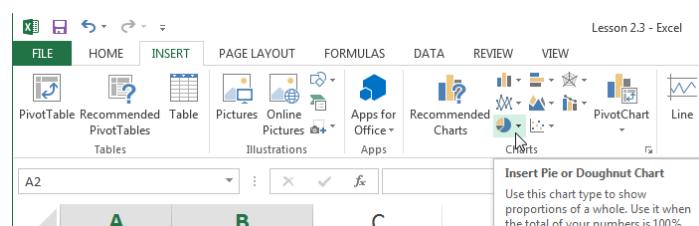
### Step-By-Step

In this exercise you will practice working with some commands in the Insert tab.

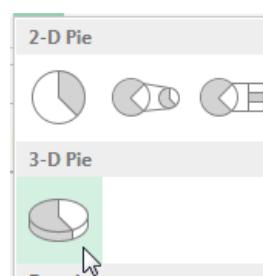
1. Open Lesson 2.3 from the MODULE A-2 folder of your Exercise Files.
  
2. Select A3:B7:

	A	B
1		
2		North
3	Product1	£12,000.00
4	Product2	£ 2,200.00
5	Product3	£13,000.00
6	Product4	£12,050.00
7	Product5	£ 1,600.00

3. Click Insert → Pie:



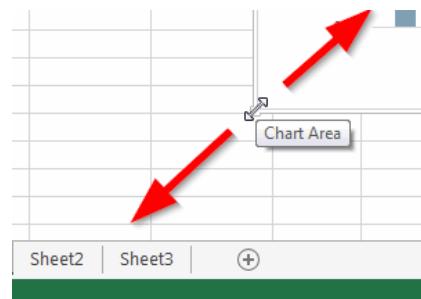
4. When the list of pie charts appears, click Pie in 3D:



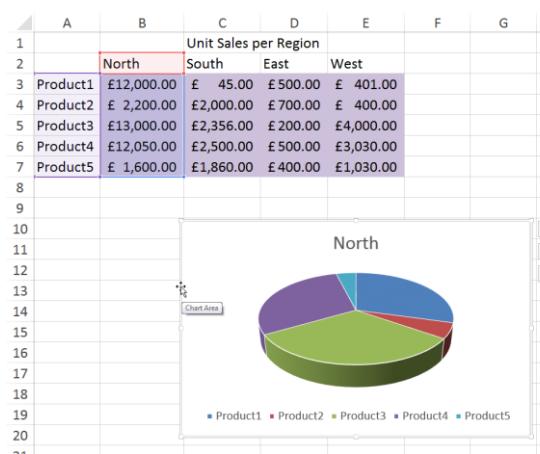
5. A pie chart will appear in the worksheet. Notice that when the chart appears, three new tabs appear. These are called contextual tabs, and let you modify specific details regarding the chart. We will explore contextual tabs later in this manual.



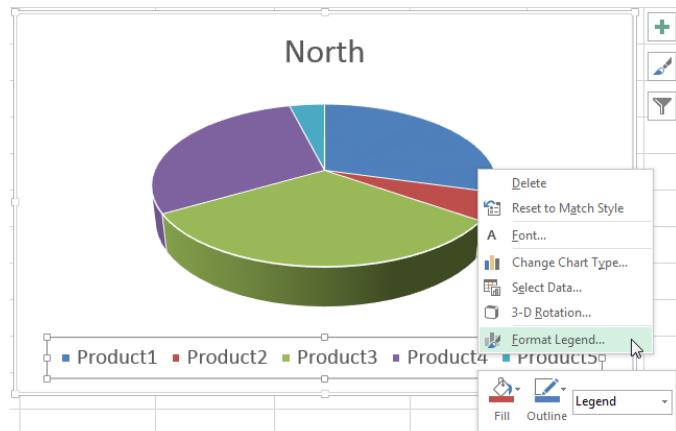
6. Move your mouse to one corner of the chart. Your mouse pointer will change to a double-headed arrow. This allows you to resize the chart by clicking and dragging the outside edges. Resize the chart to be roughly  $\frac{1}{2}$  of the original size:



7. With the chart resized, move your mouse pointer to one of the outside edges. Your mouse pointer will change to a four-headed arrow. Click and drag the chart to place it under the source data:

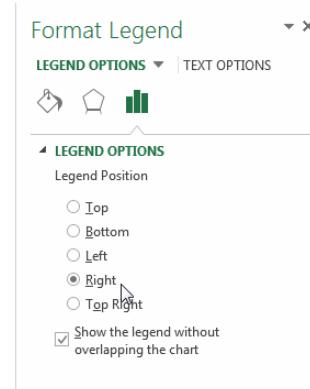


8. Right-click the chart legend and click Format Legend:

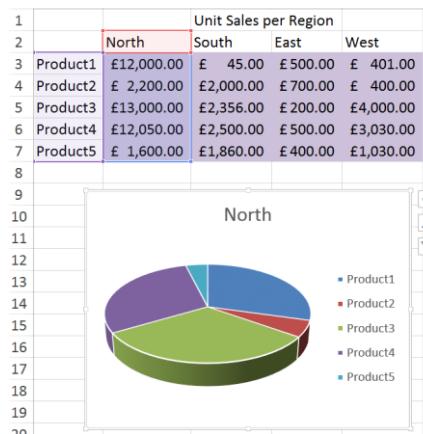


Note in Excel 2010 and 2007 the menu options are slightly different.

9. The Format Legend dialog box will appear. Click the Right radio button and then click Close:



10. The legend should now appear right of the pie chart. Your worksheet should now look something like this:



Save the file as Lesson 2.3 Complete and then close Excel to complete this lesson.

## Skill Sharpener

**Objective** To understand how to use some commands in the Insert tab.

**Briefing** You have been asked to create an organizational chart showing the structure of your company.

**Task** Use the sample data to create a worksheet with an appropriate SmartArt diagram to show the structure. Finally, create a text box and write “Company Hierarchy” inside. Change the font if you like.

- Hints**
- There is a Hierarchy category in the Choose a SmartArt Graphic dialog.
  - Some diagrams include an “Insert Picture” icon.

**Sample Data** Bill and Dan report to Sue. Stan reports to John. John and Sue report to Nancy.



Skill Sharpener 2.3 Images  
File folder

**Follow-up Questions** How would you add more hierarchy levels to this chart? Write your answer in a cell beneath your hierarchy diagram.

## **Lesson A-2.4: The Page Layout Tab**

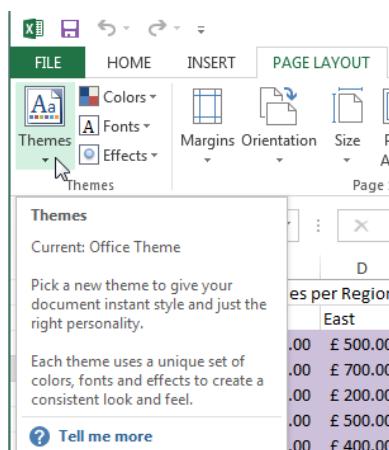
The Page Layout tab allows you to change the look and feel of your printed worksheet. Here you can enhance the style and presentation of everything in your worksheet, control how the worksheet is printed, and arrange the objects within the worksheet.

In Excel 2013 you get a few differently named themes compared to older versions of Excel.

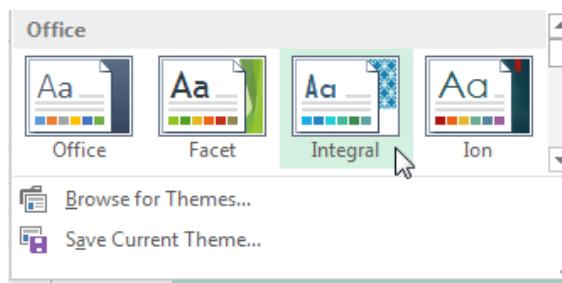
## **Step-By-Step**

In this exercise you will practice using some of the commands in the Page Layout tab.

1. Open Lesson 2.4 from the MODULE A-2 folder of your Exercise Files.
  2. Click the Page Layout tab and then click the Themes command:

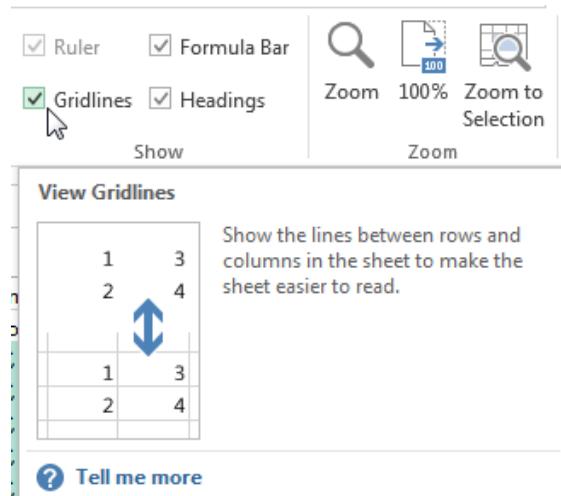


- 3.** Move your mouse pointer over the various themes to see how the worksheet's appearance changes. Select a theme for your worksheet:

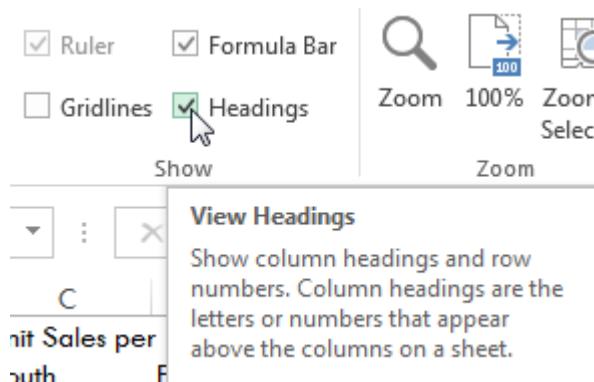


We have chosen to use the Integral theme. Note the new Theme names.

4. Click the Gridlines View checkbox to remove the gridlines from the worksheet:



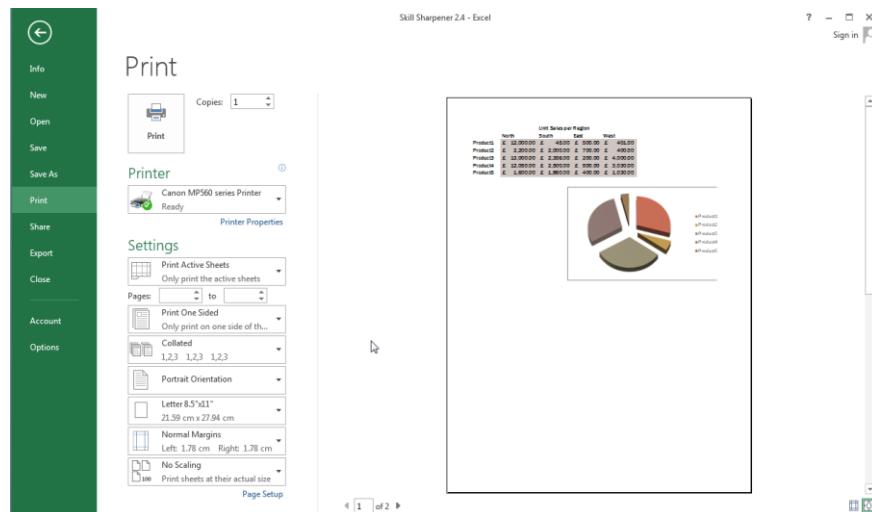
5. Now click the Headings View checkbox to remove the column/row headings:



6. As you can see, no gridlines or headers might make working with Excel difficult. Turn gridlines and headers back on.
7. Save the file as Lesson 2.4 Complete and then close Excel to complete this lesson.

## Skill Sharpener

- Objective** To understand how you can control print functionality using the Page Layout tab.
- Briefing** Your company has a policy stating that all diagrams are to be printed a certain way.
- Task** Your company policy states that any documents that contain diagrams must be printed in landscape orientation, with wide margins, and printed on A4 paper.
- Open the sample data file and make the appropriate changes to the document. Check your work by clicking File → Print and looking at the Print Preview area on the right:



- Hints** Although we haven't covered printing yet, clicking File → Print will show you how the printed page will look. You don't have to print the document.

- Sample Data**
- 
- Skill Sharpener 2.4  
Microsoft Excel Worksheet  
13.2 KB

## Lesson A-2.5: The Formulas Tab

---

The Formulas tab provides access to Excel's preset functions and formula auditing tools. As you become more familiar with Excel, you will likely start to rely more on formulae to help process your data. To help with this, Excel features a wide variety of formulae, called functions. Chances are the one you need is already part of the library! And if you need to create your own formulae, Excel features a comprehensive set of auditing tools to make sure your formula is as correct as possible.

This lesson will show you where you can access some of these features. Many of the advanced controls described here are beyond the scope of this manual. However, we will explore more about functions later in this course.

### Step-By-Step

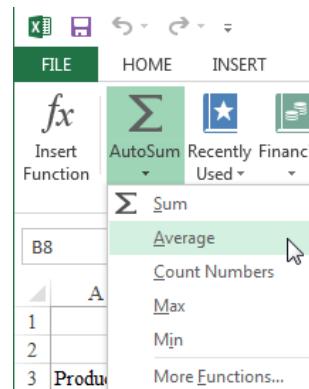
In this exercise you will practice using some of the features of the Formulas tab.

**1.** Open Lesson 2.5 from the MODULE A-2 folder of your Exercise Files.

**2.** Click B8 to make it the active cell.

A	B	C
1		Unit Sales
2	North	South
3 Product1	£ 12,000.00	£ 45.
4 Product2	£ 2,200.00	£ 2,000.
5 Product3	£ 13,000.00	£ 2,356.
6 Product4	£ 12,050.00	£ 2,500.
7 Product5	£ 1,600.00	£ 1,860.
8		

**3.** Click Formulas → AutoSum → Average:



4. The average formula will automatically be inserted in B8. Press Enter to apply the formula and calculate the result:

	A	B	C	D	E
1			Unit Sales per Region		
2		North	South	East	West
3	Product1	£ 12,000.00	£ 45.00	£ 500.00	£ 401.00
4	Product2	£ 2,200.00	£ 2,000.00	£ 700.00	£ 400.00
5	Product3	£ 13,000.00	£ 2,356.00	£ 200.00	£ 4,000.00
6	Product4	£ 12,050.00	£ 2,500.00	£ 500.00	£ 3,030.00
7	Product5	£ 1,600.00	£ 1,860.00	£ 400.00	£ 1,030.00
8		=AVERAGE(B3:B7)			
9		AVERAGE(number1, [number2], ...)			

A	B
1	
2	North South
3	Product1 £ 12,000.00 £
4	Product2 £ 2,200.00 £
5	Product3 £ 13,000.00 £
6	Product4 £ 12,050.00 £
7	Product5 £ 1,600.00 £
8	£ 8,170.00
9	

5. Click C8 and then click AutoSum → Average:

The screenshot shows a Microsoft Excel spreadsheet with a table of sales data. The table has columns for Product (A), Region (B), and Sales (C-E). Row 8 contains the formula =AVERAGE(C3:C7) and its result, £ 8,170.00. The formula bar also shows =AVERAGE(C3:C7). The AutoSum dropdown menu is open at the top, with 'Average' highlighted. Other options like Sum, Count Numbers, Max, and Min are also visible.

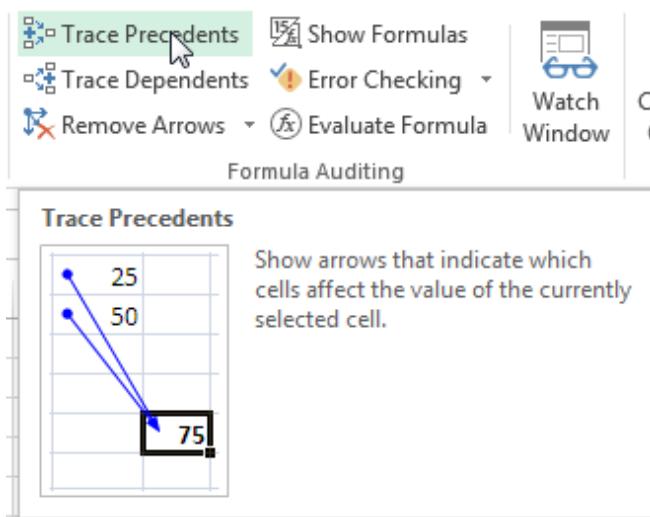
6. When the formula appears in C8, press Enter. Calculate the averages of D8 and E8 as well:

	A	B	C	D	E
1			Unit Sales per Region		
2		North	South	East	West
3	Product1	£ 12,000.00	£ 45.00	£ 500.00	£ 401.00
4	Product2	£ 2,200.00	£ 2,000.00	£ 700.00	£ 400.00
5	Product3	£ 13,000.00	£ 2,356.00	£ 200.00	£ 4,000.00
6	Product4	£ 12,050.00	£ 2,500.00	£ 500.00	£ 3,030.00
7	Product5	£ 1,600.00	£ 1,860.00	£ 400.00	£ 1,030.00
8		£ 8,170.00	£ 1,752.20	£ 460.00	£ 1,772.20

7. Click C8. You will see the formula appear in the Formula Bar:

The screenshot shows a Microsoft Excel spreadsheet titled "Unit Sales per Region". The formula bar at the top displays the formula `=AVERAGE(C3:C7)`. The ribbon tab "Formula Auditing" is selected, indicated by a red arrow pointing to the "Trace Precedents" button. The main worksheet area shows data for five products across four regions (North, South, East, West) with their respective sales values.

8. Click the Trace Precedents command:



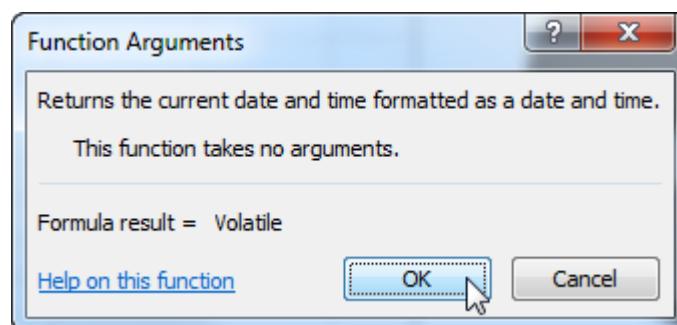
9. As you can see, C3:C7 will be highlighted and an arrow will be drawn down to indicate that these cells contain the precedent values used to calculate the formula in C8:

A	B	C	D	E
1		Unit Sales per Region		
	North	South	East	West
3 Product1	£ 12,000.00	£ 45.00	£ 500.00	£ 401.00
4 Product2	£ 2,200.00	£ 2,000.00	£ 700.00	£ 400.00
5 Product3	£ 13,000.00	£ 2,356.00	£ 200.00	£ 4,000.00
6 Product4	£ 12,050.00	£ 2,500.00	£ 500.00	£ 3,030.00
7 Product5	£ 1,600.00	£ 1,860.00	£ 400.00	£ 1,030.00
8	£ 8,170.00	£ 1,752.20	£ 460.00	£ 1,772.20

10. Click A10 and then click Date & Time → NOW:

The screenshot shows the Microsoft Excel ribbon with the 'Function Library' tab selected. Under the 'Date & Time' category, the 'NOW' function is highlighted. The tooltip for the NOW function states: 'Returns the current date and time formatted as a date and time.' Below the tooltip, there is a link to 'Tell me more'.

11. This will show you a warning stating that this formula takes no arguments. Click OK to continue:



12. The current date and time will be inserted into this cell:

North	
Product1	£ 12,000.00
Product2	£ 2,200.00
Product3	£ 13,000.00
Product4	£ 12,050.00
Product5	£ 1,600.00
	£ 8,170.00
02/05/2013 16:24	

13. Save this file as Lesson 2.5 Complete and then close Excel to complete this lesson.



## Skill Sharpener

<b>Objective</b>	To understand how formulae work in Excel.
<b>Briefing</b>	You plan to do a lot of calculations while using Excel, so there's no time like the present to get familiar with what Excel can do.
<b>Task</b>	Open the sample data file. This is a Personal Monthly Budget spreadsheet that is included with Excel 2013. Although this worksheet looks complex, it is just addition and subtraction.  Click the different tabs that contain numbers, particularly the subtotals and totals. Look at the Formula Bar to see how the values in these cells were created. Click the Trace Precedents and Trace Dependents command on the Formulas tab to see how the values in the worksheet are interconnected.
<b>Hints</b>	Use the Remove Arrows command to clean up the precedent and dependent arrows on your screen.
<b>Sample Data</b>	 Skill Sharpener 2.5 Microsoft Excel Worksheet 24.4 KB
<b>Follow-up Questions</b>	Click the Show Formulas command in the Formula Auditing group. Does this make the worksheet easier or harder to examine?

## Lesson A-2.6: The Data Tab

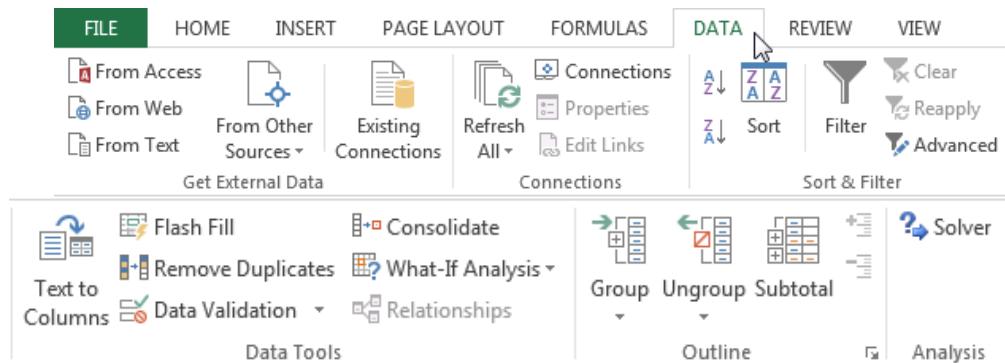
Data in a worksheet comes from one of two places: internally (typed by you or generated by a function) or externally (collected from a database or other data source, including other files on your computer.) The Data tab provides you with all the necessary commands to use and manage internal/external data connections.

### Step-By-Step

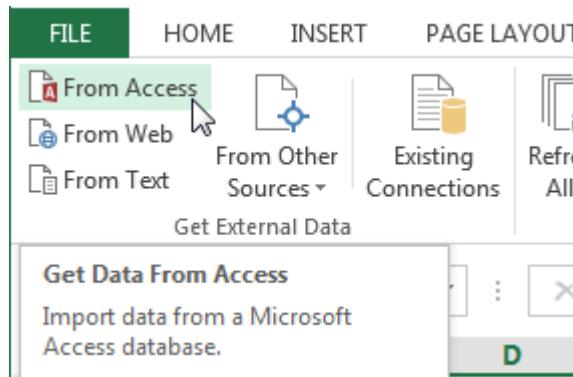
In this exercise, you will practice using some commands found in the Data tab.

1. Open Excel to a new workbook.

2. Click the Data tab:



3. Move your mouse over each of the commands in the Get External Data group. These commands let you import data from somewhere else:



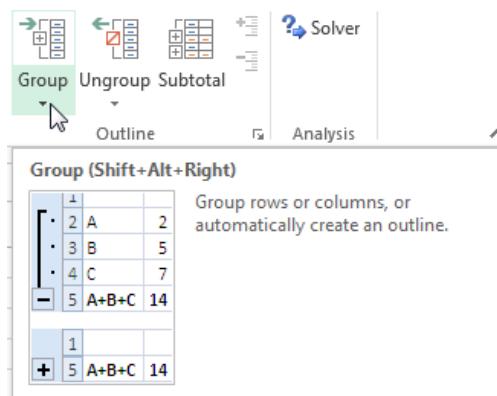
4. Enter the following data:

	A	B	C
1	Data 1	Data 2	Data 3
2	100	10	1000
3	200	20	2000
4	300	30	3000
5	400	40	4000
6			4000

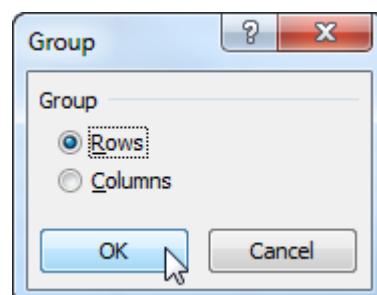
5. Select all of the data (A1:C5):

	A	B	C
1	Data 1	Data 2	Data 3
2	100	10	1000
3	200	20	2000
4	300	30	3000
5	400	40	4000

6. Next, click the Group button in the Outline group:



7. When the Group dialog box appears, leave Rows selected and click OK:



8. On the left-hand side of the screen you will see that the first five rows have been grouped. Click the – sign:

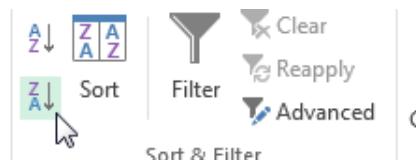
1	2	A	B	C
1		Data 1	Data 2	Data 3
2		100	10	1000
3		200	20	2000
4		300	30	3000
5		400	40	4000
6				
7				

9. This will collapse all the rows. Click the + sign to bring them back.

10. Select A2:C5:

1	2	A	B	C
1		Data 1	Data 2	Data 3
2		100	10	1000
3		200	20	2000
4		300	30	3000
5		400	40	4000
6				

11. Click the Sort Largest to Smallest command to sort this data in descending order:



12. Your worksheet should now look like this:

1	2	A	B	C
1		Data 1	Data 2	Data 3
2		400	40	4000
3		300	30	3000
4		200	20	2000
5		100	10	1000
6				

Save the file as Lesson 2.6 Complete and then close Excel to complete this lesson.

## Skill Sharpener

<b>Objective</b>	To understand how to sort and filter data.
<b>Briefing</b>	You want to explore some of the ways in which Excel can work with lists of data.
<b>Task</b>	Open the sample data file and select all of the numerical data. Click the Sort Smallest to Largest and Sort Largest to Smallest commands.  With the data still selected, click the Filter command. What do the combo boxes at the top of the data allow you to do?
<b>Hints</b>	Don't select the data headers, just select the data.

**Sample Data**

## Lesson A-2.7: The Review Tab

---

The last tab we will explore in this module is the Review tab. This tab offers commands to make sure everything in your workbook is spelled correctly, translation services for international readers, the ability to add and manage comments, and the ability to prevent others from making unauthorized changes to your document.

### Step-By-Step

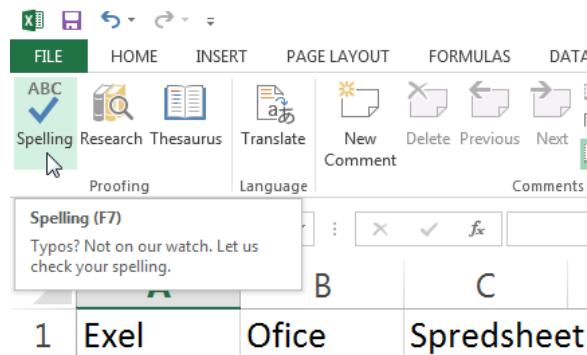
In this exercise you will practice using some of the commands in the Review tab.

1. Open Excel to a new empty worksheet.

2. Type the following misspelled words:

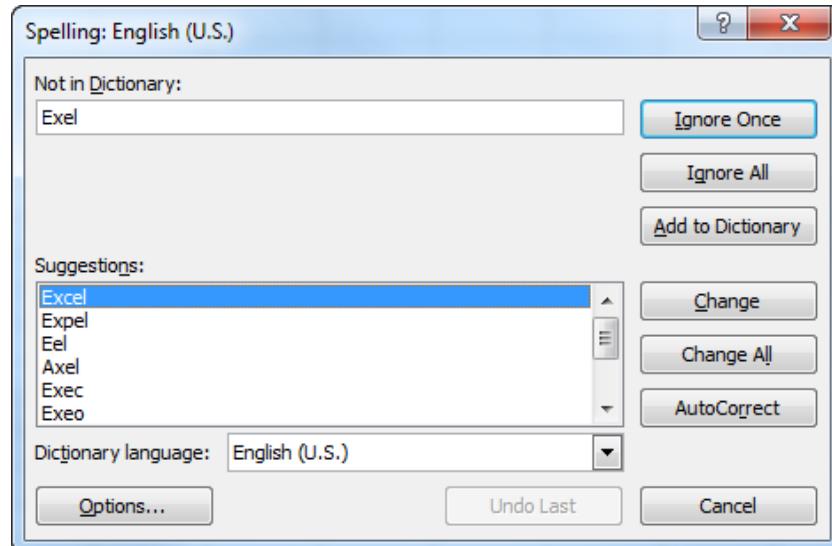
	A	B	C
1	Exel	Ofice	Spredsheet

3. Click Review → Spelling:



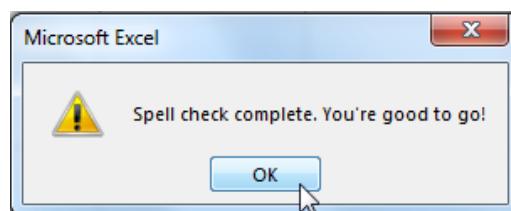
4. You will be prompted to start checking the worksheet for spelling errors. Click Yes to continue:

5. The Spelling dialog box will appear and search for misspelled words. It will determine that “Exel” is spelled incorrectly and offer suggestions:



In this case, the first suggestion is correct, so click the Change button on the right hand side.

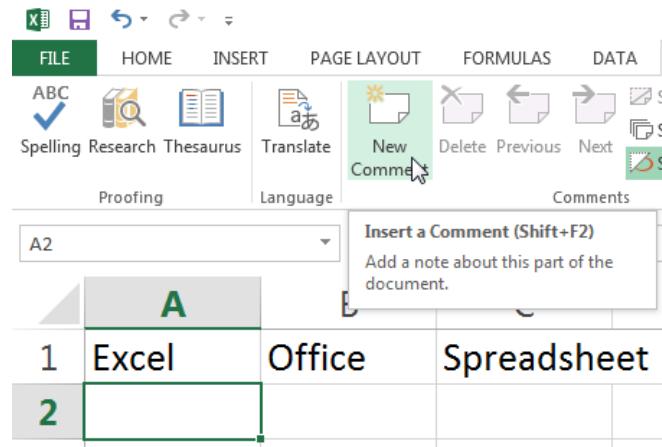
6. Excel will check the next cell, noting that “Ofice” is spelled incorrectly. The suggestion offered is correct, so click Change again.
7. Excel will find the third misspelled word, so make the correct choice from the suggestions, and click Change. When the spell checking is complete, you will be notified. Click OK to continue:



Your worksheet should now look like this, with all words spelled correctly:

	A	B	C	
1	Excel	Office	Spreadsheet	

8. Click A2 and then click the New Comment command:



9. A comment box will appear next to A2. Type the following into the comment box and then click elsewhere in the worksheet to commit the comment:

	A	B	C	D
1	Excel	Office	Spreadsheet	
2				
3				
4				
5				
6				

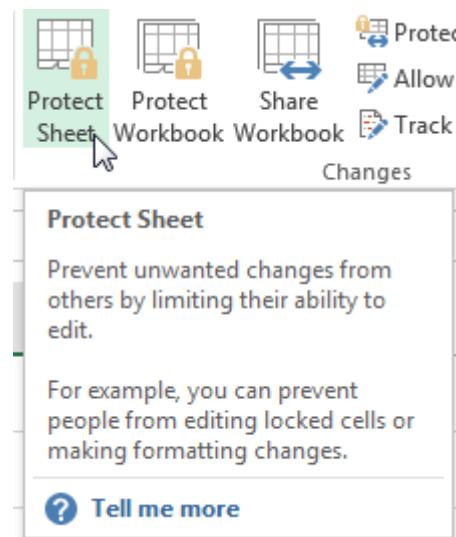
A yellow comment box is positioned over cell A2. It contains the text: **Activia:** All words in this worksheet have been checked for spelling errors.

10. The comment is denoted with a small red triangle in the corner of A2. Move your mouse pointer over this triangle to see the comment:

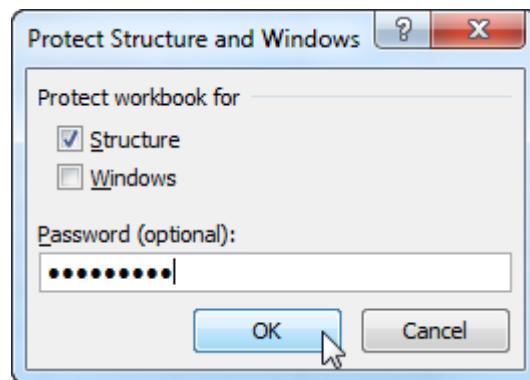
	A	B	C	D
1	Excel	Office	Spreadsheet	
2	+			
3				
4				
5				

A yellow comment box is positioned over cell A2. It contains the text: **Activia:** All words in this worksheet have been checked for spelling errors. A small red triangle is located in the top-left corner of cell A2, pointing towards the comment box.

- 11.** Click the Protect Workbook command:



- 12.** A dialog will appear and prompt you for a password. Make the password "wednesday" (all lowercase) and then click OK:



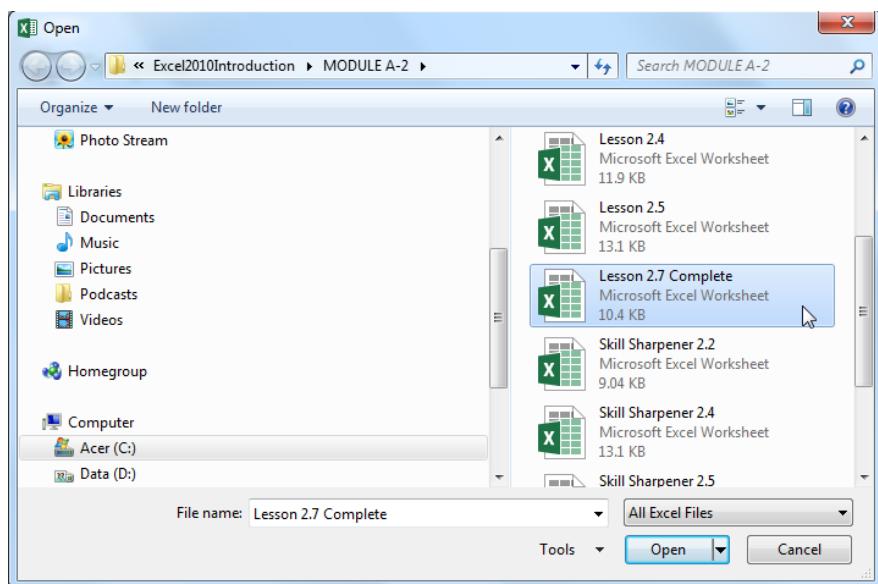
You will be prompted to re-enter the password. Do so and click OK.



- 13.** Save the file as Lesson 2.7 Complete and close the file. (You can close just the file by clicking the small close button. Excel will still be open, but won't display anything.)



- 14.** Open Lesson 2.7 Complete:



Try to add a new worksheet.



You are unable to do so because the structure of the workbook is protected. Use Review > Protect Workbook to unprotect the file. You'll have to enter your password to continue.

## Skill Sharpener

<b>Objective</b>	To understand how to check a worksheet for errors and work with comments.
<b>Briefing</b>	You have been given a file that needs some serious attention. Using what you know about the commands on the Review tab, you will fix the worksheet.
<b>Task</b>	Open the sample data and run a spell check to fix the spelling errors. Use comments to describe what each formula does. (Cells that use a formula are in <b>bold</b> text.) Save the workbook as Skill Sharpener 2.7 Complete when you are finished.

### Sample Data



### 3. MODULE XL7-A-3: Excel Basics

---

In this module you will learn how to:

- Work with columns, rows, cells, and ranges
- Create worksheet labels
- Enter and delete data
- Print a worksheet
- Use AutoFill, AutoSum, and AutoComplete
- Work with basic formulae
- Drag and drop cells
- Cut, copy, and paste cells
- Use the Clipboard and Paste Special
- Insert and delete cells, rows, and columns
- Use undo, redo, and repeat
- Use Smart Tags
- Use the error option button
- Use the AutoFill option button
- Use the Paste Option button
- Use AutoCorrect
- Use spell check
- Use Find and Replace
- Document a worksheet with comments



## Lesson A-3.1: Working with Excel

---

Excel is used to organize and analyse data. In order to work effectively with Excel, you need to understand the building blocks that make up a worksheet. In this lesson we will review the basic elements of a worksheet: columns, rows, cells, and ranges. We will also learn about worksheet labels, how to enter and remove data, and how to print a worksheet.

### Step-By-Step

In this exercise, you will practice entering data into a worksheet and then labelling the data.

1. Open Excel and open a new workbook.
  
2. Cell A1 should already be highlighted. If not, click it to make it the active cell. Type “Item” and then press the right arrow key:

	A	B
1	Item	

3. Type “Quantity” into B1 and then press Tab:

	A	B	C
1	Item	Quantity	

4. Finally, enter “Price” into C1 and then press Enter:

5. Enter the following numbers below the headings. Remember you can press Enter to move to the next cell in the column, Tab to move to the next cell in the row, or the arrow keys to move wherever you want:

	A	B	C
1	Item	Quantity	Price
2	Widget 1	20	5.99
3	Widget 2	100	0.5
4	Widget 3	68	12.5
5	Widget 4	12	7.33

6. Select all the values in the Price column and then click the combo box in the Number group of the Home Tab:

	A	B	C	D	E
1	Item	Quantity	Price		
2	Widget 1	20	5.99		
3	Widget 2	100	0.5		
4	Widget 3	68	12.5		
5	Widget 4	12	7.33		

7. Select the Accounting number format. The icon looks like a pile of golden coins and a banknote:



8. Select all cells in the worksheet by pressing Ctrl + A:

	A	B	C
1	Item	Quantity	Price
2	Widget 1	20	£ 5.99
3	Widget 2	100	£ 0.5
4	Widget 3	68	£ 12.5
5	Widget 4	12	£ 7.33

9. Click the Bold command:



10. Your worksheet should now look like this:

Item	Quantity	Price
Widget 1	20	£ 5.99
Widget 2	100	£ 0.50
Widget 3	68	£ 12.50
Widget 4	12	£ 7.33

Save your workbook as Lesson 3.1 Complete and then close Excel to complete this lesson.

## Skill Sharpener

<b>Objective</b>	To become comfortable creating a basic worksheet in Excel.
<b>Briefing</b>	Your manager has asked you to create an Excel file to use for inventory.
<b>Task</b>	<p>Create a worksheet with these column headings:</p> <ul style="list-style-type: none"><li>▪ Item</li><li>▪ Cost</li><li>▪ Quantity</li><li>▪ Price</li></ul> <p>Make all of the headings bold and italicized. Make sure the numbers in the Price column are formatted in accounting format. Save your completed file as Skill Sharpener 3.1 Complete.</p>
<b>Hints</b>	Use the formatting commands on the Home tab. Some of the formatting commands are available by right-clicking a cell too.
<b>Sample Data</b>	<p>Enter these values into the Price column:</p> <ul style="list-style-type: none"><li>▪ 20.35</li><li>▪ 24.99</li><li>▪ 7.99</li><li>▪ 5.50</li></ul>

## Lesson A-3.2: Moving your Data

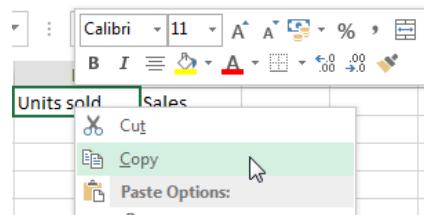
The ability to manipulate your data is crucial when building worksheets and workbooks. To work with your data efficiently, you should know how to manipulate the data in a worksheet. We will cover the Cut, Copy and Paste functions; how to insert and delete cells, rows, and columns; how to use Paste Special; how to drag and drop cells; and how to use the Undo, Redo, and Repeat features.

This lesson contains a number of important features available when working with spreadsheets, so take your time. After completing this lesson, you will have the necessary skills to take on the data in a wide variety of spreadsheets!

### Step-By-Step

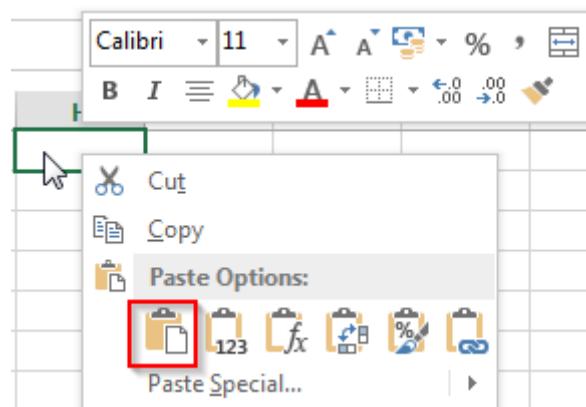
In this exercise you will practice moving cells, using the Cut/Copy/Paste commands, and use Paste Special.

- 1.** Open Lesson 3.3 from the MODULE A-3 folder of your Exercise Files.
  
- 2.** Right-click D1 and click Copy:



A copied cell or cells will have a flashing border.

- 3.** Right-click H1 and click Paste (highlighted below for more recent versions):



This will copy the "Units sold" heading to this location.

4. D1 will still have a flashing border. Click outside cell H1 and press Ctrl + D to deselect the cell.

Now select D2:D8:

A	B	C	D	E
1	ID #	Price	Units sold	Sales
2	123	£ 3.98	4	£ 15.92
3	121	£ 2.33	54	£ 125.82
4	12	£ 5.00	34	£ 170.00
5	1223	£ 6.00	24	£ 144.00
6	1212	£ 6.50	11	£ 71.50
7	24545	£ 10.50	12	£ 126.00
8	1211311	£ 12.99	31	£ 402.69
9				£ 1,055.93

Press Ctrl + C to copy these cells.

5. Click H2 and press Ctrl + V to paste:

A	B	C	D	E	F	G	H
1	ID #	Price	Units sold	Sales			
2	123	£ 3.98	4	£ 15.92			4
3	121	£ 2.33	54	£ 125.82			54
4	12	£ 5.00	34	£ 170.00			34
5	1223	£ 6.00	24	£ 144.00			24
6	1212	£ 6.50	11	£ 71.50			11
7	24545	£ 10.50	12	£ 126.00			12
8	1211311	£ 12.99	31	£ 325.50			31
9				£ 978.74			
10							

Click outside the pasted area and press Esc to deselect the values in column D.

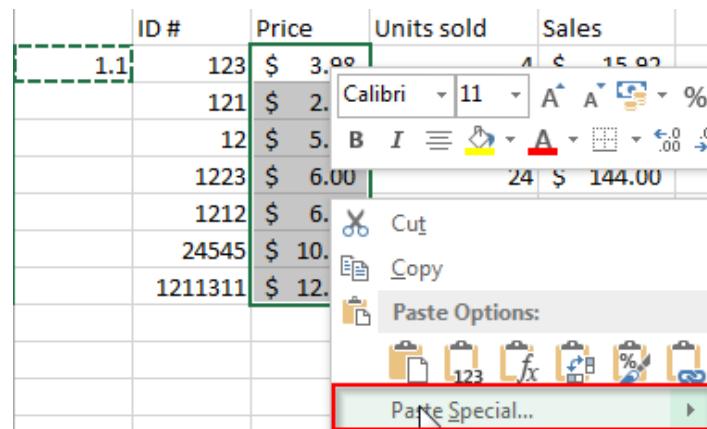
6. Click E9 to select it. Move your mouse pointer to one of the cell borders (the pointer will turn into a four-headed arrow) and then click and drag this cell one column to the right:

Units sold	Sales
4	£ 15.92
54	£ 125.82
34	£ 170.00
24	£ 144.00
11	£ 71.50
12	£ 126.00
31	£ 325.50
	£ 978.74

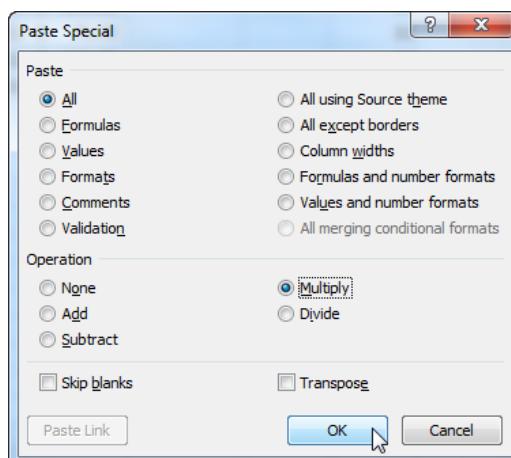
7. Add the number 1.1 to cell A2.
  
  
  
8. Push Ctrl + C to copy this cell. Now select cells C2:C8:

	A	B	C
ID #	Price		
1			
2	1.1	123	£ 3.98
3		121	£ 2.33
4		12	£ 5.00
5		1223	£ 6.00
6		1212	£ 6.50
7		24545	£ 10.50
8		1211311	£ 10.50

9. Right-click these selected cells and click Paste Special:



10. When the Paste Special dialog box appears, click the Multiply radio button and then click OK:



- 11.** All values will be multiplied by the value in A2, and thus will change the value of column E and cell F9. Reapply the accounting number format to column C

Your worksheet should now look like this:

	A	B	C	D	E	F	G	H
1		ID #	Price	Units sold	Sales			
2	1.1	123	£ 4.38	4	£ 17.51			4
3		121	£ 2.56	54	£ 138.40			54
4		12	£ 5.50	34	£ 187.00			34
5		1223	£ 6.60	24	£ 158.40			24
6		1212	£ 7.15	11	£ 78.65			11
7		24545	£ 11.55	12	£ 138.60			12
8		1211311	£ 11.55	31	£ 358.05			31
9						#####		
10								

- 12.** The cell F2 will contain hash symbols like this: #####

This is an error stating that the value in this cell is too wide to be shown due to the column width.

- 13.** Move your mouse pointer to the divider between columns F and G, and then click and drag to the right. The value will reappear:

	F	G	H
		Units sold	
1.592		4	
15.82		54	
70.00		34	
14.00		24	
71.50		11	
16.00		12	
12.69		31	
#####			

- 14.** Save and close the file to complete the exercise.

## Skill Sharpener

<b>Objective</b>	To understand how to add data to an existing worksheet.
<b>Briefing</b>	You need to add more information to an inventory worksheet.
<b>Task</b>	Add two additional columns to the sample data where you feel they are appropriate. Label them Stock # and Vendor. Save the file as Skill Sharpener 3.3 Complete.
<b>Hints</b>	You can use the right-click menu as well as the Home ribbon.
<b>Sample Data</b>	



## Lesson A-3.3: Basic Excel Features

When working with spreadsheets, it is often the case that you must repeat data in a large number of cells. Excel helps you do this efficiently by automating some basic and repetitive tasks for you. In this lesson we will discuss some of the useful Excel features concerning data entry: AutoFill, AutoSum, and AutoComplete.

In addition to covering these automated features, we will also cover a key concept: how to work with basic formulas.

### Step-By-Step

In this exercise you will practice entering data with AutoFill and then experiment with a basic formula.

1. Open Lesson 3.2 from the MODULE A-3 folder of your Exercise Files:



2. Type 2000 into A2 and 2001 into A3:

	A	
1	Year	T
2	2000	
3	2001	
4		

3. Select A2 and A3:

	A	
1	Year	T
2	2000	
3	2001	

4. Click and drag the small black box in the lower right corner of the selection. Drag it down until you see 2011 appear beside your mouse pointer:

	A	B
1	Year	Temp(
2	2000	
3	2001	
4		
5		
6		
7		
8		
9		
10		
11		
12		2011
13		
14		

Release the mouse button and the values will be filled into this column.

5. Enter 27.5 into C2 and 21 into D2:

	A	B	C	D
1	Year	Temp(Ave)	Temp(Max)	Temp (Min) #
2	2000		27.5	21
3	2001			
4	-----			

6. Enter  $=(c2+d2)/2$  into B2 and press Enter:

	A	B	C	D
1	Year	Temp(Ave)	Temp(Max)	Temp (Min) #
2	2000	$=(c2+d2)/2$	27.5	21
3	-----			

Remember that there must be an equals (=) sign in front of the equation in order for Excel to recognize it. Also note that cell references in a formula are not case sensitive, though Excel will capitalize all letters that are used in cell references.

7. Enter some values into column C and D. You can use the values shown below or make some up; just make sure the Max values are larger than the Min values. (The formula will still work if they aren't, but your chart won't make sense!)

	A	B	C	D	#
1	Year	Temp(Ave)	Temp(Max)	Temp (Min)	#
2	2000	24.25	27.5	21	
3	2001		100	-100	
4	2002		84	55	
5	2003		0.254	-0.3658	
6	2004		21	0	

8. Click B2 to select it and then click and drag the small square down until you reach B6:

	A	B	C
1	Year	Temp(Ave)	Temp(Max)
2	2000	24.25	
3	2001		
4	2002		
5	2003		
6	2004		
7	2005		

9. When you release the mouse button, the formula will be calculated for all of the values you entered:

	A	B	C	D	#
1	Year	Temp(Ave)	Temp(Max)	Temp (Min)	#
2	2000	24.25	27.5	21	
3	2001	0	100	-100	
4	2002	69.5	84	55	
5	2003	-0.0559	0.254	-0.3658	
6	2004	10.5	21	0	
7	2005				

Save the file as Lesson 3.2 Complete and then close Excel to complete this lesson.

## Skill Sharpener

<b>Objective</b>	To understand how to use AutoFill and AutoComplete.
<b>Briefing</b>	You have been asked to create a score sheet for a bowling league.
<b>Task</b>	Create a worksheet with a Rank column, with 24 places. Add a name column for the names of the players. Add a Score column and a Team Name column.
<b>Hints</b>	AutoFill is perfect for filling the Rank column.
<b>Sample Data</b>	<p>Use these names to get the list started: John, Jack, James, Brenda, Barbara, Nancy. Did AutoComplete try to fill in some of the names as you typed? Fill out the remaining 18 spots with other names.</p> <p>Use the following team names: Jets, Rockets, Tigers, Kings, Eagles, Pinheads. Assign four people per team. Did AutoComplete help when assigning team names to people?</p>



## Lesson A-3.4: Smart Tags and Options Buttons

Excel's Smart Tags and Option Buttons can provide you with information and can perform actions based on the context of what you are currently doing with your worksheet.

In this lesson, we will learn what Smart Tags are and how to use them. You will also learn about the Error option button, the AutoFill option button, and the Paste option button, and how they can make tasks easier.

Smart Tags have been around for a while so they are also in Excel 2010 and 2007.

### Step-By-Step

In this exercise you will experiment with the different AutoFill options.

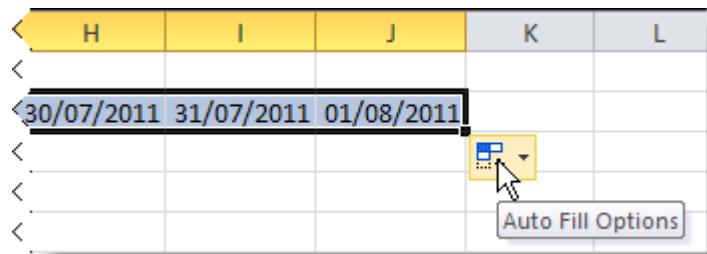
1. Open Lesson 3.4 from the MODULE A-3 folder of your Exercise Files:



2. Enter the following number into A2 and press Enter: Resize the column if required.

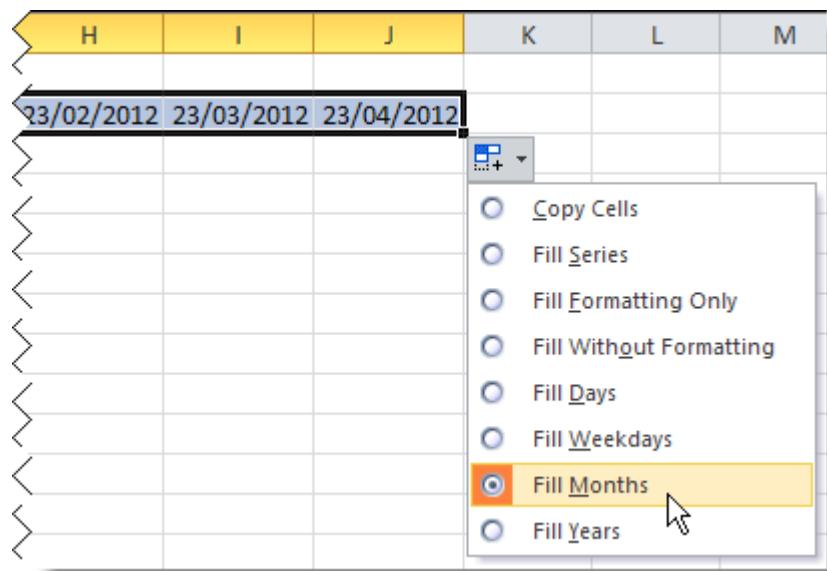
	A
1	
2	23/07/2011
3	

3. Select A2 and click and drag the small square in the corner of the cell (the fill handle) to the right until you reach column J. Release the mouse button to fill in the series.



Click the pull-down arrow beside the last cell that was filled with AutoFill.

4. Click the Fill Months option to continue:



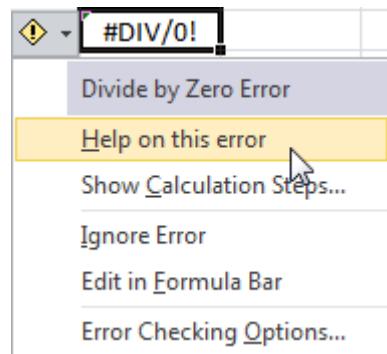
5. This will make the months cycle from the original date instead of the days.
6. Click the AutoFill pull-down arrow and select Fill Years. This will cycle all years starting from the original date
7. Starting in B4, Enter the following data and then press Enter:

3				
4				

8. This will result in an error. Click D4 and then click the Error Option button:

23	#DIV/0!
The formula or function used is dividing by zero or empty cells.	

9. Click the “Help on this error” command:



10. This will open the Help file to a subject regarding correcting errors in formulas:

The image shows a screenshot of the Microsoft Excel Help window. The title bar says "Excel Help". The main content area is titled "Correct a #DIV/0! error". It contains a search bar with the placeholder "Search online help". Below the title, there is a brief description: "Microsoft Excel shows the #DIV/0! error when a number is divided by zero (0). It happens when you enter a simple formula like =5/0, or when a formula refers to a cell that has 0 or is blank, as shown in this picture." Below the text is a table with three columns: Values, Formulas, and Formula results. The table rows are:

	A	B	C
1	Values	Formulas	Formula results
2	1	=A2/0	#DIV/0!
3	0	=A2/A3	#DIV/0!
4		=A2/A4	#DIV/0!
5		=QUOTIENT(A2,A3)	#DIV/0!

Below the table, there is a note: "If you're running a macro, it might use a formula that returns the #DIV/0! error." followed by "To correct the error, do any of the following:" and a bulleted list:

- Make sure the divisor in the function or formula isn't zero or a blank cell.
- Change the cell reference in the formula to another cell that doesn't have a zero or blank

Close the Help file and save your workbook as Lesson 3.4 Complete.  
Close Excel to complete this lesson.

## Skill Sharpener

<b>Objective</b>	To understand how to enter and work with Smart Tags.
<b>Briefing</b>	You are interested in keeping an eye on your stock portfolio and want to use Excel for the latest information.
<b>Task</b>	Enter a few stock symbols in your spreadsheet and use the associated Smart Tag to find out more information about that company.
<b>Hints</b>	You will need to enable Smart Tags. Do so by clicking File → Options → Proofing (tab) → AutoCorrect Options (button) → Smart Tags (tab) → Label data with Smart Tags.
<b>Sample Data</b>	Use an Internet search engine to find some Smart Tags. Try these ones out: MSFT, KO, VMED, SNE.



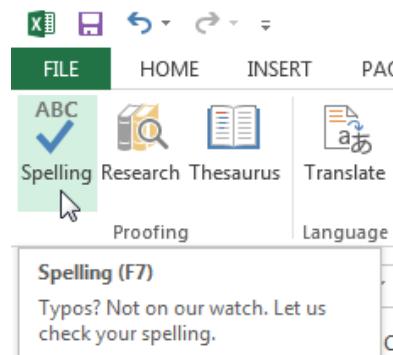
## Lesson A-3.5: Editing Tools

Excel offers a variety of editing tools to help ensure that your worksheets are accurate, free from spelling errors, and well documented. In this lesson, we will learn about AutoCorrect and Spell Check, two features that can help you fix typing and spelling errors. We will also learn how to use Find and Replace, a great tool for finding and fixing data in a large worksheet. Finally, we will learn how to add comments to a worksheet in order to clarify the data or post reminders.

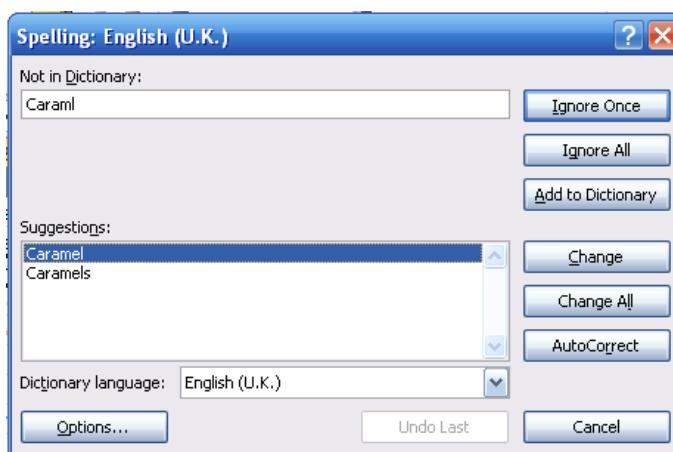
### Step-By-Step

In this exercise you will practice using the editing tools that were discussed in this lesson.

1. Open Lesson 3.5 from the MODULE A-3 folder of your Exercise Files.
  
2. Click Review → Spelling to start a check for misspelled words:



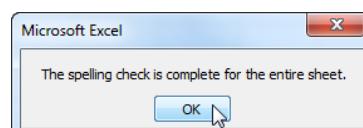
3. The suggestion that appears for “Caraml” is correct, so click Change:



4. The next misspelled word was actually a typo on the part of whoever conducted inventory for this worksheet. Select “Fuzzy” from the Suggestions and click Change:



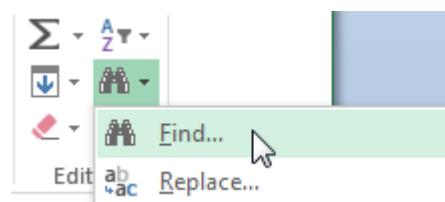
5. Once the check is complete, click OK to continue:



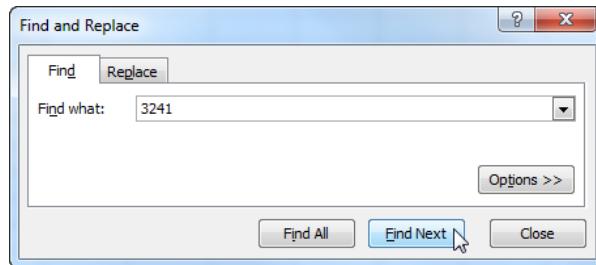
The Name column should now look like this:

	A	B
1		Name
2		Apple Snaps
3		Berry Blast
4		Caramel Crunch
5		Turkish Delight
6		Edible Socks
7		Fuzzy Pop
8		Grated Cinnamon

6. Look closely at the Item number column. There are three instances of the same item number, which would cause confusion when ordering. Click cell D2 and then click Home → Find & Select → Find:



7. When the Find dialog box opens, enter 3241 and click Find Next:



8. The first instance is okay, so click Find Next.
9. The next instance is beside the Fuzzy Pop item. Click in D7 and change this number to 3236:

	A	B	C	D
1	Name	Rank	Item number	
2	Apple Snaps	1	3223	
3	Berry Blast	2	3241	
4	Caramel Crunch	3	3229	
5	Turkish Delight	4	3237	
6	Edible Socks	5	3235	
7	Fuzzy Pop	6	3236	
8	Grated Cinnamon	7	3231	

Click Find Next to continue your search. It should return to the original cell.

10. Your worksheet should now look like this:

Name	Rank	Item number	Price	Inventory
Apple Snaps	1	3223	£20.00	1000
Berry Blast	2	3241	£23.00	1000
Caramel Crunch	3	3229	£26.00	1000
Turkish Delight	4	3237	£29.00	1000
Edible Socks	5	3235	£32.00	1000
Fuzzy Pop	6	3236	£35.00	1000
Grated Cinnamon	7	3231	£18.00	1000

Save the file as Lesson 3.5 Complete and then close Excel to complete this lesson.

## Skill Sharpener

<b>Objective</b>	To add comments to a worksheet.
<b>Briefing</b>	Your manager has asked you to comment a worksheet and provide clarification.
<b>Task</b>	Add comments to the headings in this worksheet and explain what each column of data represents. Save your file with comments as Skill Sharpener 3.5 Complete.
<b>Sample Data</b>	 Skill Sharpener 3.5 Microsoft Excel Worksheet 11.7 KB
<b>Follow-up Questions</b>	What are some different uses of comments besides just describing a column of data?



## 4. MODULE XL7-A-4: Editing your Workbook

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**In this module you will learn how to:**

- Change the size of rows or columns
- Adjust cell alignment and rotate text
- Create custom number and date formats
- Use conditional formatting
- Use the Format Painter
- Merge adjacent cells together
- Use AutoFit
- Find and replace formatting
- Add patterns, borders to a worksheet
- Work with styles and themes

## Lesson A-4.1: Cell Formatting

---

To make the most out of your worksheets, you need to understand the many ways that you can modify cells and data in Excel. In this lesson, we will learn about changing the size of rows and columns, adjusting cell alignment, creating custom formats, and rotating text.

### Step-By-Step

In this exercise you will practice formatting the cells in a worksheet.

- 1.** Open Lesson 4.1 from the MODULE A-4 folder of your Exercise Files.
  
  
  
- 2.** Select cells G3:H7:

	A	B	C	D	E	F	G	H
1			Unit Sales per Region					
2		North	South	East	West	Total units	Price per Unit	Sales
3	Product1	12000	45	500	401	12946	50	647300
4	Product2	2200	2000	700	400	5300	55	291500
5	Product3	13000	2356	200	4000	19556	60	1173360
6	Product4	12050	2500	500	3030	18080	65	1175200
7	Product5	1600	1860	400	1030	4890	70	342300

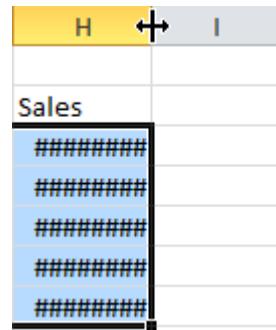
- 3.** Click the Accounting Number format command.



- 4.** As you can see, the numbers in column H are too wide for the cells:

H
Sales
#####
#####
#####
#####
#####
#####

5. Double-click the divider between column H and I:



6. Select all of the headers in row 2:

	A	B	C	D	E	F
1	Unit Sales per Region					
2	North	South	East	West	Total units	
3	Product1	12000	45	500	401	12946
4	Product2	2200	2000	700	400	5300
5	Product3	13000	2356	200	4000	19556
6	Product4	12050	2500	500	3030	18080
7	Product5	1600	1860	400	1030	4890

7. Right-click the selected cells, click the pull-down arrow beside the Font Color command on the mini toolbar, and select a dark blue :

South	East	West	Total units	Price per Unit	Sales
45	500	401	12946	50	647300
2000	700	400	5300	55	291500
2356	200	4000	19556	60	1173360
2500	500	3030	18080	65	1175200
1860	400	1030	4890	70	342300

8. Select all the product names and apply bold formatting:

	A	B	C	D	E
1		Unit Sales per Region			
2		North	South	East	West
3	<b>Product1</b>	12000	45	500	
4	<b>Product2</b>	2200	2000	700	
5	<b>Product3</b>	13000	2356	200	
6	<b>Product4</b>	12050	2500	500	
7	<b>Product5</b>	1600	1860	400	

9. Select B3:F7 and then click the Decrease Font Size command:

The screenshot shows the Microsoft Excel ribbon with the 'Font' tab selected. The font dropdown shows 'Calibri' and size '11'. The font style dropdown shows 'A' with a downward arrow, which is highlighted with a red box. A tooltip 'Decrease Font Size' is displayed above the style dropdown, with the sub-instruction 'Make your text a bit smaller.' below it.

	B	C	D	E	F	G
	Unit Sales per Region					
North	South	East	West	Total units	Price per Unit	
12000	45	500	401	12946	50	
2200	2000	700	400	5300	55	
13000	2356	200	4000	19556	60	
12050	2500	500	3030	18080	65	
1600	1860	400	1030	4890	70	

10. Now italicize the selected cells by pressing **Ctrl + I**. Your worksheet should now look like this:

	A	B	C	D	E	F
1		Unit Sales per Region				
2		North	South	East	West	Total units
3	<b>Product1</b>	12000	45	500	401	12946
4	<b>Product2</b>	2200	2000	700	400	5300
5	<b>Product3</b>	13000	2356	200	4000	19556
6	<b>Product4</b>	12050	2500	500	3030	18080
7	<b>Product5</b>	1600	1860	400	1030	4890

11. Save the file as Lesson 4.1 Complete and then close Excel to complete this lesson.

## Skill Sharpener

<b>Objective</b>	To change the text orientation of text in a worksheet.
<b>Briefing</b>	You need to create a personnel worksheet, but some of the titles make the cells too wide.
<b>Task</b>	Open the sample data and rotate the column headings by 45 degrees.
<b>Hints</b>	Use AutoFit to reduce cell size after you have rotated the headings.

### Sample Data



## Lesson A-4.2: Conditional Formatting

When it comes to the quality and clarity of a workbook, layout and appearance both play major roles. Excel features a number of formatting features at your disposal, letting you create practical worksheets with a professional look and feel. This lesson deals with some of the cell formatting tools that can help you present your data in a polished and meaningful way. In this lesson, we will cover conditional formatting and the Format Painter. We will also learn about cell merging, AutoFit, and Find and Replace Formatting.

This feature started out in Excel 2007 then 2010 and now its enhanced in Excel 2013.

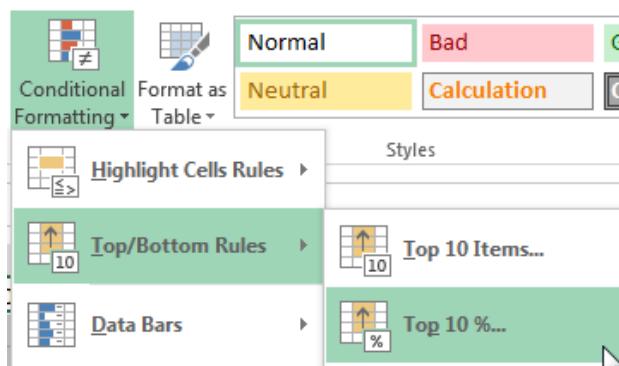
### Step-By-Step

In this exercise you will experiment with some of the more advanced cell formatting commands.

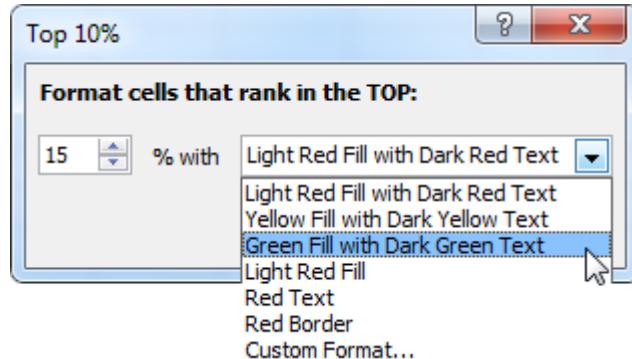
1. Open Lesson 4.2 from the MODULE A-4 folder of your Exercise Files.
  
2. This worksheet contains 10 test scores for 20 students. You want to determine the top and bottom 15% of the marks easily. First, select B2:K21:

A	B	C	D	E	F	G	H	I	J	K	
1	Student Number	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Test 7	Test 8	Test 9	Test 10
2	101234	60	61	62	63	64	65	66	67	68	69
3	101235	80	81	84	67	80	78	76	74	73	70
4	101236	90	92	81	71	61	51	41	42	43	44
5	101237	20	22	78	75	42	53	43	50	50	45
6	101238	95	78	75	79	23	55	45	58	57	46
7	101239	92	79	72	83	40	57	47	66	64	47
8	101240	89	80	69	87	57	59	49	74	71	48
9	101241	86	81	66	91	74	61	51	82	78	49
10	101242	83	82	63	95	91	63	53	95	85	50
11	101243	80	72	60	90	93	65	55	94	92	51
12	101244	77	62	57	85	93	67	57	93	90	52
13	101245	74	52	63	80	70	60	55	92	88	56
14	101246	73	55	69	75	72	65	53	91	86	60
15	101247	78	58	75	70	74	70	51	83	84	64
16	101248	83	61	81	65	76	75	49	75	82	68
17	101249	88	64	87	60	78	80	60	67	80	72
18	101250	93	67	93	55	80	85	71	59	78	76
19	101251	98	70	99	56	82	90	82	51	76	80
20	101252	100	73	78	57	84	95	93	43	74	84
21	101253	100	76	57	58	86	100	100	35	72	88

3. Click Conditional Formatting → Top/Bottom Rules → Top 10%:

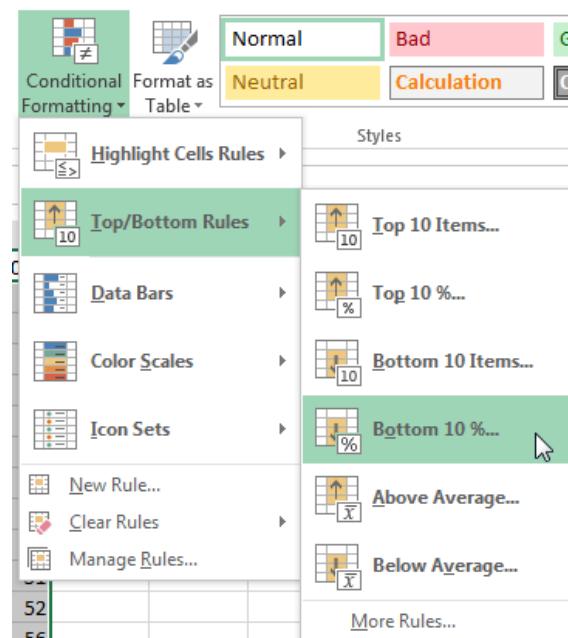


4. The Top 10% dialog box will be displayed. Use the small up/down arrows to reach 15%. Then choose Green Fill with Dark Green Text as the formatting style:



Click OK to continue.

5. Click Conditional Formatting → Top/Bottom Rules → Bottom 10%:



6. When the Bottom 10% dialog box appears, increase the percentage to 15% and leave the default option. Click OK to continue:



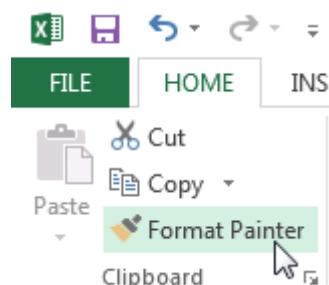
7. Select A2:

	A	B	C	D	E
1	Student Number	Test 1	Test 2	Test 3	Test 4
2	101234	60	61	62	
3	101235	80	81	84	
4	101236	90	92	81	
5	101237	20	22	78	
6	101238	95	78	75	
7	101239	92	79	72	
8	101240	89	80	69	
9	101241	86	81	66	
10	101242	83	82	63	
11	101243	80	72	60	

8. Apply some formatting that makes the text easier to read. Here, we have increased the font size, made the font bold, and added some background shading:

	A
1	Student Number
2	101234

9. Click the Format Painter command:



10. Now click A3:

	A
1	Student Number
2	101234
3	101235

This cell will assume the same formatting as A2.

- 11.** Select A2 or A3 and double-click the Format Painter. Now click each of the remaining student numbers:

	A	B
1	Student Number	Test 1
2	101234	60
3	101235	80
4	101236	90
5	101237	20
6	101238	95
7	101239	92
8	101240	89
9	101241	86
10	101242	83
11	101243	80
12	101244	77
13	101245	74
14	101246	73
15	101247	78
16	101248	83
17	101249	88
18	101250	93
19	101251	98
20	101252	100
21	101253	100

When you have reached the last student number, click the Format Painter command again to turn it off.

- 12.** Your worksheet should now look like this:

	A	B	C	D	E	F	G	H	I	J	K
1	Student Number	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Test 7	Test 8	Test 9	Test 10
2	101234	60	61	62	63	64	65	66	67	68	69
3	101235	80	81	84	67	80	78	76	74	73	70
4	101236	90	92	81	71	61	51	41	42	43	44
5	101237	20	22	78	75	42	53	43	50	50	45
6	101238	95	78	75	79	23	55	45	58	57	46
7	101239	92	79	72	83	40	57	47	66	64	47
8	101240	89	80	69	87	57	59	49	74	71	48
9	101241	86	81	66	91	74	61	51	82	78	49
10	101242	83	82	63	95	91	63	53	95	85	50
11	101243	80	72	60	90	93	65	55	94	92	51
12	101244	77	62	57	85	93	67	57	93	90	52
13	101245	74	52	63	80	70	60	55	92	88	56
14	101246	73	55	69	75	72	65	53	91	86	60
15	101247	78	58	75	70	74	70	51	83	84	64
16	101248	83	61	81	65	76	75	49	75	82	68
17	101249	88	64	87	60	78	80	60	67	80	72
18	101250	93	67	93	55	80	85	71	59	78	76
19	101251	98	70	99	56	82	90	82	51	76	80
20	101252	100	73	78	57	84	95	93	43	74	84
21	101253	100	76	57	58	86	100	100	35	72	88

Save the file as Lesson 4.2 Complete and then close Excel to complete this lesson.

## Skill Sharpener

**Objective**

To understand how to apply conditional formatting.

**Briefing**

You have decided to give all students who scored on average 70% or higher 5 bonus points.

**Task**

Create a new column that finds the average of all test scores for each person. Then apply conditional formatting to this new column of data to determine who has an average of 70% or higher. Save your completed file as Skill Sharpener 4.2 Complete.

**Hints**

You can use the New Rule command found under the Conditional Formatting command.

**Sample Data**

## Lesson A-4.3: Enhancing a Worksheet's Appearance

Up until now, we have been dealing with formatting individual values or ranges of cells. In this lesson, we will learn how to further enhance a worksheet's appearance by applying colours, patterns, borders, and fill effects. We will also learn what styles are and how to use them, and how to roll all of these concepts together by using a theme.

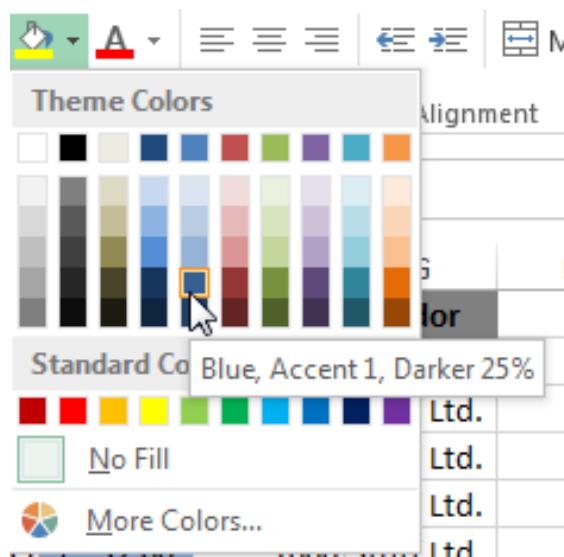
### Step-By-Step

In this exercise, you will enhance a workbook using some colour and formatting.

- 1.** Open Lesson 4.3 from the MODULE A-4 folder of your Exercise Files.
  
- 2.** Select all data under the Rank heading:

	A	B	C	D	E	F	G
1		Name	Rank	Item number	Price	Inventory	Vendor
2		Product1	1	3283	£ 20.00	1000	Stuff Ltd.
3		Product2	2	3241	£ 23.00	1000	Stuff Ltd.
4		Product3	3	3289	£ 26.00	1000	Stuff Ltd.
5		Product4	4	3237	£ 29.00	1000	Stuff Ltd.
6		Product5	5	3235	£ 32.00	1000	Stuff Ltd.
7		Product6	6	3233	£ 35.00	1000	Stuff Ltd.

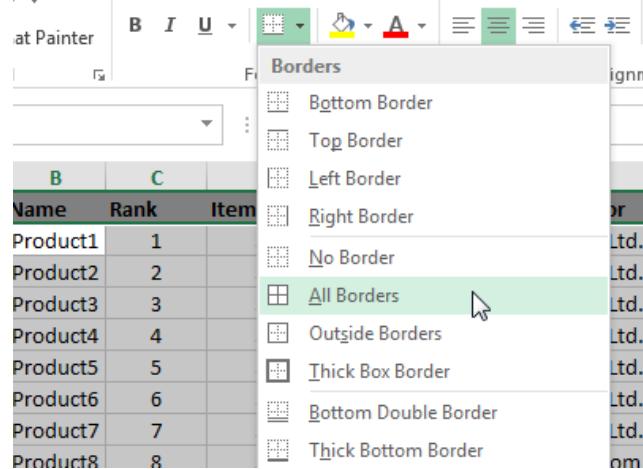
- 3.** Give these cells a darker blue background fill:



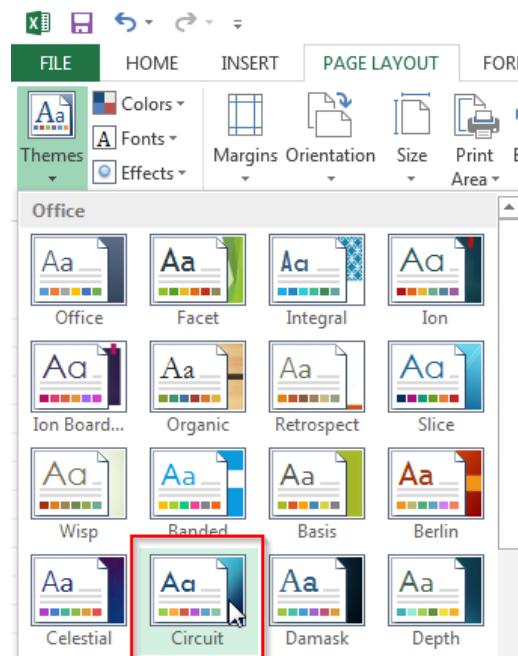
4. Select all data (B2:G31) and center align the data, both horizontally and vertically:



5. With all the data still selected, click the Borders command and select All Borders:



6. Now click Page Layout → Themes → Circuit:



Excel 2013 now has a different set of Theme names so pick another if you do not have this.

7. Your worksheet should now look something like this:

A	B	C	D	E	F	G
1	Name	Rank	Item number	Price	Inventory	Vendor
2	Product1	1	3283	£ 20.00	1000	Stuff Ltd.
3	Product2	2	3241	£ 23.00	1000	Stuff Ltd.
4	Product3	3	3289	£ 26.00	1000	Stuff Ltd.
5	Product4	4	3237	£ 29.00	1000	Stuff Ltd.
6	Product5	5	3235	£ 32.00	1000	Stuff Ltd.
7	Product6	6	3233	£ 35.00	1000	Stuff Ltd.
8	Product7	7	3231	£ 18.00	1000	Stuff Ltd.
9	Product8	8	3289	£ 16.00	1000	Fict.com
10	Product9	9	3250	£ 14.00	1500	Fict.com
11	Product10	10	3282	£ 12.00	1500	Fict.com
12	Product11	11	3254	£ 10.00	1500	Fict.com
13	Product12	12	3256	£ 8.00	1500	Fict.com
14	Product13	13	3288	£ 12.00	1500	Fict.com
15	Product14	14	3280	£ 16.00	1500	Fict.com
16	Product15	15	3262	£ 20.00	1500	Fict.com
17	Product16	16	3264	£ 24.00	1500	Fict.com
18	Product17	17	3278	£ 28.00	1800	Fict.com
19	Product18	18	3279	£ 32.00	1800	JBC Inc.
20	Product19	19	3280	£ 36.00	1800	JBC Inc.
21	Product20	20	3281	£ 40.00	1800	JBC Inc.
22	Product21	21	3282	£ 44.00	1800	JBC Inc.
23	Product22	22	3283	£ 55.00	1800	JBC Inc.
24	Product23	23	3240	£ 59.00	1800	JBC Inc.
25	Product24	24	3241	£ 51.00	1800	JBC Inc.
26	Product25	25	3242	£ 43.00	2200	JBC Inc.
27	Product26	26	3243	£ 35.00	2200	JBC Inc.
28	Product27	27	3244	£ 27.00	2200	JBC Inc.
29	Product28	28	3285	£ 19.00	2200	JBC Inc.
30	Product29	29	3246	£ 11.00	2200	JBC Inc.
31	Product30	30	3247	£ 3.00	2200	JBC Inc.

8. Save the file as Lesson 4.3 Complete and then close Excel to complete this lesson.

## Skill Sharpener

<b>Objective</b>	To become familiar with using themes in Excel.
<b>Briefing</b>	A friend has asked for help with making a worksheet look more attractive when printed.
<b>Task</b>	<p>Open the sample data file and try applying different themes. Are any applied to the document?</p> <p>Close the worksheet without saving any changes and then open it again. This time, apply some background fills to the headings and rows of data and then try applying different themes. How do the themes affect the styles that have already been added?</p>

### Sample Data

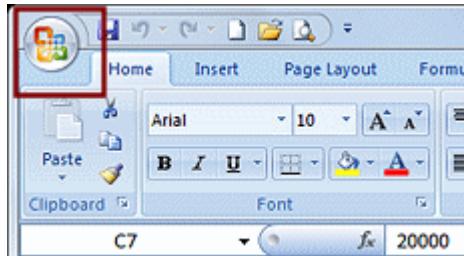


## 5. MODULE XL7-A-5: Printing and Viewing your Workbook

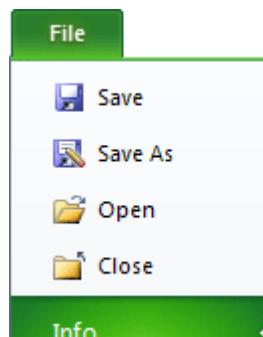
**In this module you will learn how to:**

- Use Normal view, Page Break Preview, Page Layout view, and Ribbon Display options
- Manage a single window
- Create, hide, or unhide a window
- Freeze a pane
- Split a worksheet to view multiple areas at once
- Manage multiple windows
- Switch between open workbooks
- Arrange windows
- Compare workbooks side by side
- Reset windows
- Use synchronous scrolling
- Save a workspace
- Print your workbook
- Use Print Preview
- Set printer options

**Please note:** One key difference between Excel 2007 and later versions is the File tab. Excel 2007 uses the Office button in the top-left corner of the screen. The vast majority of the tools (and certainly the ones used in this course) are identical so you should be able to follow without any issue. For example, where you see File > Save As, 2007 users will need to go to the Office Button > Save As.



Office Button in Excel 2007



File tab in recent versions

## Lesson A-5.1: Using the View Tab

Excel has a number of different view options that make viewing your workbook easier in certain situations. For example, if you are ready to print, you probably don't want to view your workbook as a normal spreadsheet because it can be hard to tell exactly where your printed pages will begin and end. Sometimes, you may want to view a larger portion of the grid area, or you may want to view several spreadsheet pages at once. In this lesson, we will explore the different commands on the View tab.

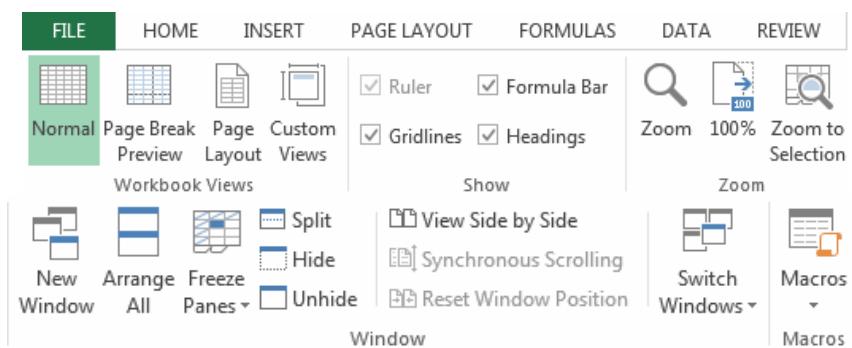
### Step-By-Step

In this exercise you will practice using the different views available in Excel.

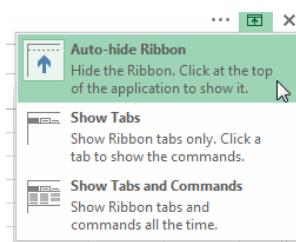
1. Open Lesson 5.1 from the MODULE A-5 folder of your Exercise Files:



2. Click the View tab:



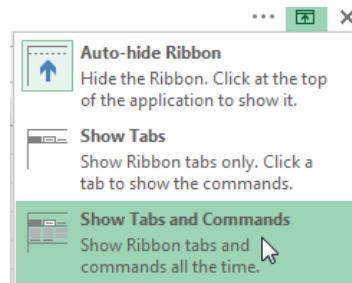
3. In Excel 2013 click Auto-hide Ribbon at the top right of the screen as below to hide the menus. In older versions double click any Tab name.



- 4.** This command allows you to see a lot more data at once:

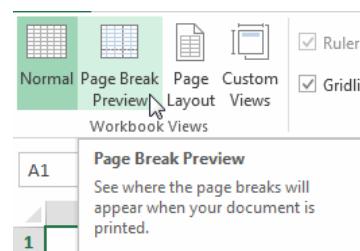
	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Rain fall	Average Temp	Wind Direction	Observation point	Rain fall	Average Temp	Wind Direction	Observation point	Rain fall	Average Temp	Wind Direction	Observation point	Rain fall	Average Temp
3	Jan	1	28	East	Station1	1	28	East	Station1	1	28	East	Station1	
4	Feb	2	23	East	Station1	2	23	East	Station1	2	23	East	Station1	
5	Mar	3.5	24	East	Station1	3.5	24	East	Station1	3.5	24	East	Station1	
6	Apr	2.7	25	East	Station2	2.7	25	East	Station2	2.7	25	East	Station2	
7	May	1.9	26	East	Station1	1.9	26	East	Station1	1.9	26	East	Station1	
8	Jun	1.1	27	East	Station2	1.1	27	East	Station2	1.1	27	East	Station2	
9	Jul	0.3	28	East	Station1	0.3	28	East	Station1	0.3	28	East	Station1	
10	Aug	1	27.5	East	Station1	1	27.5	East	Station1	1	27.5	East	Station1	
11	Sep	1.7	27	East	Station1	1.7	27	East	Station1	1.7	27	East	Station1	
12	Oct	2.4	26.5	East	Station1	2.4	26.5	East	Station1	2.4	26.5	East	Station1	
13	Nov	3.1	26	East	Station2	3.1	26	East	Station2	3.1	26	East	Station2	
14	Dec	3.8	25.5	South	Station1	3.8	25.5	South	Station1	3.8	25.5	South	Station1	
15	Jan	4.5	25	South	Station2	4.5	25	South	Station2	4.5	25	South	Station2	
16	Feb	5.2	24.5	South	Station1	5.2	24.5	South	Station1	5.2	24.5	South	Station1	
17	Mar	5.9	24	South	Station1	5.9	24	South	Station1	5.9	24	South	Station1	
18	Apr	6.6	23.5	South	Station1	6.6	23.5	South	Station1	6.6	23.5	South	Station1	
19	May	7.3	23	South	Station1	7.3	23	South	Station1	7.3	23	South	Station1	
20	Jun	8	23.2	South	Station2	8	23.2	South	Station2	8	23.2	South	Station2	
21	Jul	8.7	23.4	Southeast	Station1	8.7	23.4	Southeast	Station1	8.7	23.4	Southeast	Station1	
22	Aug	9	23.6	Southeast	Station2	9	23.6	Southeast	Station2	9	23.6	Southeast	Station2	
23	Sep	9	23.8	Southeast	Station1	9	23.8	Southeast	Station1	9	23.8	Southeast	Station1	
24	Oct	9	24	Southeast	Station1	9	24	Southeast	Station1	9	24	Southeast	Station1	
25	Nov	3	24.2	Southeast	Station1	3	24.2	Southeast	Station1	3	24.2	Southeast	Station1	
26	Dec	3	24.4	North	Station1	3	24.4	North	Station1	3	24.4	North	Station1	
27	Jan	3	30	North	Station2	3	30	North	Station2	3	30	North	Station2	
28	Feb	3	30	North	Station1	3	30	North	Station1	3	30	North	Station1	
29	Mar	3	30	North	Station2	3	30	North	Station2	3	30	North	Station2	
30	Apr	3	30	North	Station1	3	30	North	Station1	3	30	North	Station1	

Click Show Tabs and Commands to return to the menus.

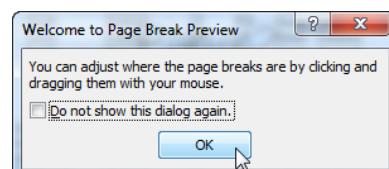


In 2007 & 2010 double click a tab name to lock it back in place.

- 5.** Click the Page Break Preview command:



- 6.** If you see the Welcome to Page Break Preview dialog appear, click OK to close it:



If you do not see this dialog, just proceed to the next step.

7. As you can see, there is a dotted blue line that shows where the page break will occur. Currently, it is in the middle of all data, but this split occurs down the middle of Cycle2:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N		
1	Cycle1															
2	Rain fall	Average Temp	Wind Direction	Observation point	Rain fall	Average Temp	Wind Direction	Observation point	Rain fall	Average Temp	Wind Direction	Observation point	Rain fall	Average Temp	Wind Direction	Observation point
3	Jan	1	28	East	Station1	1	28	East	Station1	1	28	East	Station1			
4	Feb	2	23	East	Station1	2	23	East	Station1	2	23	East	Station1			
5	Mar	3.5	24	East	Station1	3.5	24	East	Station1	3.5	24	East	Station1			
6	Apr	2.7	25	East	Station2	2.7	25	East	Station2	2.7	25	East	Station2			
7	May	1.9	26	East	Station1	1.9	26	East	Station1	1.9	26	East	Station1			
8	Jun	11	27	East	Station2	11	27	East	Station2	11	27	East	Station2			
9	Jul	0.3	28	East	Station1	0.3	28	East	Station1	0.3	28	East	Station1			
10	Aug	1	27.5	East	Station1	1	27.5	East	Station1	1	27.5	East	Station1			
11	Sep	17	27	East	Station1	17	27	East	Station1	17	27	East	Station1			
12	Oct	2.4	26.5	East	Station1	2.4	26.5	East	Station1	2.4	26.5	East	Station1			
13	Nov	3.1	26	East	Station2	3.1	26	East	Station2	3.1	26	East	Station2			
14	Dec	3.8	25.5	South	Station1	3.8	25.5	South	Station1	3.8	25.5	South	Station1			
15	Jan	4.5	25	South	Station2	4.5	25	South	Station2	4.5	25	South	Station2			
16	Feb	5.2	24.5	South	Station1	5.2	24.5	South	Station1	5.2	24.5	South	Station1			
17	Mar	5.9	24	South	Station1	5.9	24	South	Station1	5.9	24	South	Station1			
18	Apr	6.6	23.5	South	Station1	6.6	23.5	South	Station1	6.6	23.5	South	Station1			
19	May	7.3	23	South	Station1	7.3	23	South	Station1	7.3	23	South	Station1			
20	Jun	8	23.2	South	Station2	8	23.2	South	Station2	8	23.2	South	Station2			
21	Jul	8.7	23.4	Southeast	Station1	8.7	23.4	Southeast	Station1	8.7	23.4	Southeast	Station1			
22	Aug	9	23.6	Southeast	Station2	9	23.6	Southeast	Station2	9	23.6	Southeast	Station2			
23	Sep	9	23.8	Southeast	Station1	9	23.8	Southeast	Station1	9	23.8	Southeast	Station1			
24	Oct	9	24	Southeast	Station1	9	24	Southeast	Station1	9	24	Southeast	Station1			
25	Nov	3	24.2	Southeast	Station1	3	24.2	Southeast	Station1	3	24.2	Southeast	Station1			
26	Dec	3	24.4	North	Station1	3	24.4	North	Station1	3	24.4	North	Station1			
27	Jan	3	30	North	Station2	3	30	North	Station2	3	30	North	Station2			
28	Feb	3	30	North	Station1	3	30	North	Station1	3	30	North	Station1			
29	Mar	3	30	North	Station2	3	30	North	Station2	3	30	North	Station2			
30	Apr	3	30	North	Station1	3	30	North	Station1	3	30	North	Station1			

Click and drag the dotted blue line to between column E and F:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N		
1	Cycle1															
2	Rain fall	Average Temp	Wind Direction	Observation point	Rain fall	Average Temp	Wind Direction	Observation point	Rain fall	Average Temp	Wind Direction	Observation point	Rain fall	Average Temp	Wind Direction	Observation point
3	Jan	1	28	East	Station1	1	28	East	Station1	1	28	East	Station1			
4	Feb	2	23	East	Station1	2	23	East	Station1	2	23	East	Station1			
5	Mar	3.5	24	East	Station1	3.5	24	East	Station1	3.5	24	East	Station1			
6	Apr	2.7	25	East	Station2	2.7	25	East	Station2	2.7	25	East	Station2			
7	May	1.9	26	East	Station1	1.9	26	East	Station1	1.9	26	East	Station1			

8. Your worksheet will now look like this:

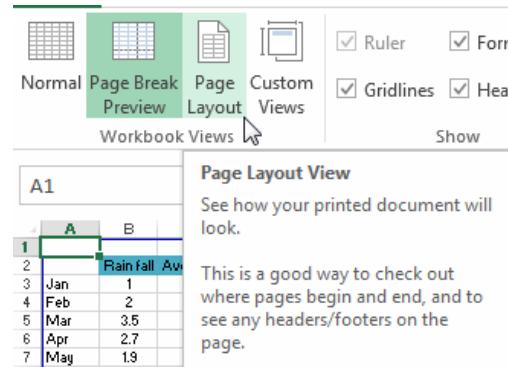
	A	B	C	D	E	F	G	H	I	J	K	L	M	N		
1	Cycle1															
2	Rain fall	Average Temp	Wind Direction	Observation point	Rain fall	Average Temp	Wind Direction	Observation point	Rain fall	Average Temp	Wind Direction	Observation point	Rain fall	Average Temp	Wind Direction	Observation point
3	Jan	1	28	East	Station1	1	28	East	Station1	1	28	East	Station1			
4	Feb	2	23	East	Station1	2	23	East	Station1	2	23	East	Station1			
5	Mar	3.5	24	East	Station1	3.5	24	East	Station1	3.5	24	East	Station1			
6	Apr	2.7	25	East	Station2	2.7	25	East	Station2	2.7	25	East	Station2			
7	May	1.9	26	East	Station1	1.9	26	East	Station1	1.9	26	East	Station1			

A new blue dotted line has appeared on the right. Click and drag this line between columns I and J:

	H	I	J	K	L	M	N											
1	Cycle2																	
2	Mind Director	Observation point	Rain fall	Average Temp	Wind Dir	Observation point	Rain fall	Average Temp	Wind Direction	Observation point	Rain fall	Average Temp	Wind Direction	Observation point	Rain fall	Average Temp	Wind Direction	Observation point
3	East	Station1	1	28	East	Station1												
4	East	Station1	2	23	East	Station1												
5	East	Station1	3.5	24	East	Station1												
6	East	Station2	2.7	25	East	Station2												
7	East	Station1	1.9	26	East	Station1												
8	East	Station2	1	27	East	Station2												
9	East	Station1	0.3	28	East	Station1												
10	East	Station1	1	27.5	East	Station1												



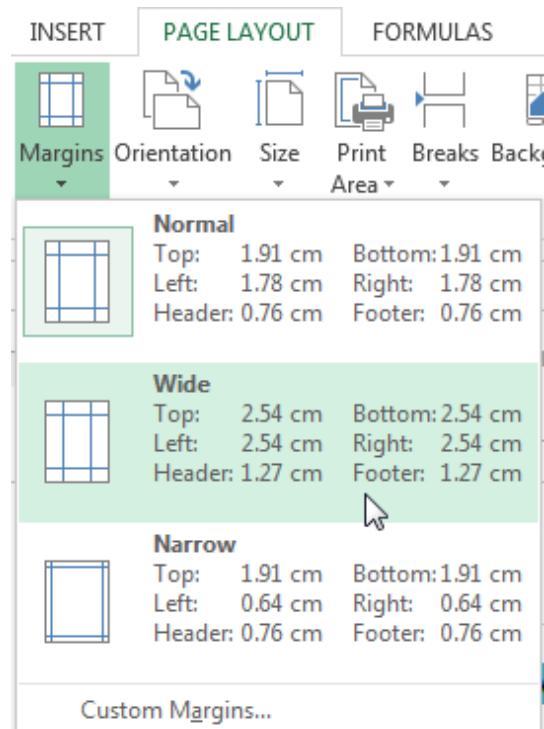
9. All three cycles are now on separate pages. Next, click the Page Layout command:



10. Use the Zoom controls to zoom out until you can see all three pages. Click and drag the Zoom slider or click the – sign to zoom out:



11. Click Page Layout → Margins → Wide:



12. Your worksheet should now look like this:

ID	Name	Club	Address
1	John	Golf	St. John's
2	Paul	Golf	St. Paul's
3	George	Golf	St. George's
4	Ringo	Golf	St. Ringo's
5	Yoko	Golf	St. Yoko's
6	John	Soccer	St. John's
7	Paul	Soccer	St. Paul's
8	George	Soccer	St. George's
9	Ringo	Soccer	St. Ringo's
10	Yoko	Soccer	St. Yoko's
11	John	Football	St. John's
12	Paul	Football	St. Paul's
13	George	Football	St. George's
14	Ringo	Football	St. Ringo's
15	Yoko	Football	St. Yoko's
16	John	Hockey	St. John's
17	Paul	Hockey	St. Paul's
18	George	Hockey	St. George's
19	Ringo	Hockey	St. Ringo's
20	Yoko	Hockey	St. Yoko's
21	John	Swim	St. John's
22	Paul	Swim	St. Paul's
23	George	Swim	St. George's
24	Ringo	Swim	St. Ringo's
25	Yoko	Swim	St. Yoko's
26	John	Run	St. John's
27	Paul	Run	St. Paul's
28	George	Run	St. George's
29	Ringo	Run	St. Ringo's
30	Yoko	Run	St. Yoko's

Save the file as Lesson 5.1 Complete and then close Excel to complete this lesson.



## Skill Sharpener

**Objective** To understand how to use Page Layout View and Page Break Preview to prepare a worksheet for printing.

**Briefing** You have been given a worksheet to split up for effective printing.

**Task** Open the sample data and adjust the margins and page breaks to prepare a document for printing.

**Hints** Use page breaks to logically split up the data. Don't split the pages in the middle of a group of data.

**Sample Data**



## Lesson A-5.2: Managing a Single Window

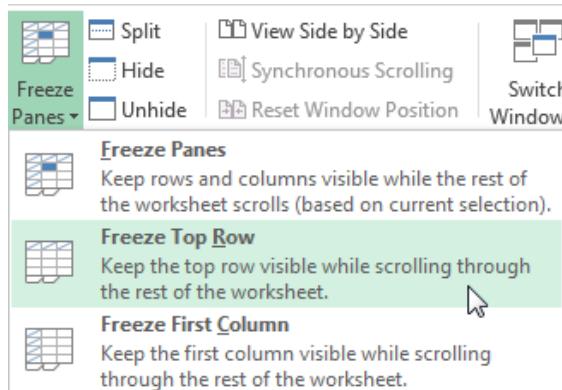
When you open a workbook in Excel, the actual working area (the cells) is defined as its own region. This working area is bounded by a border and can be minimized, closed, or resized independently of the Excel program itself. This self-contained working area is a window inside Excel.

You can have multiple windows for the same workbook open at the same time, or multiple windows representing different workbooks open at the same time. In this lesson, we will learn how to create a new window, hide a window, unhide a window, and how to freeze panes in a window.

### Step-By-Step

In this exercise you will practice using some of the view controls.

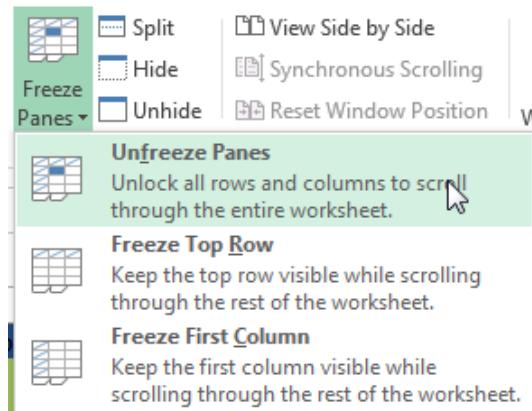
1. Open Lesson 5.2 from the MODULE A-5 folder of your Exercise Files.
  
2. Click View → Freeze Panes → Freeze Top Row:



3. A thin black line will appear beneath the first row of data. Scroll up and down through the data in the worksheet. As you do, the first row will remain fixed:

	A	B	C	D	E
1				Cycle 1	
17	Mar	5.9	24	South	Station1
18	Apr	6.6	23.5	South	Station1
19	May	7.3	23	South	Station1
20	Jun	8	23.2	South	Station2
21	Jul	8.7	23.4	Southeast	Station1
22	Aug	9	23.6	Southeast	Station2
23	Sep	9	23.8	Southeast	Station1
24	Oct	9	24	Southeast	Station1

4. Click Freeze Panes → Unfreeze Panes to continue:

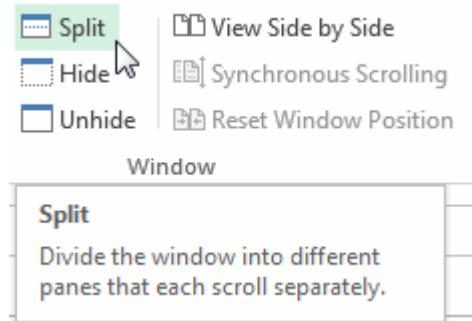


5. Now click cell F19 and click Freeze Panes → Freeze Panes:

6. This will add a thin line between columns E and F, and between rows 18 and 19, separating the worksheet into scrollable areas. Experiment by clicking inside each of the areas; what data can be scrolled and what remains fixed?

A	B	C	D	E	F	G	H	I	
	Cycle 1				Cycle2				
1	2	Rain fall	Average Temp	Wind Direction	Observation point	Rain fall	Average Temp	Wind Direction	Observation point
3	Jan	1	28	East	Station1	1	28	East	Station1
4	Feb	2	23	East	Station1	2	23	East	Station1
5	Mar	3.5	24	East	Station1	3.5	24	East	Station1
6	Apr	2.7	25	East	Station2	2.7	25	East	Station2
7	May	1.9	26	East	Station1	1.9	26	East	Station1
8	Jun	1.1	27	East	Station2	1.1	27	East	Station2
9	Jul	0.3	28	East	Station1	0.3	28	East	Station1
10	Aug	1	27.5	East	Station1	1	27.5	East	Station1
11	Sep	1.7	27	East	Station1	1.7	27	East	Station1
12	Oct	2.4	26.5	East	Station1	2.4	26.5	East	Station1
13	Nov	3.1	26	East	Station2	3.1	26	East	Station2
14	Dec	3.8	25.5	South	Station1	3.8	25.5	South	Station1
15	Jan	4.5	25	South	Station2	4.5	25	South	Station2
16	Feb	5.2	24.5	South	Station1	5.2	24.5	South	Station1
17	Mar	5.9	24	South	Station1	5.9	24	South	Station1
18	Apr	6.6	23.5	South	Station1	6.6	23.5	South	Station1
19	May	7.3	23	South	Station1	7.3	23	South	Station1
20	Jun	8	23.2	South	Station2	8	23.2	South	Station2

7. Unfreeze the panes, click F19 again, and click the Split command:



8. Experiment with horizontal and vertical scrolling in the different panes:

	A	B	C	D	E	F	G	H	I	J	K	L
19	May	7.3	23	South	Station1	7.3	23	South	Station1	7.3	23	South
20	Jun	8	23.2	South	Station2	8	23.2	South	Station2	8	23.2	South
21	Jul	8.7	23.4	Southeast	Station1	8.7	23.4	Southeast	Station1	8.7	23.4	Southeast
22	Aug	9	23.6	Southeast	Station2	9	23.6	Southeast	Station2	9	23.6	Southeast
23	Sep	9	23.8	Southeast	Station1	9	23.8	Southeast	Station1	9	23.8	Southeast
24	Oct	9	24	Southeast	Station1	9	24	Southeast	Station1	9	24	Southeast
25	Nov	3	24.2	Southeast	Station1	3	24.2	Southeast	Station1	3	24.2	Southeast
26	Dec	3	24.4	North	Station1	3	24.4	North	Station1	3	24.4	North
27	Jan	3	30	North	Station2	3	30	North	Station2	3	30	North
28	Feb	3	30	North	Station1	3	30	North	Station1	3	30	North
29	Mar	3	30	North	Station2	3	30	North	Station2	3	30	North
30	Apr	3	30	North	Station1	3	30	North	Station1	3	30	North
31												
32												
33												
34												
35												
36												
1					Cycle 1				Cycle2			Cycle3
2					Rain fall	Average Temp.	Wind Direction	Observation point	Rain fall	Average Temp.	Wind Direction	
3	Jan	1	28	East	Station1	1	28	East	Station1	1	28	East
4	Feb	2	23	East	Station1	2	23	East	Station1	2	23	East
5	Mar	3.5	24	East	Station1	3.5	24	East	Station1	3.5	24	East
6	Apr	2.7	25	East	Station2	2.7	25	East	Station2	2.7	25	East
7	May	1.9	26	East	Station1	1.9	26	East	Station1	1.9	26	East

9. Save the file as Lesson 5.2 Complete and then close Excel to complete this lesson.

## Skill Sharpener

<b>Objective</b>	To understand how to use the split feature.
<b>Briefing</b>	You need to examine a large worksheet and want to use something other than the Freeze Panes command.
<b>Task</b>	Open the sample data and use the Split command. Practice moving the split and scrolling around in the worksheet while using the split.
<b>Hints</b>	Remember that the active cell provides the start for the split.

**Sample Data**

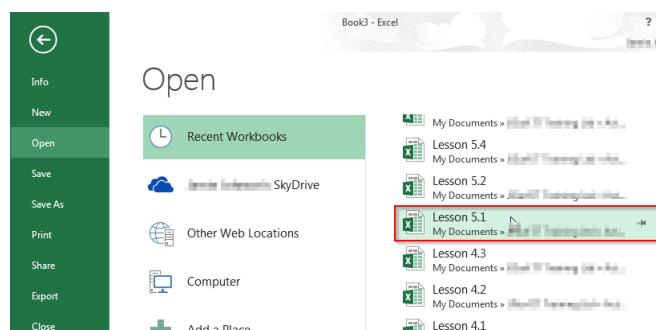
## Lesson A-5.3: Managing Multiple Windows

If you find that you frequently open a number of workbooks at the same time, Excel has some useful features that may help you manage your windows and workbooks. In this lesson, you will learn how to switch between open workbooks, how to arrange workbooks, how to compare workbooks side by side, and how to reset a window.

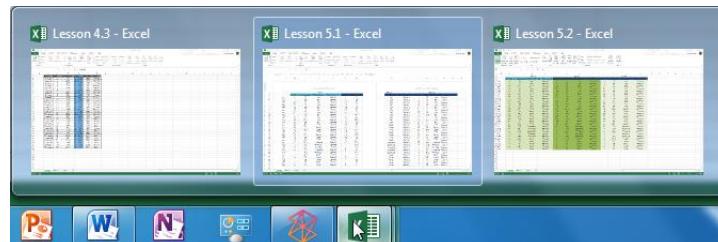
### Step-By-Step

In this exercise, you will practice using multiple workbooks.

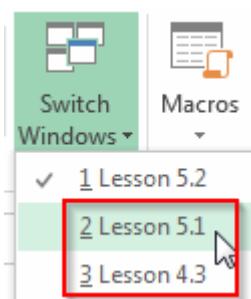
1. Open Excel, click File → Open, →Recent and then open a file (Office Button > Open will display recent files):



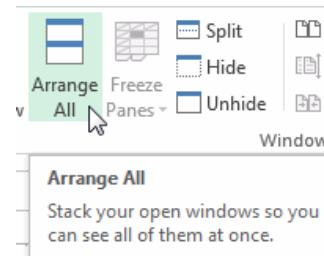
2. Repeat this process until you have three open files:



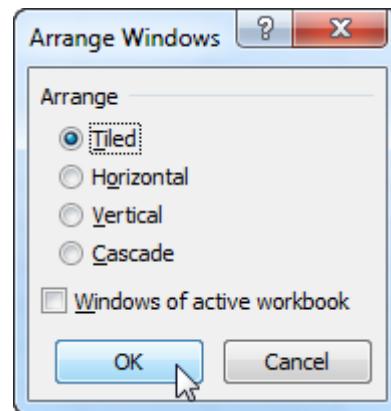
3. Click View → Switch Windows and select a workbook that does not currently have the checkmark beside it:



4. Whichever file you have selected will become visible. Now click Arrange All:



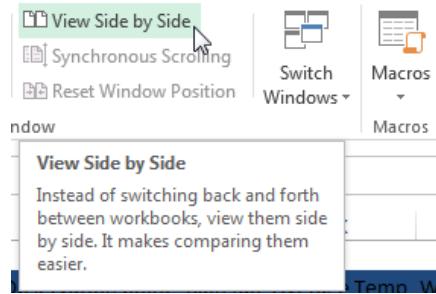
5. When the Arrange Windows dialog appears, make sure Tiled is selected and then click OK:



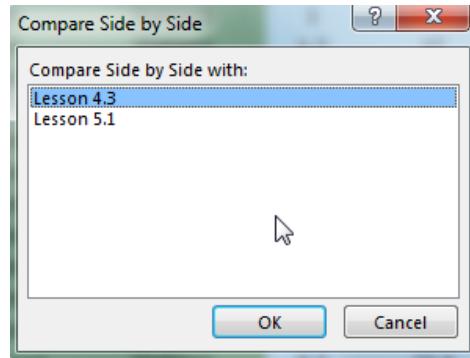
6. All open Excel files will arrange themselves within your screen; each file has the menu available within its own window.

	Name	Rank	Item number	Price	Inventory	Vendor
1	Product1	1	3283	€ 20.00	1000	Stuff It!
2	Product2	2	3284	€ 20.00	1000	Stuff It!
3	Product3	3	3285	€ 24.00	1000	Stuff It!
4	Product4	4	3286	€ 29.00	1000	Stuff It!
5	Product5	5	3285	€ 32.00	1000	Stuff It!
6	Product6	6	3287	€ 32.00	1000	Stuff It!
7	Product7	7	3281	€ 18.00	1000	Stuff It!
8	Product8	8	3289	€ 16.00	1000	Fict.com
9	Product9	9	3290	€ 14.00	1500	Fict.com
10	Product10	10	3291	€ 10.00	1500	Fict.com
11	Product11	11	3294	€ 10.00	1500	Fict.com
12	Product12	12	3296	€ 8.00	1500	Fict.com

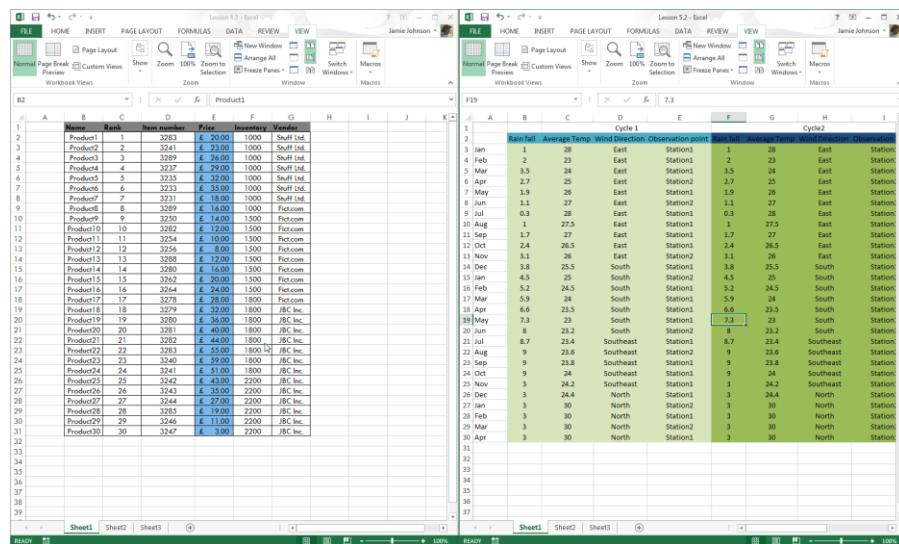
7. Now click the View Side by Side command:



8. When the Compare Side by Side dialog appears, select a worksheet to compare with whichever workbook is currently active in Excel and click OK:  
e.g. 4.3 to 5.2



9. You may want to drag the windows into the left of the screen and to the right of the screen to position it better for synchronous scrolling.



10. Close Excel to complete this lesson. If you are prompted to save any changes, click Don't Save.

## Skill Sharpener

<b>Objective</b>	To understand how to create and save a workspace.
<b>Briefing</b>	You have been assigned the task of comparing a number of worksheets at the same time to look for patterns.
<b>Task</b>	Open Excel and maximize the window. Next, open four different worksheets. Using what you know about window management, arrange the four files in a manner which compliments the file. When all four files have been arranged, save the workspace.
<b>Hints</b>	If a file only contains a small amount of data, you won't need to give it a lot of space. Try using splits and frozen panes to help.
<b>Sample Data</b>	Browse through your Exercise Files folder and use any files you like.

## Lesson A-5.4: Printing your Workbook

It is often the case that printouts of your workbook (or parts of your workbook) will be required for one purpose or another. This is especially true for the workplace, where hard copies of data are often requested. Needless to say, knowing how to print data from your workbook is essential. In this final lesson, we will explore how to use the printing functionality in Excel.

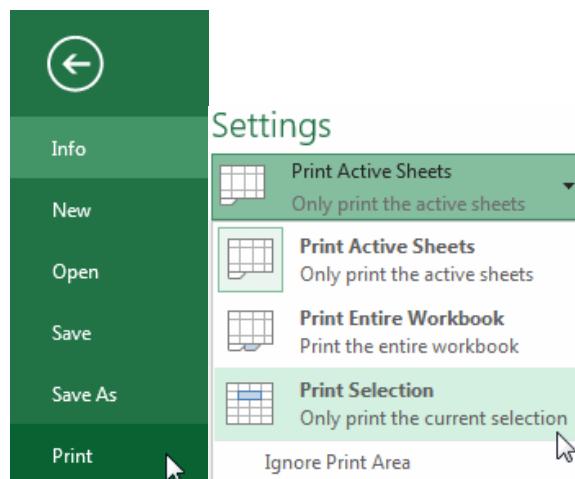
### Step-By-Step

In this exercise you will prepare a selected area and a simple spreadsheet for printing.

- 1.** Open Lesson 5.4 from the MODULE A-5 folder of your Exercise Files.
  
- 2.** Select A1:D10:

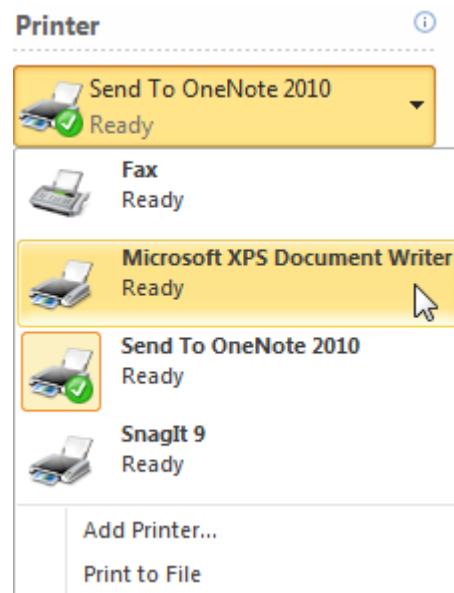
	A	B	C	D
1	Player Name	Points	Rank	Team Name
2	Bob	40	4	Tigers
3	Jim	30	5	Jets
4	Sarah	24	6	Rockets
5	Will	60	2	Rockets
6	Jack	50	3	Jets
7	Nancy	20	7	Tigers
8	Lisa	100	1	Jets
9	Ed	15	8	Rockets
10	Fred	11	9	Tigers

- 3.** Click File → Print and choose to print only the selected data:

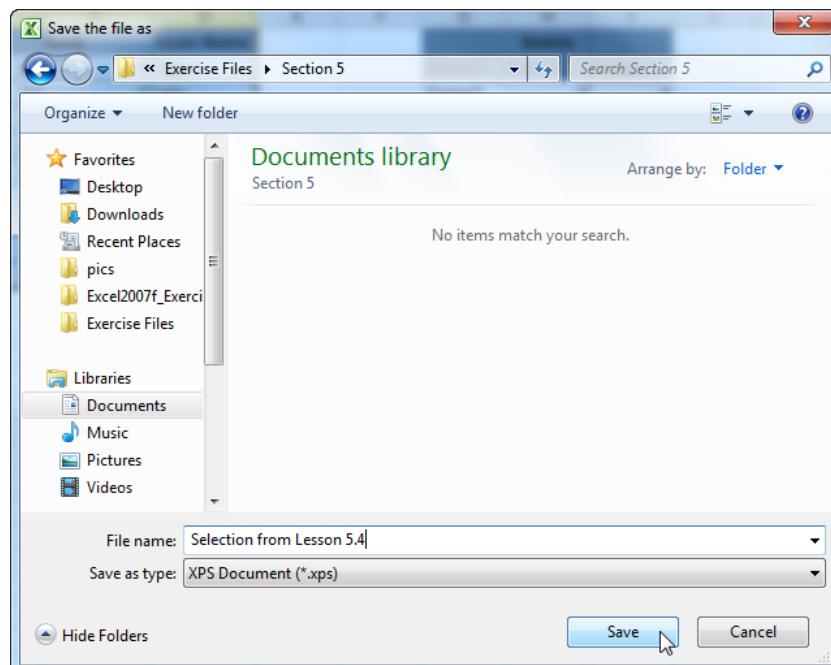


Excel 2007 uses Office Button > Print then you choose Print, Quickprint or Print Preview.

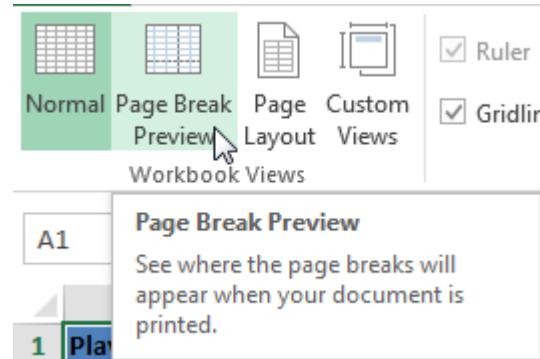
4. Select the Microsoft XPS Document Writer as the printer. (If you do not have this soft printer installed, skip to step 6.)



5. Click Print. This action will prompt you with the Save As dialog. In order to “print” this file, the XPS document writer will save your selection in an individual .xps file. Browse to the MODULE A-5 folder of your Exercise Files and name the file “Selection from Lesson 5.4”:



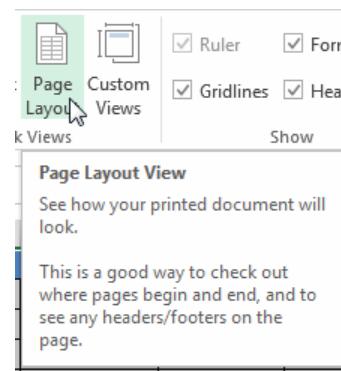
6. Click View → Page Break Preview:



7. If the Welcome to Page Break Preview dialog appears, click OK to close it. Adjust the page break to separate columns I and J between pages:

	A	B	C	D	E	F	G	H	I
1	Player Name	Points	Rank	Team Name					Scores
2	Bob	40	4	Tigers					Game1
3	Jim	30	5	Jets					Home
4	Sarah	24	6	Rockets					Away
5	Will	60	2	Rockets					Game2
6	Jack	50	3	Jets					3
7	Nancy	20	7	Tigers					4
8	Lisa	100	1	Jets					Game3
9	Ed	15	8	Rockets					5
10	Fred	11	9	Tigers					Game4
11									3
12									4
13									Game5
14									2
15									Game6
16									6
17									Game7
18									5
19									Game8
20									2
21									Game9
22									6

8. Click Page Layout:



- 9.** At the top of the page, click the area that says “Click to add header.”

A	B	C	D	E	F	G	H	I
Click to add header								
Player Name	Points	Rank	Team Name					
Bob	40	4	Tigers					

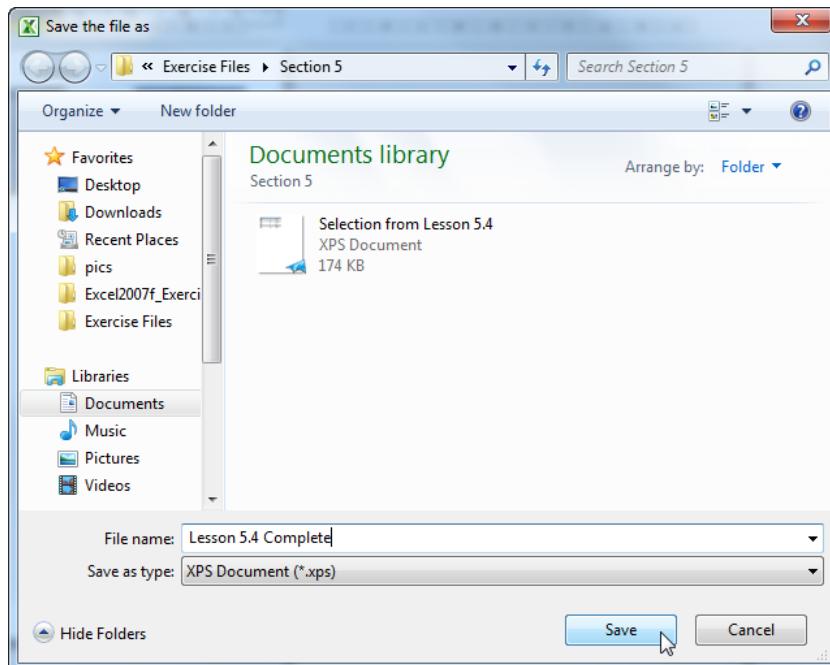
- 10.** Type “Sports Stats” as the header and then scroll to the bottom of the first page:

- ## **11.** Add “Our League” as the footer:

Our League

- 12.** Zoom out until you can see the entire page:

13. Click File → Print and using the Microsoft XPS Document Printer, print the whole page. Name the .xps file “Lesson 5.4 Complete.” (If you do not have a soft printer installed, advance to the next step.)



14. Save the file as Lesson 5.4 Complete and then close Excel to complete this lesson.

## Lesson A-5.5: Print Page Layout options

Printing from Excel used to cause real problems but not any longer with Excel 2013 its so much easier to sort out alignment issues, making sure all the data fits on the required pages, repeated headings as needed in larger printouts, scaling issues etc.

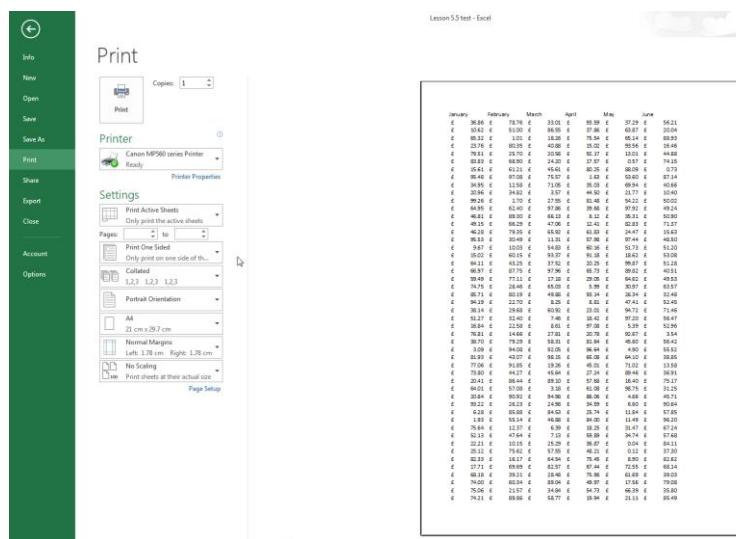
In File Print you can now see the preview directly and also adjust the Printer settings, Page settings, number of copies needed, which Printer to send the print to.

Excel doesn't really conform to A4 paper size but we can certainly help it by making your prints easy to read and well laid out. Nothing worse than not being able to read printouts or it's unclear as to what the data is saying to you.

### Step by Step

1. Open Lesson 5.5 from the MODULE A5 folder

2. This is ready for printing, go to File → Print and examine the Preview.

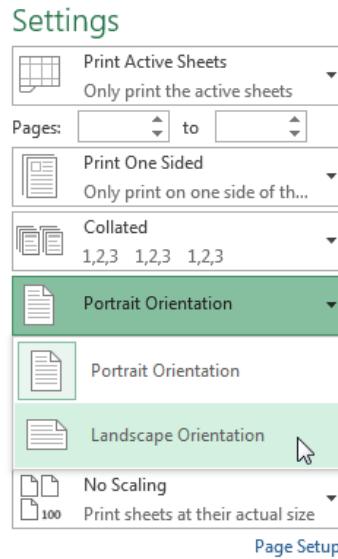


3. What's wrong with this preview? Well it won't fit onto 1 page that's for sure. We will need to resolve some issues by using some of the print page layout options.

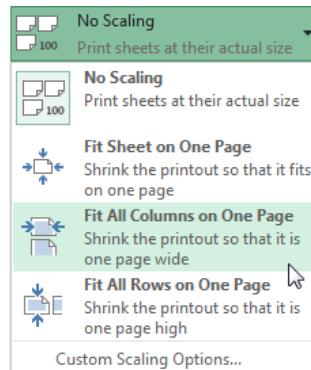
In Excel 2013 & 2010 the Print and Print Preview options have been combined together in a nice easy to use window.

Excel 2007 uses an older Print Preview mode but is fairly similar. You have to come out of this mode to get back to your data.

4. Firstly change the Page Orientation to Landscape, maybe that will allow us to fit the headings across the top of the page.

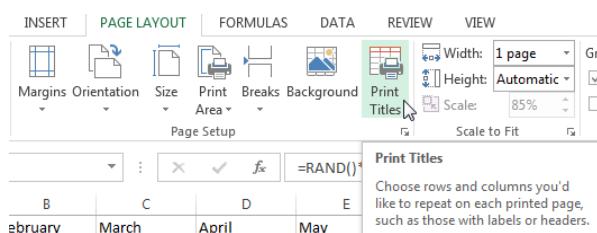


5. This still didn't solve the issue, what we can try next is to select the Scaling options and choose

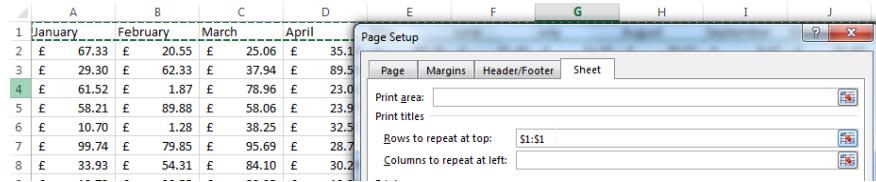


6. This will fit Jan to Dec across the page in Landscape mode but now its still across multiple pages. That's ok as it would be too small to read trying to squeeze it onto 1 page. If we could repeat the titles across every page then that will help.

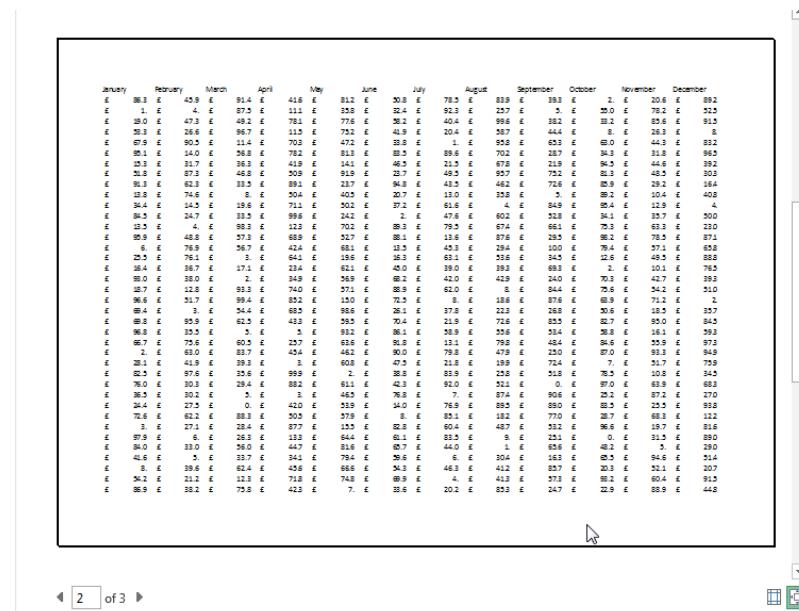
7. Click the back arrow to go to the Excel tabs and select Page Layout, select Print Titles to select the area to repeat.



- 8.** Select Rows to repeat at top and select row 1 back on the data sheet, this will put \$1:\$1 into the box for you. Click Print Preview.



- 9.** Check that the headings are now repeated on page 2 and 3.



- 10.** Save the file as Lesson 5.5 Complete

## Skill Sharpener

<b>Objective</b>	To understand how to set up a worksheet for printing.
<b>Briefing</b>	You have been asked to print a worksheet.
<b>Task</b>	Open the sample data file and examine it using the view commands. After viewing the file, adjust the page breaks in a way that makes sense. Print the file or use the Microsoft XPS Document Printer and save the file as Skill Sharpener 5.4 Complete.

**Sample Data**

## 6. MODULE XL7-A-6: Working with Charts

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**In this module you will learn how to:**

- Create and format charts
- Enhance charts with drawing tools
- Change the chart type
- Change the source data for a chart
- Work with chart axes and data series
- Save a chart style/layout as a template
- Change the layout of a chart
- Change the formatting of a chart

## Lesson A-6-1: Using Recommended and Standard Charts

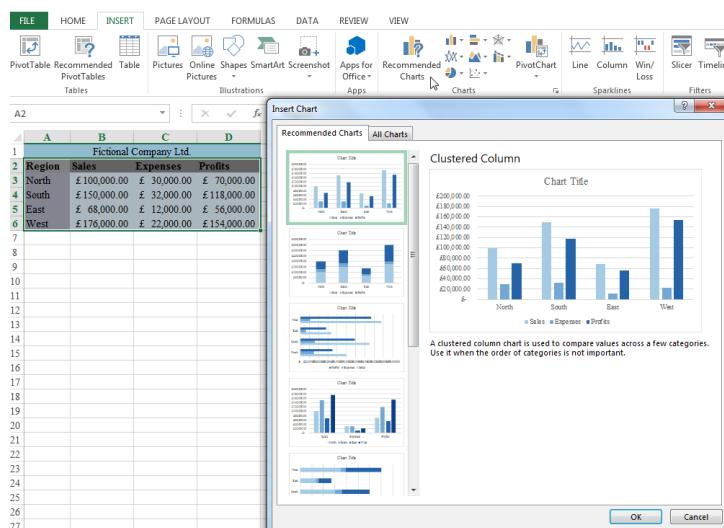
If you look at a large table of figures, it can be very hard to figure out what is happening with the data. Conditional formatting will help, but sometimes a picture really is worth a thousand words. Excel features powerful charting tools to help you create a more meaningful representation of your data. In this lesson, we will learn how to create, format, and manipulate a chart.

In Excel 2013 it recommends to you the most suitable Chart for the data selected, you can still go through the process of creating your own too as in older versions of Excel 2010 and 2007.

### Step-By-Step

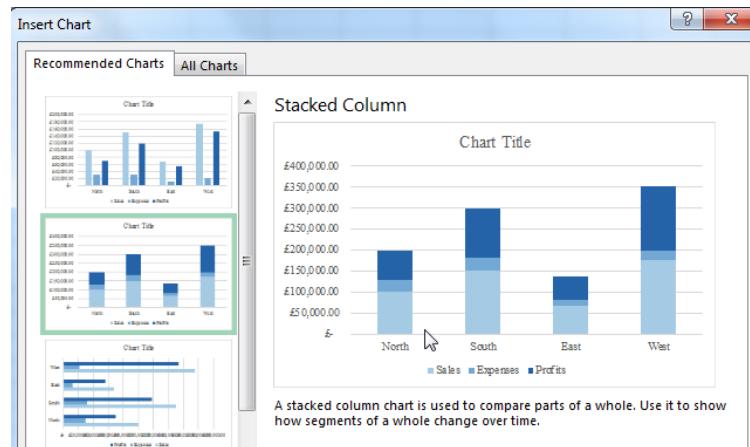
In this exercise you will create and modify a recommended chart.

- 1.** Open Lesson 6.1 from the MODULE A-6 folder of your Exercise Files.
  
  
  
- 2.** Copy the data on sheet 1 to sheet 2 ready for later. Go back to sheet 1
  
  
  
- 3.** Highlight the data except for the heading and go to the Insert Tab.
  
  
  
- 4.** In Excel 2013 select Recommended Charts



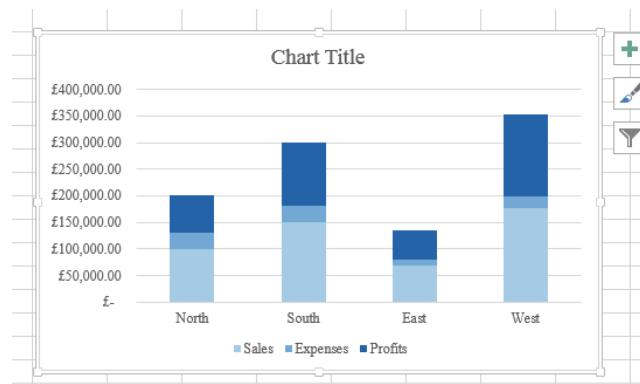
You will see it has recommended a range of nice charts for you.

5. Click through the various types of recommended charts. In older versions simply have a look at the different types of chart.

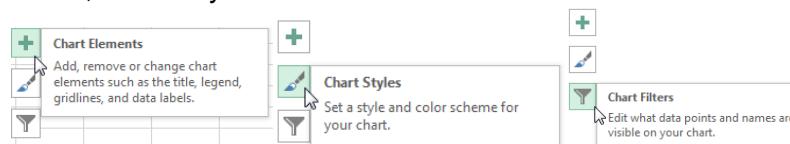


6. Choose Stacked Column from the list.

7. Note the results and move the chart to below the data.



8. In Excel 2013 charts now include buttons to the right of the chart, these are Chart Elements, Chart Styles and Chart Filters.



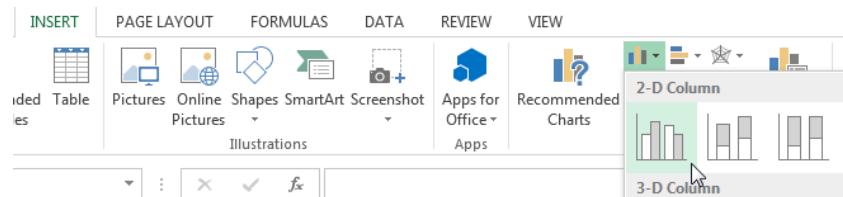
9. Now change to a different Chart Style via the Design tab.



**10.** Now we will create a standard chart based on sheet 2 data.

**11.** Select all the information in the worksheet except the main title.

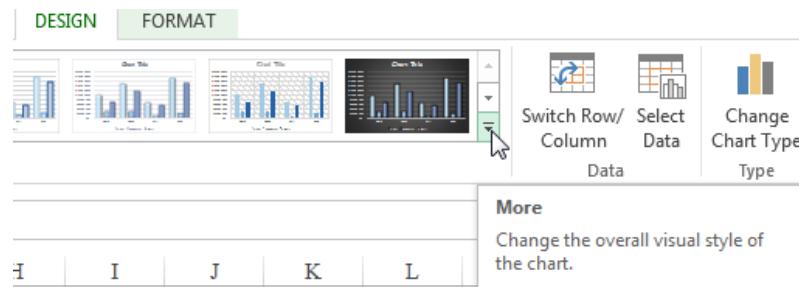
**12.** Click Insert → Column → 2D Clustered Column:



**13.** The chart will appear in the worksheet and the Chart Tools contextual tabs will appear:



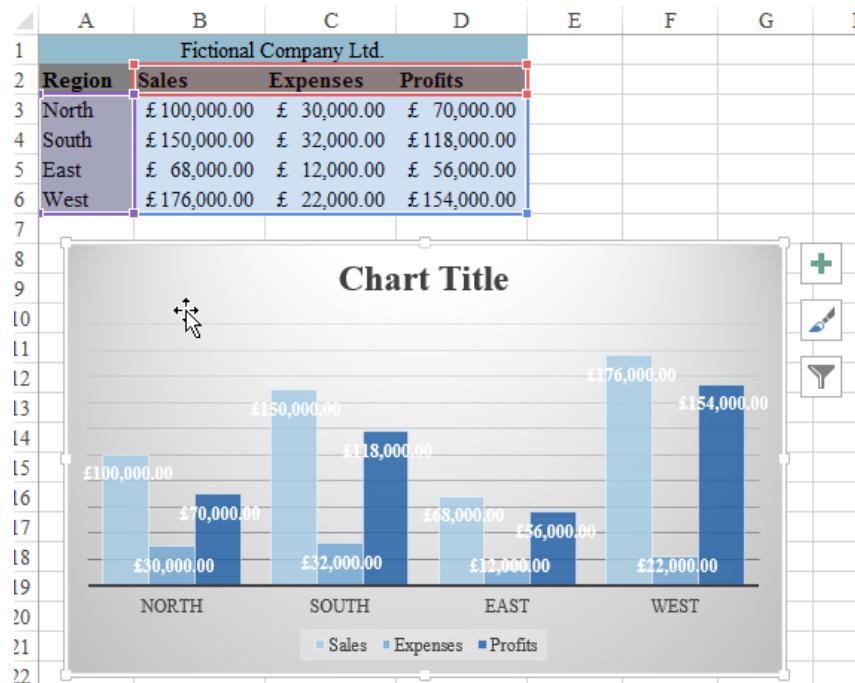
**14.** Click the pull-down arrow in the Chart Styles group of the Chart Tools → Design tab:



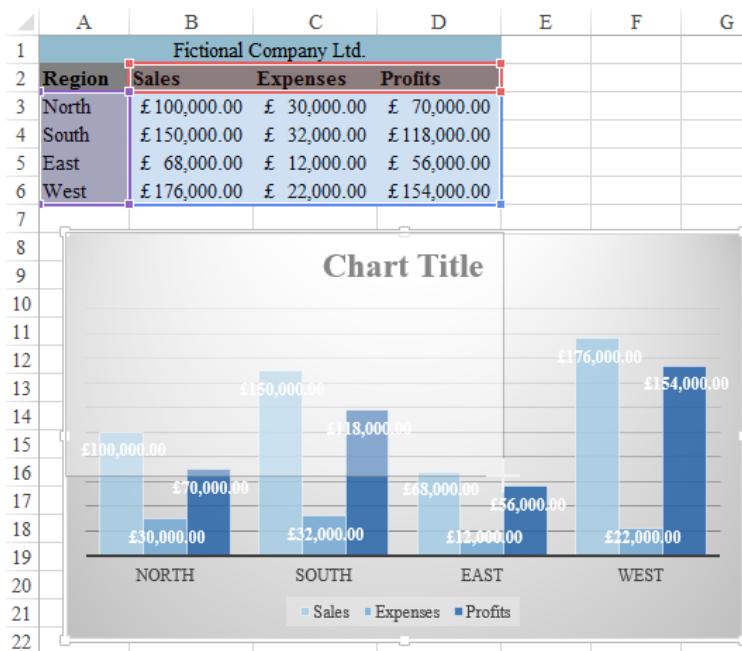
**15.** This will display a number of chart styles based on the current theme which has been applied to the worksheet. Select one of the styles:



16. Click and drag the outside edge of the chart to move it under the source data:

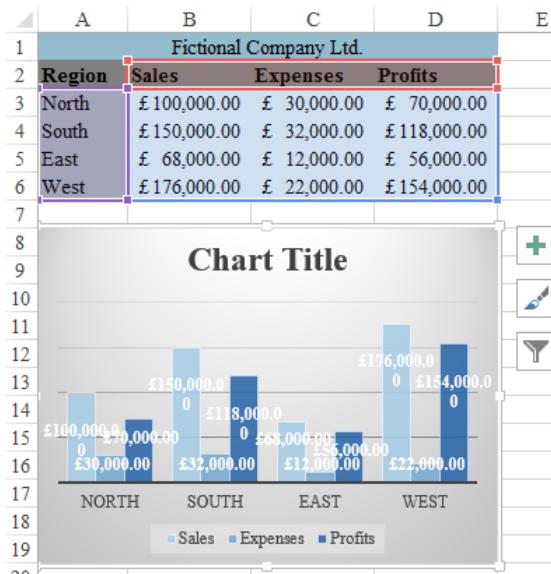


17. Now move your mouse to the bottom right-hand corner of the chart area so your pointer turns into a double-headed arrow. Press and hold Shift and then click and drag to make the chart area small enough to fit under the source data:



Holding the Shift key allows you to resize a chart while maintaining the chart's width/height ratio. You may need to move the chart when you have finished resizing it.

18. Your worksheet should now look like this:



Save the file as Lesson 6.1 Complete and then close Excel to complete this lesson.

## Skill Sharpener

<b>Objective</b>	To understand how to create charts in Excel.
<b>Briefing</b>	Your manager has asked you to explore some of the more eye-catching charts available in Excel.
<b>Task</b>	Open the sample data file and create a 3D bar chart based on the data.
<b>Hints</b>	Change the chart style by using the worksheet Themes command and the styles available on the Chart Tools – Design contextual tab.
<b>Sample Data</b>	Skill Sharpener 6.1.xlsx
<b>Follow-up Questions</b>	Try changing the chart type. Which types of chart might not make sense for the data contained in this worksheet?

## Lesson A-6.2: Chart Elements

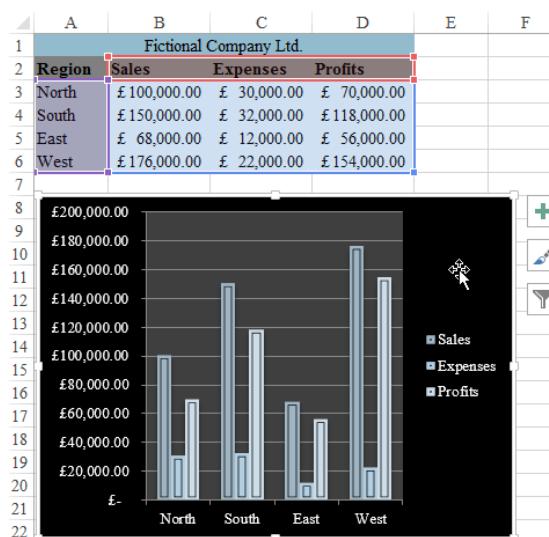
In the last lesson, we explored how to create and modify the visual look of a chart. In this lesson, we will explore the background manipulation of charts including how to apply a new chart type and change the source data. We will also learn how to create chart templates and how to work with the chart axes and data series.

In Excel 2013 Elements is a new way to configure your charts just the way you like it. If you have older versions of Excel its still worth reading through this lesson.

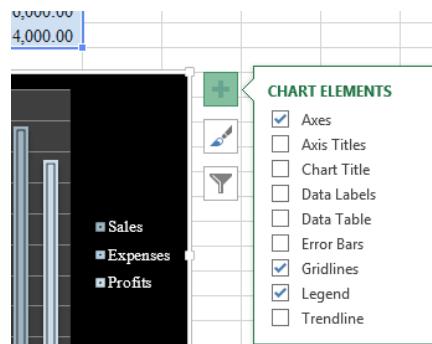
### Step-By-Step

In this exercise, you will alter the source data for a chart.

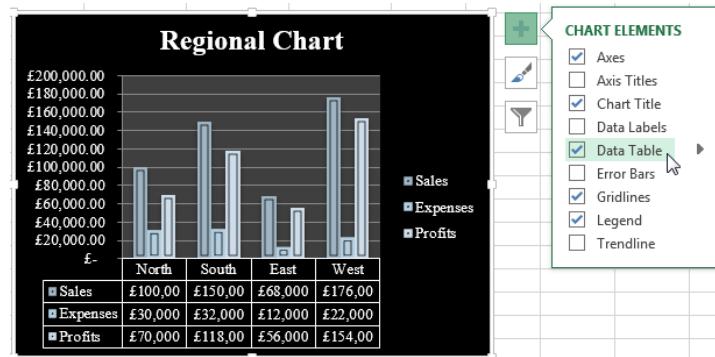
1. Open Lesson 6.2 from the MODULE A-6 folder of your Exercise Files.
2. Select the black chart area and in Excel 2013 examine the Elements to the right of the chart:



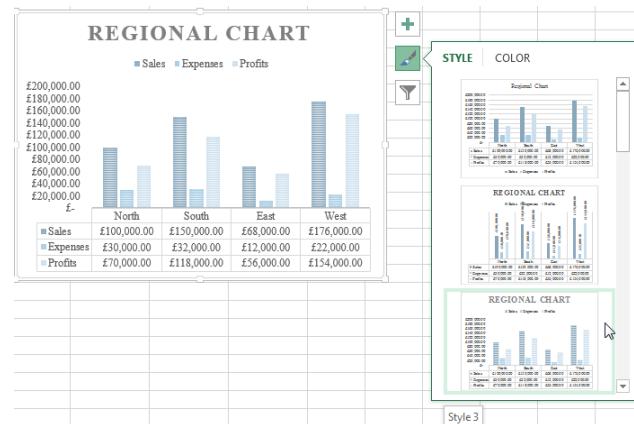
3. The Plus sign reveals the Chart Elements such as show Axes, Axis Titles, Chart Title etc. Select Chart Title. Type in Regional Chart.



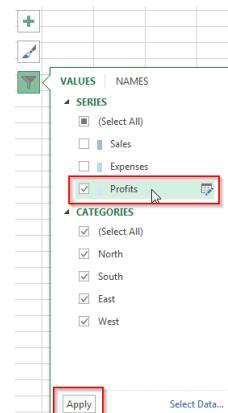
**4.** Show a Data Table below the Chart



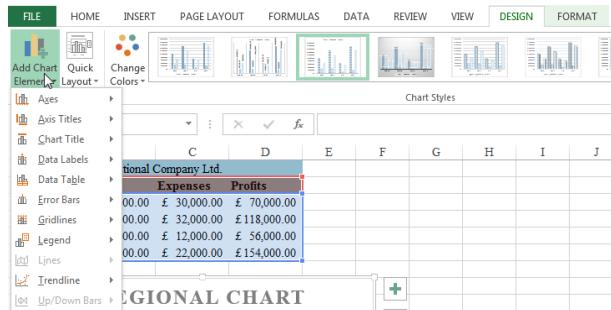
**5.** Look at the options in the Style Tool and go for Style 3



**6.** Next we will examine the Chart Filters Tool. Select just Profits only and click Apply.



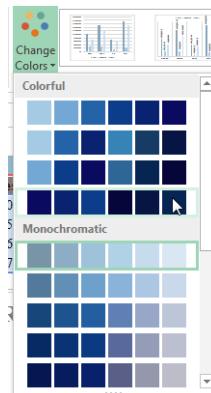
- From the Chart Tools Design tab we can see Add Chart Elements contains much further detailed options to configure your charts.



- Quick Layout will quickly offer you an alternative chart layout to save time.



- Change Colors allows you to alter the chosen colours, this depends on the current Theme chosen if any.



- Save the file as Lesson 6.2 Complete and then close Excel to complete this lesson.

## Skill Sharpener

<b>Objective</b>	To understand how to create multiple charts from the same data.
<b>Briefing</b>	The marketing department has decided that it's time for your company to implement a more modern look.
<b>Task</b>	Create three different 3D charts based on the source data. Make sure the chart types make sense for the data contained within the chart. Choose a red chart style, a full chart style, and a black and white chart style.
<b>Sample Data</b>	Skill Sharpener 6.2.xlsx

## Lesson A-6.3: Chart Tools – Design & Format

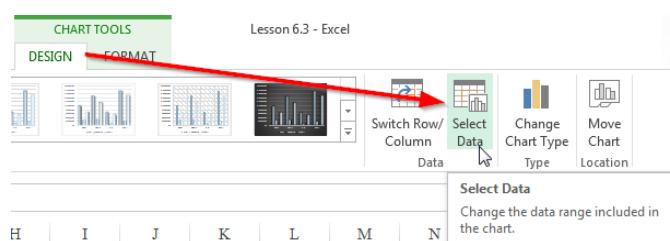
Once you have selected your data and created a chart, you can use various tools to represent elements of the chart in different ways.

If you have older versions of Excel it's still worth reading through this lesson to see the new method of altering Charts.

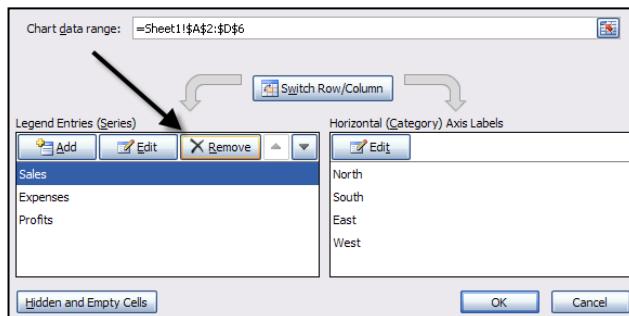
### Step-By-Step

In this lesson you will experiment with the features of the Chart Tools Layout tab.

1. Open up Lesson 6.3 from the A-6 exercise module.
  
2. First of all, you only want to see the Profit figures displayed in the chart. Select the chart by clicking on it and from the Chart Tools, Design tab, click Select Data.

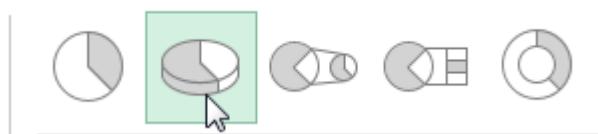


3. Remove the Sales and Expenses series from the chart to leave the Profit. Click OK when you have finished.



4. Change the chart to a 3D pie chart.

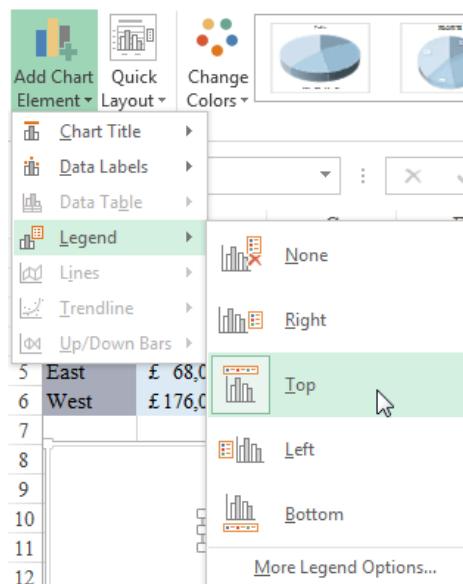
Click Change Chart Type on the Design tab and select a pie in 3D.



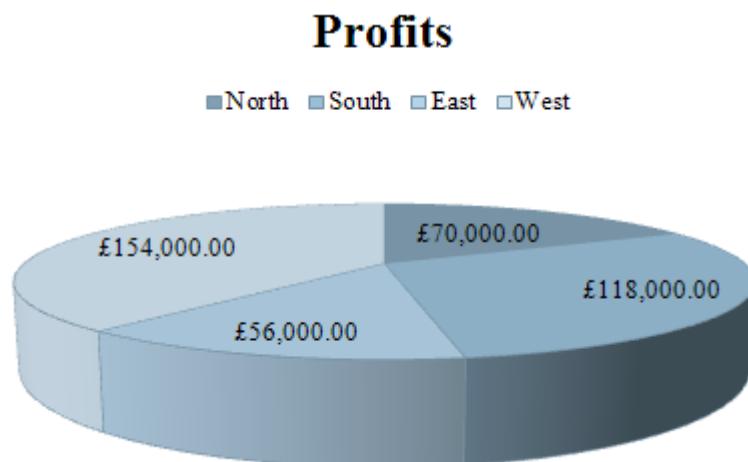
5. In Excel 2013 select the Add Chart Element button on the Design Tab.



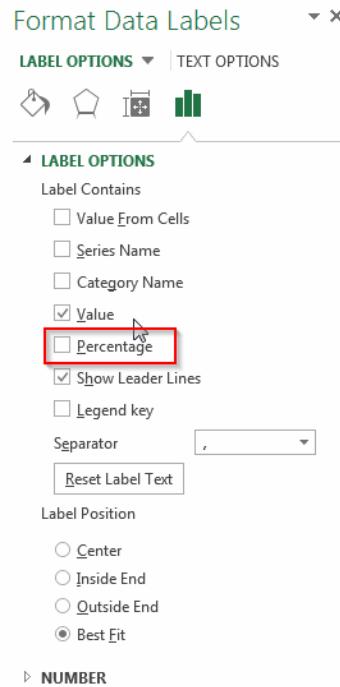
6. Click on the Legend, Top button to display it at the top of the chart.



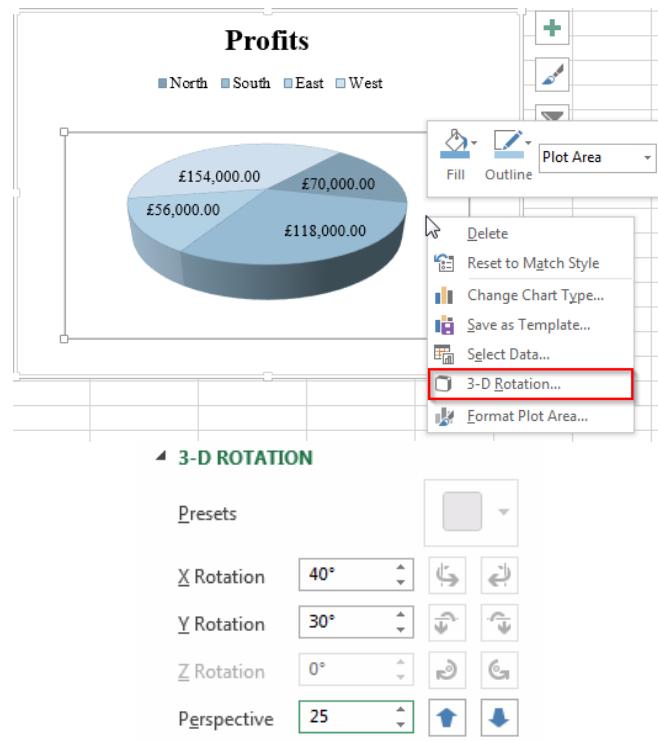
7. Use Add Chart Element, Data Labels, and choose what you think is best for the positioning of the labels. E.g. Center.



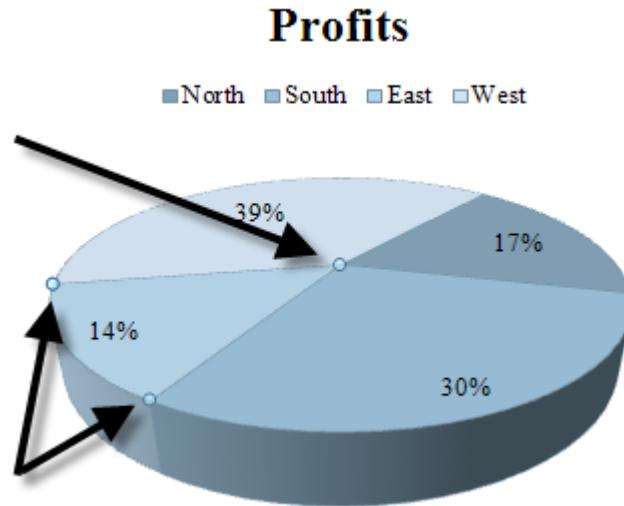
8. Replace the Value with the Percentage by right clicking the Values on the pie and choosing Format Data Labels. Tick Percentage and un-tick Values.



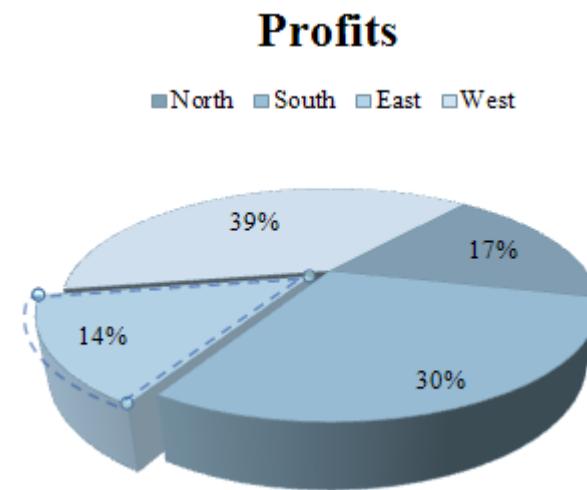
9. Select the Plot Area and right click then choose 3D Rotation. Change the settings as below:



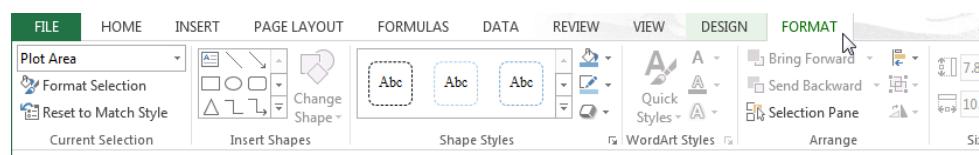
10. When you have closed the window, click onto the pie itself, to select it and then click onto the slice which represents 14%.



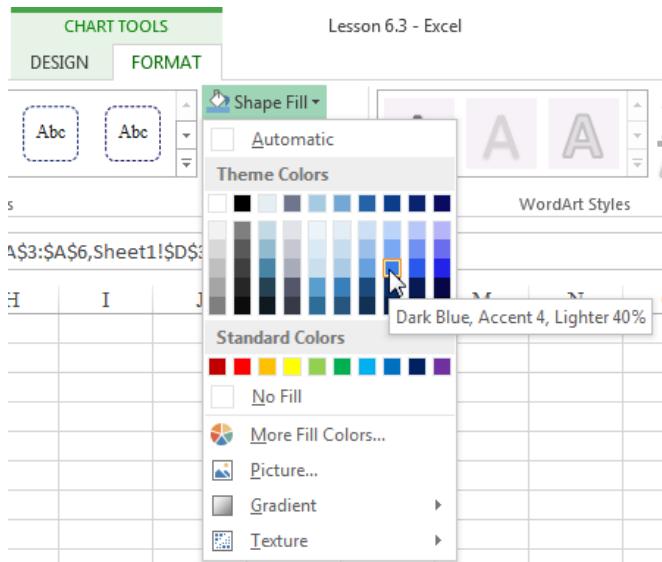
11. Drag this slice out slightly from the chart to remove it from the other slices.



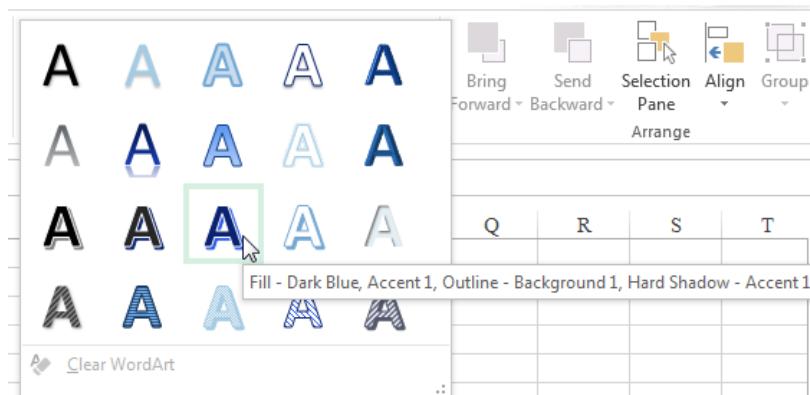
12. Click onto the Format tab. This is where you can customise any area of the chart.



- 13.** Ensure the 14% slice is still selected and select Shape Fill. Pick a Darker colour for this slice.



- 14.** Click onto the chart title and apply a WordArt Style.



- 15.** Save the file as Lesson 6.3 Complete. Close the Spreadsheet.

## Skill Sharpener

<b>Objective</b>	To explore different chart types
<b>Briefing</b>	Use the data from the previous lesson to create a new chart.
<b>Task</b>	Select the data from Sheet 2 of the previous lesson. Use the Insert tab to create a chart. Experiment with the tools available and change chart type if required. Explore chart template options on the Design tab.
<b>Hints</b>	Ask the trainer or use the help files on how to save a chart as a template to use again.

## 7. Your Notes







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