

# **ECDL<sup>®</sup> Advanced**

**European Computer Driving Licence<sup>®</sup>**

**ECDL Advanced Spreadsheets  
BCS ITQ L3 Spreadsheet Software**

**Using Microsoft<sup>®</sup> Excel<sup>®</sup> 2016**

**Syllabus Version 2.0**

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# Section 2

# Formatting

**By the end of this section you should be able to:**

**Split Windows**

**Use Conditional Formatting**

**Use Format as a Table**

**Use Paste Special**

**Transpose Data**

**Copy and Move Sheets**

Work through the **Driving Lessons** Work through the **Driving Lessons** in this section to gain an understanding of the above features.


For each **Driving Lesson**, read all of the **Park and Read** instructions and then perform the numbered steps of the **Manoeuvres**. Complete the **Revision** exercise(s) at the end of the section to test your knowledge.

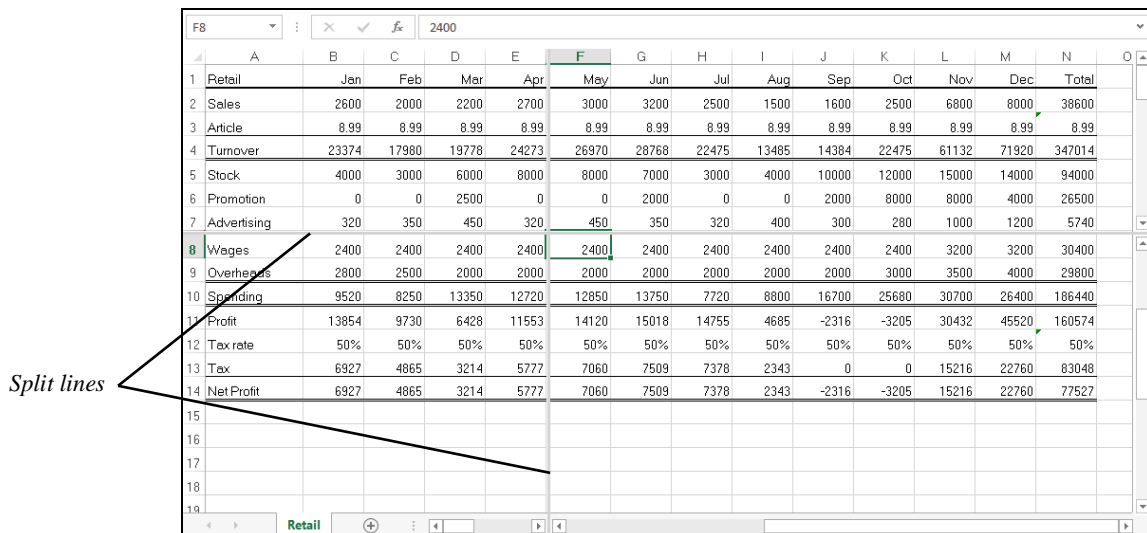
# Driving Lesson 4 - Split a Window



## **P** Park and Read

**Split** is similar to freeze panes except that the individual panes can be scrolled to show different information in each pane.

## Manoeuvres

1. Open the workbook **Retail**.
2. **Split** is created at the active cell position using the Ribbon. Select cell **F8**. Display the **View** tab and then click the **Split** button,  in the **Window** group. The worksheet is now split into four areas, all displaying the same worksheet.



3. Notice the four scrollbars (2 at the bottom and 2 on the right of the screen). You can use these to move the views in each area – very useful when working with a large worksheet. Give them a try now.
4. The split can be moved by clicking on the split lines and dragging them when  or  is displayed. Drag the vertical split to the left to display only 2 columns in the left panes.
5. To remove the **Split**, click the **Split** button again.
6. Make **A5** the active cell and **Split** the window. Making a split in any cell in column **A** or row **1** splits the window into two parts rather than four.
7. Scroll the lower view down to display row **14** just below row **4**. The **Turnover** and **Net Profit** are viewed together.
8. An alternative and quicker method to remove a split is to double click on a split line. Remove the horizontal split.
9. Leave the workbook **Retail** open for the next lesson.

## Driving Lesson 5 - Conditional Formatting

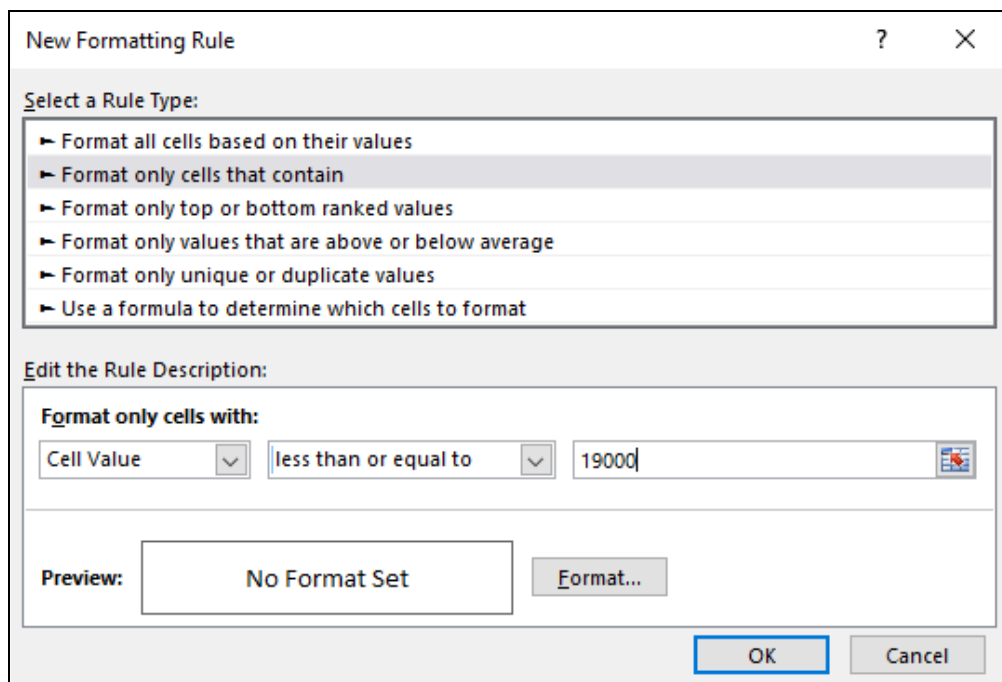
### **P** Park and Read

It is possible to apply different formatting to cells depending on the values in those cells. Selected cells can be compared to a value, or the results of a formula, to decide which format should be used. This is called **Conditional Formatting**.

Multiple conditions can be used to determine the formatting for the same cell. For example, a cell could be coloured red if it is below a certain value and blue if it is greater.

### Manoeuvres

1. Using the workbook **Retail**, select the range **B4:M4** (the **Turnover** figures).
2. With the **Home** tab displayed, click **Conditional Formatting** from the **Styles** group.
3. Select **New Rule**. The **New Formatting Rule** dialog box is displayed.
4. From the **Select a Rule Type** box, click **Format only cells that contain**.
5. In the drop-down criteria box to the right of **Cell Value** (currently labelled **between**), select **less than or equal to**.
6. Enter **19000** in the value box.



The screenshot shows the 'New Formatting Rule' dialog box. The 'Select a Rule Type' section has 'Format only cells that contain' selected. The 'Edit the Rule Description' section shows 'Format only cells with:' followed by a dropdown menu set to 'Cell Value', a second dropdown menu set to 'less than or equal to', and a text box containing '19000'. Below this is a 'Preview' section showing 'No Format Set' and a 'Format...' button. At the bottom are 'OK' and 'Cancel' buttons.

7. Click the **Format** button. On the **Font** tab, select the **Colour** red and click **OK**. Click **OK** again to apply the new rule.



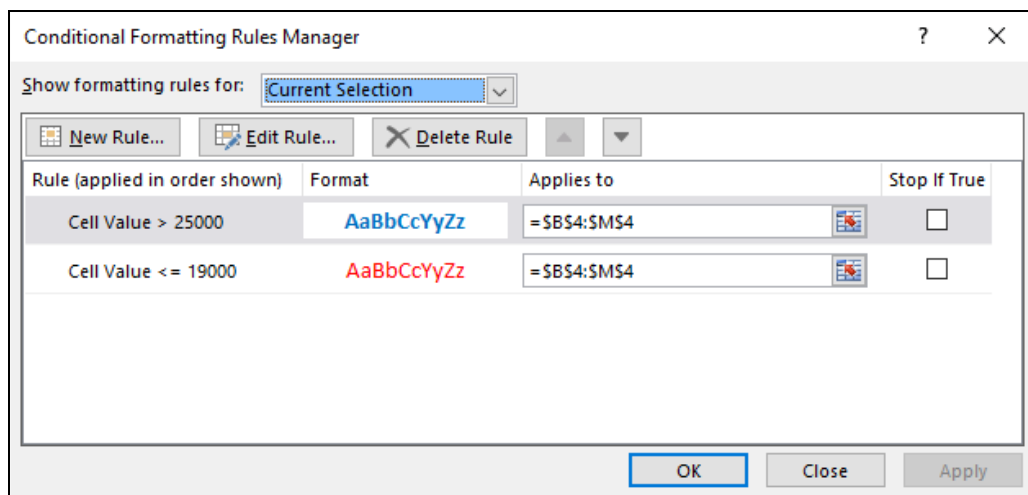
## Driving Lesson 5 - Continued

8. Notice the effect; any value less than 19000 is now formatted.
9. To add another condition to the same range, click the **Conditional Formatting** button and select **New Rule** again. Select **Format only cells that contain**.
10. Select the criteria **greater than** and enter **25000** in the value box. Format the text to be **Bold** and blue. Click **OK** and **OK** again to apply the rule.
11. Next, highlight the range **B14:M14**. Click the **Conditional Formatting** button and select **New Rule** again. Select **Format only cells that contain**.

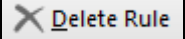


*If entering a formula in the value box, remember to start with =.*

12. Select the criteria **less than**. Then, enter **=Average(B14:M14)** in the value box. Format the range with **yellow** cell shading using options on the **Fill** tab.
13. Click **OK** and **OK** again. Notice the effect; values less than the *average* of the range are now highlighted.
14. To remove **Conditional Formatting**, select the range **B4:M4**, click **Conditional Formatting** and select **Manage Rules**.



*The current selection has two rules applied to it. To view all the rules, select **This Worksheet** from the **Show formatting rules for** box.*

15. Select the “**Cell Value > 25000**” rule and click **Delete Rule**, . Click **OK**. All values over **25000** should no longer be **blue** or **bold**.
16. Feel free to spend some time experimenting with conditional formatting.
17. When you are finished, close the workbook without saving.

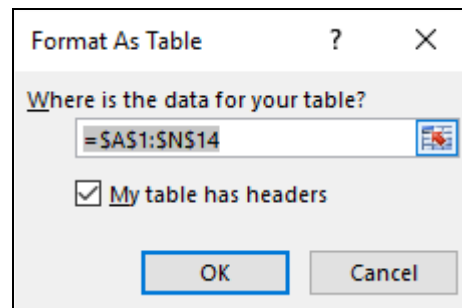
## Driving Lesson 6 - Format as Table

### **P** Park and Read

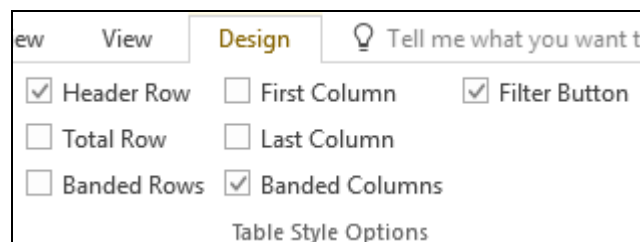
There is a set of predefined worksheet table formats that can be used to enhance the appearance of a worksheet.

### Manoeuvres

1. Open the workbook **Budget**.
2. Highlight the range **A1:N14** and, on the **Home** tab, in the **Styles** group, click **Format as Table**.
3. Take a look at the list of available **Table Formats** covering **Light**, **Medium** and **Dark** options. Select **Table Style Light 2** (a tooltip will appear when you place your mouse pointer over a style).



4. Click **OK** to confirm the range to be formatted.
5. The sheet is now formatted in the **Light 2** style. A **Table Tools - Design** tab is displayed on the Ribbon showing various table formatting options.
6. Uncheck **Banded Rows** and check **Banded Columns**. Notice the effect.



7. Uncheck the **Filter Button** option. This hides the filter buttons in row 1.
8. With the range **A1:N14** still selected, click the **Quick Styles** button in the **Table Styles** group on the **Design** tab. Select any other design you like to apply it.
9. Finally, click the **Quick Styles** button in the **Table Styles** group again. Then select **Clear** at the bottom to remove the table formatting.
10. Close the workbook without saving.

# Driving Lesson 7 - Paste Special

## **P** Park and Read

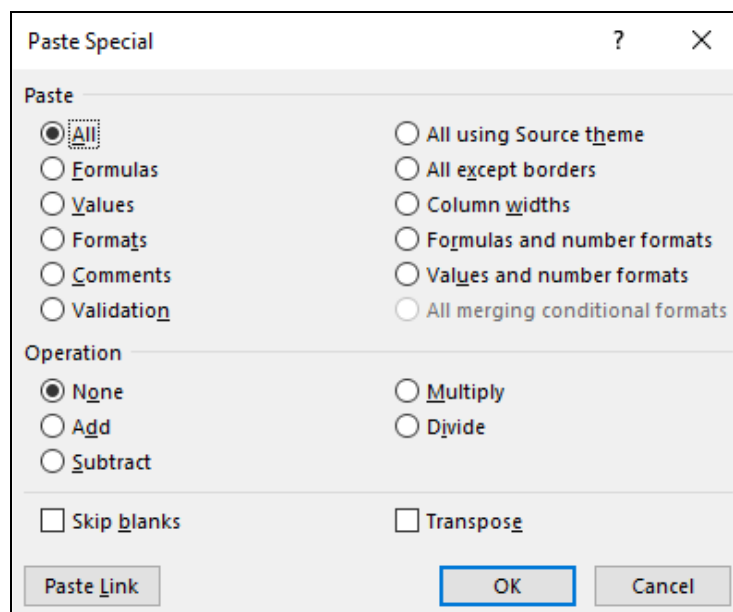
When using **Copy** and **Paste** or **Cut** and **Paste**, the default is to paste the cell exactly as it was originally. However, **Paste Special** can be used to:

- Paste only formulas, values or formats. Pasting values from cells that contain formulas is a way of fixing the data, as it will never then be recalculated.
- Combine ranges using an operation, e.g. adding, subtracting, etc.
- Transpose ranges (change a spreadsheet round by converting rows to columns and columns to rows).
- Paste links to the original data (covered in a later section).



## Manoeuvres

1. Open the workbook **Finances**.
2. Highlight the range **A1:N1**. Change the range to italic and the font colour to **blue**.
3. To paste this new formatting to another range, first click the **Copy** button in the **Home** tab's **Clipboard** group.
4. Highlight the range **A2:A16** and click the **Paste** button's drop-down arrow (not the paste button's icon).
5. Many paste options are displayed in the drop-down panel. Place your mouse pointer over each in turn and read the tooltip that appears. For the purposes of this lesson, select **Paste Special** to display the advanced **Paste Special** dialog box. Take a look at the features available.



## Driving Lesson 7 - Continued

6. Under **Paste**, select the **Formats** option and click **OK** to paste the formatting. The cell border from **A1** is pasted as well. Remove the unwanted borders to match those in column **B**.
7. Open the workbook **Outgoings**.
8. Select the range **A1:L10** and click the **Copy** button.
9. Click the *Excel* button on the **Taskbar** and then select the **Finances** workbook to make it active.
10. Select cell **B5**. Click the **Paste** button to paste the contents normally.
11. Data can also be pasted using a mathematical operation. Open the workbook **Income** and highlight the range **A1:L2**, the income figures.
12. Click the **Copy** button.
13. Switch back to **Finances** using the **Taskbar**.
14. The income figures are to go into the range **B2:M3** but this range already contains data (which would be overwritten if a normal paste was used). To *add* the copied values to the original data, select cell **B2** and click the **Paste** button's drop-down arrow. Select **Paste Special**.
15. Under **Operation**, click **Add** to add the two sets of figures together, then click **OK**. The data is now combined.



The **Add** operation was used in this example. **Subtract, Multiply and Divide** work in the same way.

16. It may be required to convert formulas to values because the numbers are final (e.g. a VAT return or expenditure after the month end). Using the **Finances** workbook, January has ended and the figures in column B are to be converted to values. Check the cells **B4**, **B15** and **B16** to see that they contain formulas.
17. Select the range **B2:B16**.
18. Click **Copy**, then click the **Paste** drop-down and select **Paste Special**.
19. Under **Paste**, select the **Values** option and click **OK**. Press <Enter> or <Esc> to remove the selection rectangle.
20. Check that the cells **B4**, **B15** and **B16** now contain values.



Remember that this process removes formulas.

21. Save the workbook as **Finances2** and close it.
22. Close the workbooks **Income** and **Outgoings** without saving.

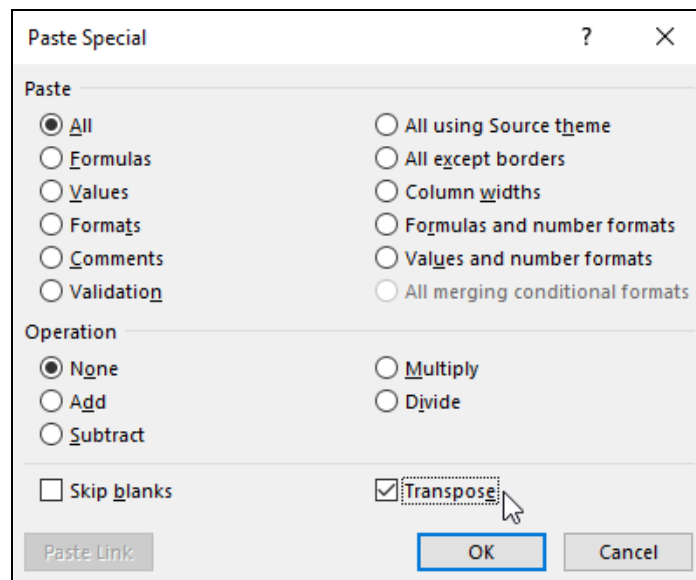
## Driving Lesson 8 - Transposing Data

### **P** Park and Read

It is sometimes necessary to change the way data is stored in a worksheet. Data stored in rows may be needed in columns and vice versa. This process is called **Transposing Data**.

### Manoeuvres

1. Open the workbook **Transpose**. The results shown are needed in a row.
2. Select the range **B3:C17** and **Copy** the data.
3. Move to **A20**, click the **Paste** button's drop-down arrow and select **Paste Special**. Check the **Transpose** box.



4. Click **OK**. Press **<Esc>** to remove the selection rectangle.
5. The data is now shown in rows. Notice that the cell formatting (the borders), have also been copied. This could have been avoided by selecting to paste just **Values** in the **Paste Special** dialog box.
6. Transpose the range **B3:C17**, with values only, to **A23**.
7. Close the workbook without saving.
8. Open the workbook **Budget** and transpose the range **A1:N14** to cell **A18**.
9. The borders are not appropriate. Undo the paste and transpose the range again, this time pasting with **All except borders** selected.
10. Check the formulas are still present. Then highlight the new range and add new borders as appropriate.
11. Close the workbook without saving.

## Driving Lesson 9 - Copying & Moving Sheets

### **P** Park and Read

Sheets within a workbook can be moved or copied within the same workbook or to a different workbook.

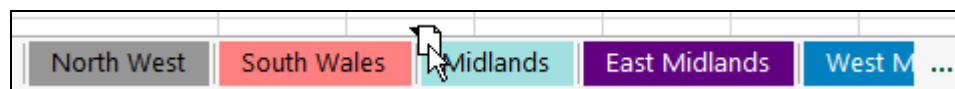
### Manoeuvres

1. Open the workbook **Divisions**.




*Sheets can be moved within the same workbook by dragging their sheet tabs at the bottom of the screen.*

2. Move the **North Midlands** sheet to between **South Wales** and **Midlands** by clicking and dragging its tab (a black triangle shows where the sheet will be inserted when you drop it). Any hidden sheet tabs will appear as you drag the tab left or right.



3. Next, move the **North West** sheet to between **North** and **North East**.



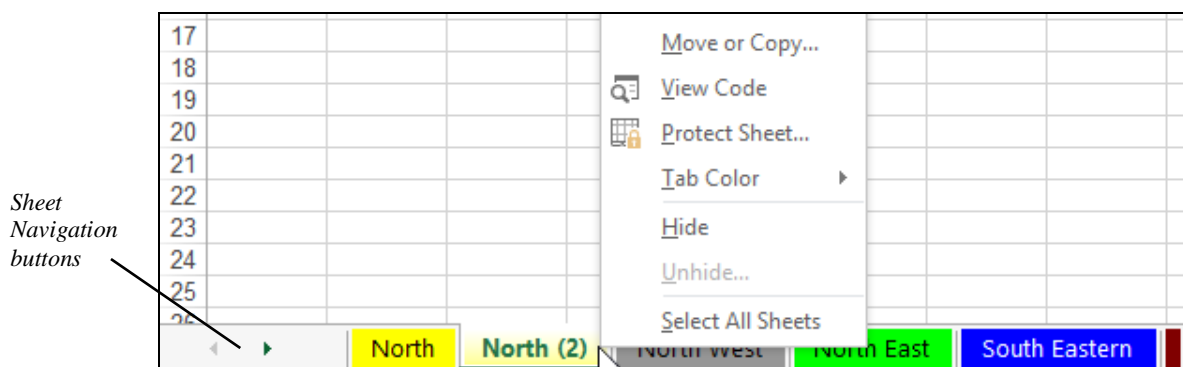
Use the **Sheet navigation** buttons, , to locate sheets that are not visible.

4. A sheet is *copied* within the same workbook by holding <Ctrl> while dragging its sheet tab. Select the **North** tab.
5. To make a copy of the **North** sheet, hold down <Ctrl> and drag the **North** tab right a little until a black triangle appears. Release the mouse button first before <Ctrl>.



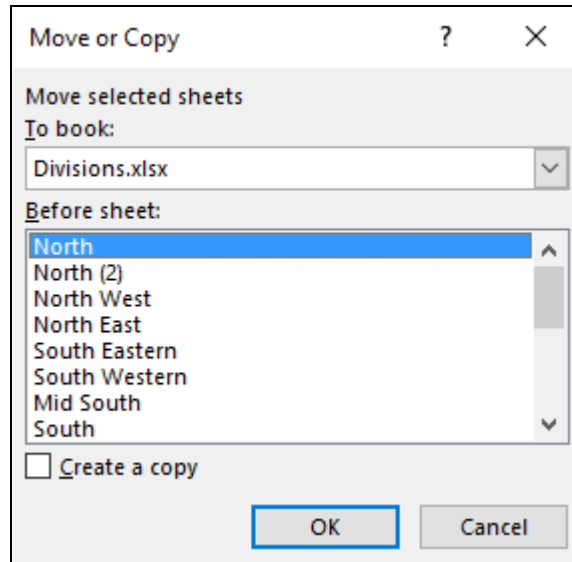
*The name of the copied sheet is **North (2)**. Duplicate sheet names are not allowed.*

6. If a sheet is to be moved or copied to another workbook a shortcut menu is used. Right click on the **North (2)** sheet tab.



## Driving Lesson 9 - Continued

- This menu controls all the actions relating to sheets. Select **Move or Copy**.



This above dialog box can also be displayed using the **Format** button on the **Home** tab and selecting **Move or Copy Sheet**.

- To create a copy, check the **Create a copy** box, otherwise the sheet is moved.
- To move or copy to a different workbook, select from the **To book** box. Drop-down the list and select (**new book**).



To move or copy to an existing workbook it must be open, so it is displayed in the **To book** box.

- The **Before sheet** box is empty for a new workbook. An existing one would display all the sheets for a selection to be made on the placement. Click **OK**.
- A new workbook is started with just the sheet **North (2)** in it.



A sheet is renamed by double clicking its sheet tab and entering a new name.

- Rename the copied sheet as **North Copy**.
- Display the **Divisions** workbook and check that **North (2)** is still in this book and that it was copied.
- Close both workbooks without saving.

## Driving Lesson 10 - Revision

### Park and Read

At the end of every section you get the chance to complete one or more revision exercises to develop your skills and prepare you for your ECDL certification test. You should aim to complete the following steps without referring back to the previous lessons.

### Manoeuvres

1. Open the workbook **House**.
2. Format the range **B2:N16** as currency with two decimal places.
3. Freeze the column and row titles.
4. Scroll to check that the titles are frozen.
5. Format the whole worksheet in **Table Style Medium 3**.
6. The worksheet is very cluttered! Change the row height of rows **2** to **16** to **15.00** units (20 pixels).
7. The screen is now cluttered with zeros, so reformat the range **B2:N16** as **Currency** with no decimal places to remove some of them.
8. Apply conditional formatting to the range **B16:N16** (the accumulated savings row). Display amounts greater than **1000** in bold and blue text, and saving levels under **0** in italic and red text.
9. An unexpected windfall comes in the form of a **£500** pay bonus in **February**. Make the necessary change. Note the effects of the conditional formatting on row **16**.
10. Highlight the range **A1:N16** and, using paste special, make a copy on a new sheet (but paste only the values).
11. Check the cells in rows **4**, **15** and **16** that contained formulas but are now just numbers. Change cell **B2** to **0**. It has no impact on any other cells.
12. Save the workbook as **House2**.
13. Close the workbook.



Now complete the **Record of Achievement Matrix** at the back of the guide. You should only move on when confident with the topics and features described in this section.



# Section 9

# Scenarios

**By the end of this section you should be able to:**

**Create Scenarios**

**Use, Edit and Delete Scenarios**

**Create Scenario Summary Reports**

Work through the **Driving Lessons** in this section to gain an understanding of the above features.

For each **Driving Lesson**, read all of the **Park and Read** instructions and then perform the numbered steps of the **Manoeuvres**. Complete the **Revision** exercise(s) at the end of the section to test your knowledge.

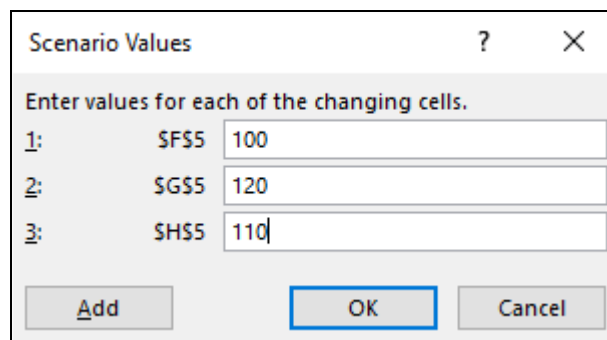
## Driving Lesson 38 - Creating Scenarios

### **P** Park and Read

When you have created a working spreadsheet, you will probably want to explore “what-if” scenarios and see how different values effect results (e.g. “what if I increase wages?” or “what if I invest in less stock?”). To help, *Excel* allows separate versions of a worksheet, each containing different values, to be saved as **Scenarios**.

### Manoeuvres

1. Open the workbook **Food** which shows the ingredients available to make 3 different products. Varying the production mix for each product (**F5:H5**) will produce different profit totals. For the first model, ensure that the cells **F5:H5** are all **0**.
2. Highlight the range **F5:H5**. Display the **Data** tab and, from the **Forecast** group, click **What-If Analysis**. Select **Scenario Manager**.
3. In the **Scenario Manager** dialog box, click **Add** and enter the **Scenario name** as **Worst**. Make sure the **Changing cells** are **F5:H5** and click **OK**.
4. Leave the values of the three changing cells as **0** and click **OK**. **Worst** is now displayed in the **Scenario** list.
5. The next scenario will be a guess to try and increase profits. Click **Add**, enter the name as **Guess** and click **OK**. Enter the values of the 3 cells as **100**, **120** and **110**.



Scenario Values		
Enter values for each of the changing cells.		
1:	\$F\$5	100
2:	\$G\$5	120
3:	\$H\$5	110
<input type="button" value="Add"/> <input type="button" value="OK"/> <input type="button" value="Cancel"/>		

6. Click **OK**. Then click **Show** to see the results with these values.
7. The next scenario will be another guess to try and maximise profits. Click **Add**, enter the name as **Better Guess** and click **OK**. Enter the values of the 3 cells as **150**, **150** and **160**. Click **OK**.
8. Click **Add** again, enter the name as **Best** and click **OK**. Enter the values of the 3 cells as **159**, **167** and **200**, and click **OK**.
9. Click **Close**. Four scenarios have now been created. Save the workbook as **Scenario** and leave it open for the next lesson.

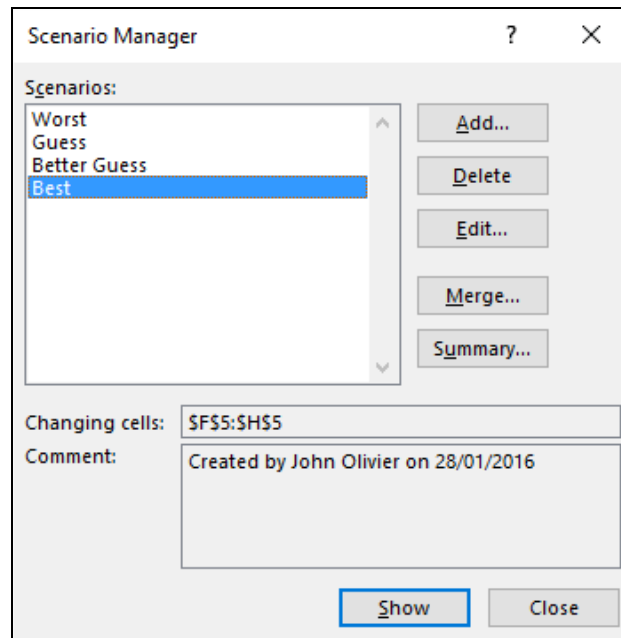
# Driving Lesson 39 - Using, Editing & Deleting Scenarios

## **P** Park and Read

Once a set of **Scenarios** has been created, each can be viewed by selecting its name from the **Scenario Manager**. **Scenarios** can also be edited or deleted.

## Manoeuvres

- Using the workbook **Scenario**, click the **What-If Analysis** drop-down button and select **Scenario Manager**. The four scenarios created in the previous lesson are displayed in the **Scenario Manager** dialog box.



- Select **Worst** then click **Show** (the **Scenario Manager** dialog box may need to be moved to see the values on the worksheet). The values and the solution for the **Worst** scenario are now displayed.
- Show the **Guess** scenario. Make a note of the **Total Profit**.
- Show the **Best** scenario. Note the increased **Total Profit**; most of the ingredients are now used.
- The scenario **Better Guess** is not required. Click it once to select it and click the **Delete** button. The scenario is removed.
- Select **Worst** again and click **Edit** and **OK**. The worst scenario can now be changed. Edit the values so that they are all **50**. Click **OK**.
- Click **Show** to view the results then **Close** the **Scenario Manager**.
- Save the workbook using the same name and leave it open.

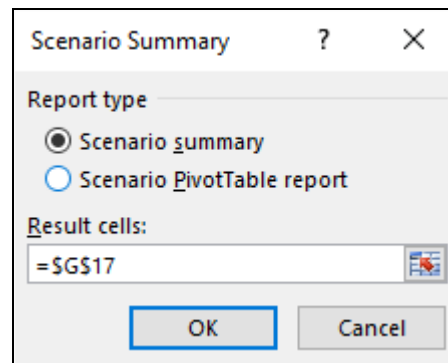
# Driving Lesson 40 - Scenario Summary Report

## **P** Park and Read

A **Scenario Summary Report** is a report that lists all the scenarios created for a worksheet along with any result cells.

## Manoeuvres

1. The workbook **Scenario** should still be open. Display the **Scenario Manager**.
2. Click the **Summary** button. The **Result cell** is the **Total Profit, G17**. Click the cell **G17** on the worksheet (move the dialog box if necessary).



3. Click **OK**. The **Summary Report** is now displayed.

		Scenario Summary			
		Current Values:	Worst	Guess	Best
<b>Changing Cells:</b>					
	\$F\$5	50	50	100	159
	\$G\$5	50	50	120	167
	\$H\$5	50	50	110	200
<b>Result Cells:</b>					
	\$G\$17	£670.50	£670.50	£1,476.90	£2,329.74
Notes: Current Values column represents values of changing cells at time Scenario Summary Report was created. Changing cells for each scenario are highlighted in gray.					

4. The report shows the values of the changing cells and the result cell for each scenario. An **outline view** is provided allowing certain rows and columns to be grouped or un-grouped. The outline can be manipulated to change the view of the data.
5. Note that the report is created on a separate sheet called **Scenario Summary** within the current workbook.
6. Save the workbook using the same name and close it.

## Driving Lesson 41 - Revision

### Park and Read

At the end of every section you get the chance to complete one or more revision exercises to develop your skills and prepare you for your ECDL certification test. You should aim to complete the following steps without referring back to the previous lessons.

### Manoeuvres

1. Open the workbook **Mailshot**.
2. The range **C7:C9** should be empty.
3. Display the **Scenario Manager** and add the scenario **Guess1** with the values for **C7:C9** as **800, 700** and **500**.
4. Add the scenario **Guess2** with the values for **C7:C9** as **1000, 600** and **400**.
5. Add the scenario **Guess3** with the values for **C7:C9** as **750, 750** and **500**.
6. The three **Scenarios** are now named. Show each in turn and notice the effect on **Total Estimated Sales**.
7. Use the **Scenario Manager** to produce a **Scenario Summary**, the **Result Cell** is **I11**.
8. Display **Sheet1** and use the **Scenario Manager** to delete the scenario **Guess3**.
9. Save the workbook as **Mailshot Scenarios**.
10. Close the workbook.



Now complete the **Record of Achievement Matrix** at the back of the guide. You should only move on when confident with the topics and features described in this section.