ECDL® Advanced

European Computer Driving Licence®

Advanced Spreadsheet Software
BCS ITQ Level 3

Using Microsoft® Excel® 2010

Syllabus Version 2.0

Contents

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

To gain an understanding of the above features, work through the **Driving Lessons** in this **Section**.
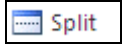
For each **Driving Lesson**, read the **Park and Read** instructions, without touching the keyboard, then work through the numbered steps of the **Manoeuvres** on the computer. Complete the **Revision Exercise(s)** at the end of the section to test your knowledge.

Driving Lesson 4 - Split a Window

▣ 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** (see page 4 - **Downloading the Data Files** for the location).

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

3. Move the active cell to the right and up a few cells, using the arrow keys.

4. Use the four scroll bars to display different parts of the worksheet to create four different views of the same worksheet - very useful if using a large worksheet.

5. The split can be moved by clicking on the split lines and dragging them when ⁺‖⁺ appears. Drag the vertical split to the left to display only 2 columns in the left panes.

6. To remove the **Split,** click the **Split** button again.

7. **Split** can also be created using the split boxes at the top or right of the **Scroll Bars**.

Horizontal Split box
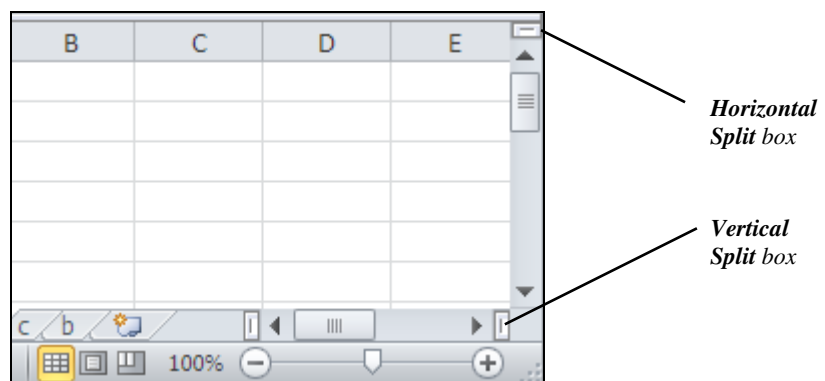
Vertical Split box

8. Drag the **Horizontal Split** button at the top of the vertical scroll bar down to between rows **7** and **8**. Drag the **Vertical Split** button at the right of the horizontal scroll bar down to between columns **E** and **F**. This achieves the same split as created using the **Ribbon**.

9. An alternative method to remove a single split is to double click on the split line or the split box. Remove the horizontal and then the vertical split.

10. Leave the workbook **Retail** open for the next Driving Lesson.

Driving Lesson 5 - Conditional Formatting

⊞ Park and Read

As well as applying formatting to certain cells, it is possible to apply different formatting to cells depending on the values within 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, so for example, a cell could be coloured red if it is below a certain value and blue if it is greater than another value.

⇗ Manoeuvres

1. Open the workbook **Retail**, if it is not already open.

2. Highlight the **Turnover** figures, the range **B4:M4**.

3. With the **Home** tab displayed, from the **Styles** group, select **Conditional Formatting**.

4. Select **New Rule**. The **New Formatting Rule** dialog box is displayed.

5. From the **Select a Rule Type** box click on **Format only cells that contain**.
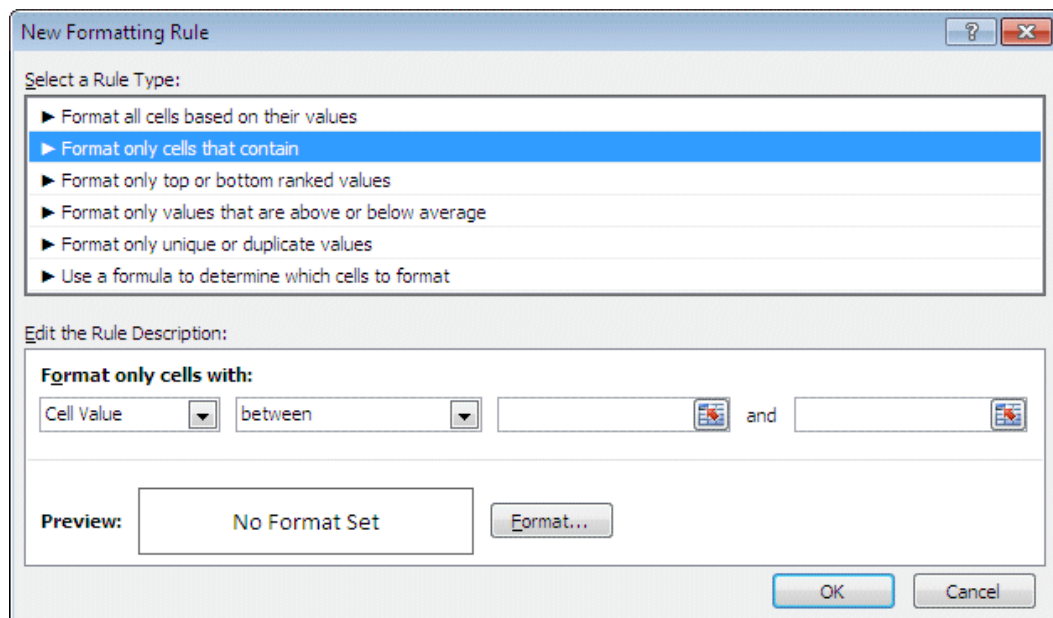
6. In the drop down criteria box (**between**) select **less than or equal to**.

7. Enter the value **19000** in the next box.

continued over

Driving Lesson 5 - Continued

Edit the Rule Description:

Format only cells with:

| Cell Value | less than or equal to | 19000 |

Preview: No Format Set   Format...

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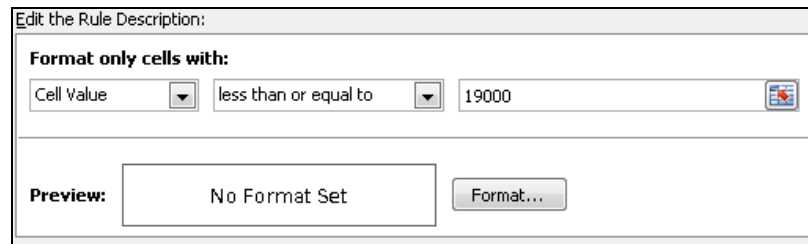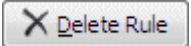
i *If entering a formula in the value box remember to start with =*

8. Click the **Format** button and select the font colour **red**. Click **OK**. Click **OK** again to apply the rule.

9. To add another condition to the same range, click the **Conditional Formatting** icon and select **New Rule**. Select **Format only cells that contain**, again. Select **greater than** and enter **25000** in the next box. Format the text to be **bold** and **blue**. Click **OK** and **OK** again to apply the formatting.

10. Highlight the range **B14:M14**, apply the conditional formatting, values **less than** the average of the range **=Average($B$14:$M$14)**. Format the range with a **pale yellow** cell shading using the **Fill** tab and **More Colors** option. Click **OK, OK** and **OK** again.

11. To remove **Conditional Formatting**, select the range **B4:M4**, click **Conditional Formatting** and select **Manage Rules**.

Conditional Formatting Rules Manager

Show formatting rules for: Current Selection

New rule   Edit rule   Delete rule

Rule (applied in order shown)	Format	Applies to	Stop If True
Cell Value > 25000	AaBbCcYyZz	=$B$4:$M$4	☐
Cell Value <= 19000	AaBbCcYyZz	=$B$4:$M$4	☐

OK   Close   Apply

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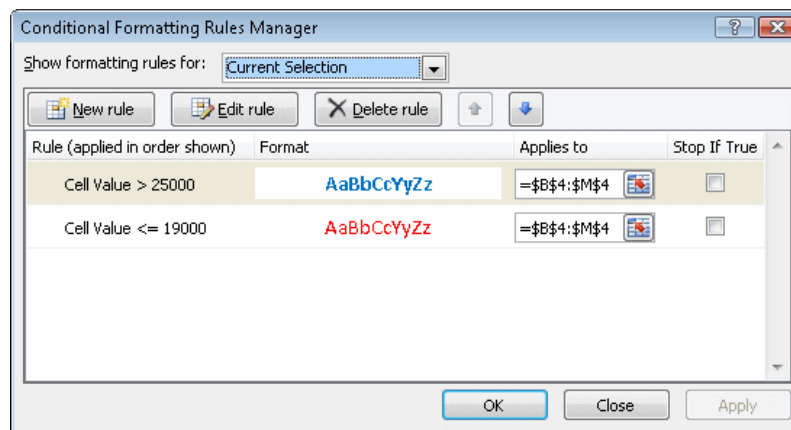
i *The current selection has two rules applied to it. To view all the rules, select* ***This Worksheet*** *from the* ***Show formatting rules for*** *box.*

12. Select the **Cell Value > 25000** rule and click the **Delete Rule** button, ✗ Delete Rule . Click **OK**. All values of over **25000** should now not be **blue** or **bold**.

13. Experiment with adding and removing conditional formats to highlight results in a way that had not been possible before.

14. Close the workbook <u>without</u> saving.

Driving Lesson 6 - Format as Table

▣ Park and Read

There is a set of pre-defined worksheet formats to enhance the appearance of a worksheet, via the **Home** tab **Styles** group, **Format as Table** command.

⤵ 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. There is a list of the available **Table Formats**, covering **Light**, **Medium** and **Dark** options. Scroll through the list of **Table Formats**. Select **Table Style Light 2**.
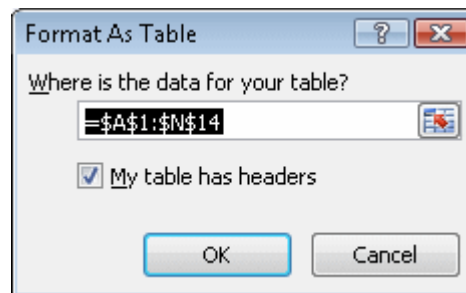
4. Click **OK** to confirm the range that is to be formatted.

5. The sheet is now formatted in the **Light 2** style. A **Design** tab is displayed on the ribbon, showing various groups for different types of formatting.

6. To change the table format, select an option from the **Table Styles** group on the **Design** tab. Click the **More** drop down (shown below) to display all the available styles. The sheet displays each format as the mouse passes over it.
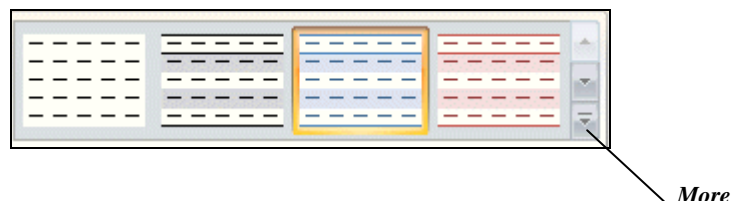
More

7. To remove the table format, with the range **A1:N14** selected, click the **More** button in the **Table Styles** group on the **Design** tab and then select **Clear**.

8. With a filled cell selected, display the **Data** tab and click the **Filter** button to clear the filter buttons.

9. Close the workbook <u>without</u> saving.

Driving Lesson 7 - Paste Special

⊡ Park and Read

When using **Copy** and **Paste** or **Cut** and **Paste**, the default is to paste the cell exactly as it was originally. **Paste Special** is used to paste cell information when a complete copy is not required. For example, **Paste Special** can:

- 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 formatting to another range, click the cell **A1** and in the **Home** tab, **Clipboard** group, click the **Copy** button.

4. Highlight the range **A2:A16** and select the **Paste** drop down arrow.

5. Many paste options are displayed in the drop down panel, but for the purposes of this exercise, select **Paste Special** to display the **Paste Special** dialog box.
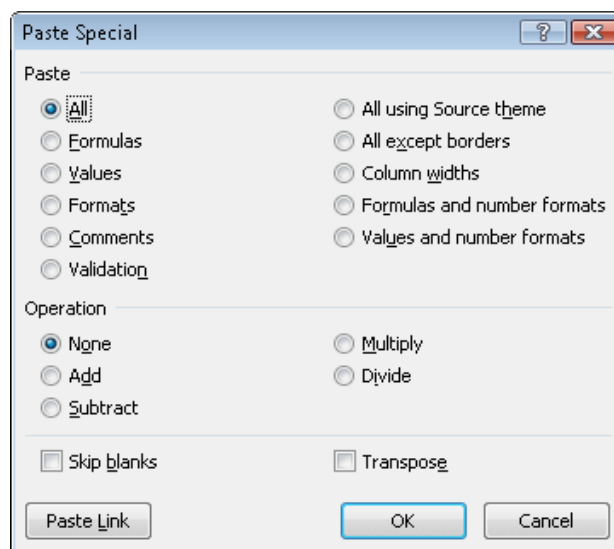
6. Under **Paste** select the **Formats** option and click **OK** to paste the formatting. The cell border from **A1** is pasted as well. Remove the unwanted borders to match those in column **B**.

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Driving Lesson 7 - Continued

7. Open the workbook **Outgoings**.

8. Select the range **A1:L10** and click on the **Copy** button.

9. Click on the *Excel* button on the **Taskbar** and then select the **Finances** workbook to make it active.

10. Click on cell **B5**. Click the **Paste** button to paste the contents normally.

11. Data can be pasted using a mathematical operation. Open the file **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 keep the original data, select cell **B2** then click the **Paste** drop down and 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, etc. Using the **Finances** workbook, January has ended and the figures in column B are required 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**. Click away from the selection.

20. Check that the cells **B4**, **B15** and **B16** contain values.

🛈 *Remember that this process removes formulas and therefore the worksheet cannot be used again. If repeated use is required, create and use a template.*

21. Save the workbook as **Finances2** and close it.

22. Close the workbooks **Income** and **Outgoings** <u>without</u> saving.

Driving Lesson 8 - Transposing Data

▣ 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 **Result** column is needed in a row.

2. Select the range **B3:C17**, then select to **Copy** the range.

3. Move to **A20** and click the **Paste** drop down and select **Paste Special**. Check the **Transpose** box.
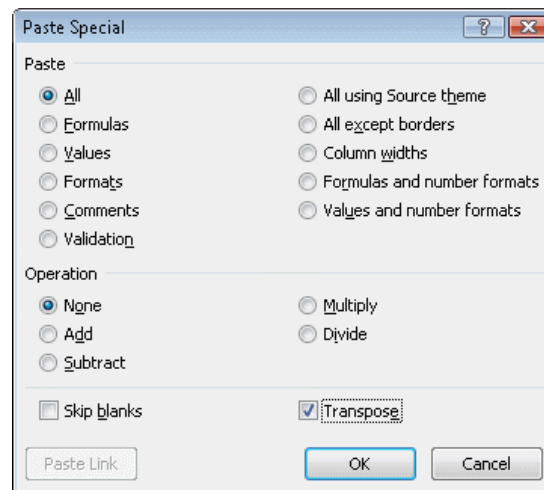
4. Click **OK**. Press <**Esc**> to exit the copy command.

5. The data is now shown in rows. Notice that the formats, i.e. 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 <u>without</u> saving.

8. Open the workbook **Budget**.

9. Transpose the range **A1:N14** to cell **A18**.

10. The borders are not appropriate. Undo the paste and transpose the range again, this time pasting only values.

11. Highlight the new range and add new borders as appropriate.

12. Check the formulas and print a landscape copy of the worksheet on one page.

13. Close the workbook <u>without</u> saving.

Driving Lesson 9 - Copying and Moving Sheets

▣ 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**.

2. Sheets can be moved and copied within the same workbook by dragging the sheet tab with the mouse. Move the **North Midlands** sheet to between **South Wales** and **Midlands** by clicking and dragging the tab to the correct position (the black triangle always shows where the sheet will be inserted). More sheets will appear when the cursor reaches the end of the displayed sheets.

3. Move the **North West** sheet to between **North** and **North East**.

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

4. A sheet is copied within the same workbook by holding <**Ctrl**> while dragging the sheet tab. To make a copy of the **North** sheet, hold down <**Ctrl**> and click and drag the **North** sheet tab across to the right, next to **North**. Release the mouse button first before <**Ctrl**>.

ℹ *The name of the copied sheet is **North (2)**. Duplicate sheet names are not allowed. A sheet is renamed by double clicking on it and entering a new name.*

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

Sheet Navigation buttons
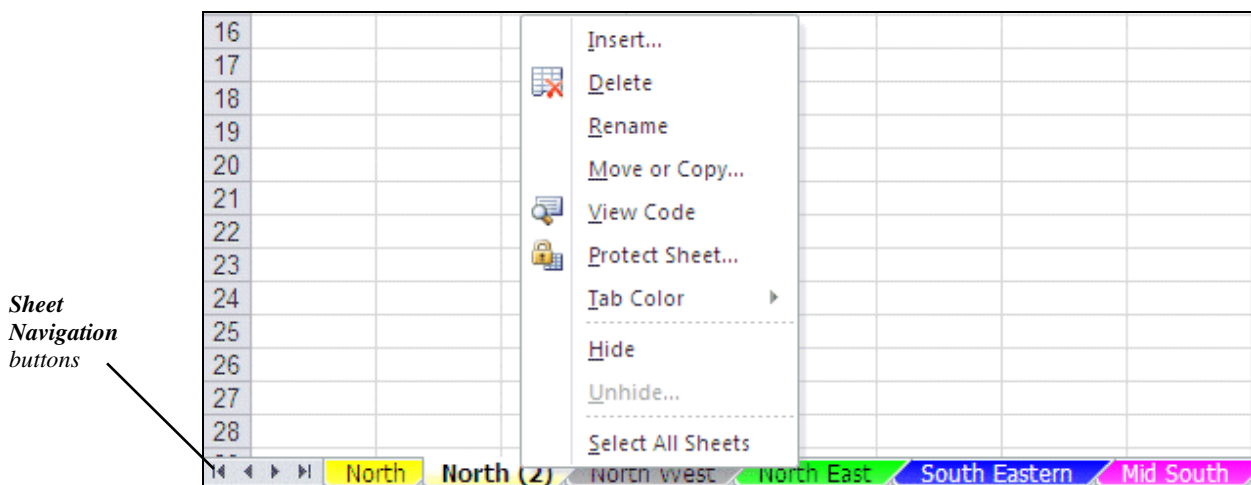
6. This menu controls all the actions relating to sheets. Select **Move or Copy**.

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Driving Lesson 9 - Continued
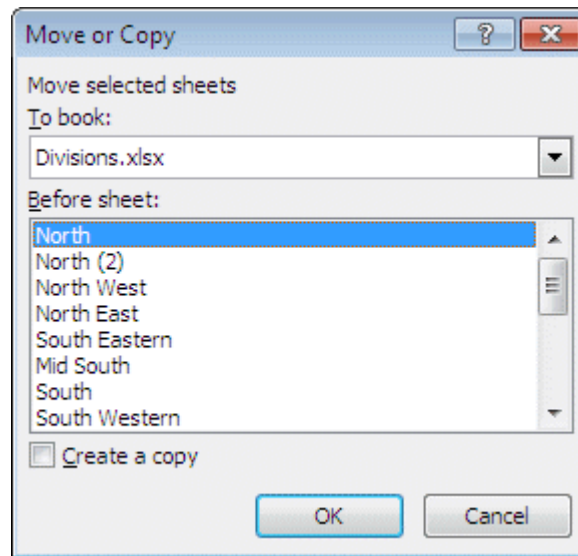
ⓘ *This above dialog box can also be displayed by using the **Home** tab, **Cells** group, **Format** button then under **Organize Sheets**, **Move or Copy Sheets**.*

7.   To create a copy the **Create a copy** box is checked, otherwise the sheet is moved. Check the **Create a copy** box.

8.   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 already be open, so it is displayed in the **To book** box.*

9.   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**.

10.   A new workbook is started with just the sheet **North (2)** in it. Display the **Divisions** workbook and check that **North (2)** is still in this book and that it was copied.

11.   Close both workbooks <u>without</u> saving.

Driving Lesson 10 - Revision: Formatting

This is not an ECDL test. Testing may only be carried out through certified ECDL test centres. This covers the features introduced in this section. Try not to refer to the preceding Driving Lessons while completing it.

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 off the screen to check that the titles are frozen.

5.   Format the whole worksheet in **Table Style Medium 3**.

6.   The screen is cluttered, change the row height of rows **2** to **16** to **15.00** units (20 pixels).

7.   The screen is now cluttered with zeros, 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, to display amounts greater than **1000** to be bold and displayed in blue text and saving levels under **0** in bold and displayed in 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.

If you experienced any difficulty completing this Revision refer back to the Driving Lessons in this section. Then redo the Revision.
Once you are confident with the features, complete the Record of Achievement Matrix referring to the section at the end of the guide. Only when competent move on to the next 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

To gain an understanding of the above features, work through the **Driving Lessons** in this **Section**.
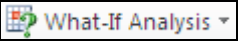
For each **Driving Lesson**, read the **Park and Read** instructions, without touching the keyboard, then work through the numbered steps of the **Manoeuvres** on the computer. Complete the **Revision Exercise(s)** at the end of the section to test your knowledge.

Driving Lesson 38 - Creating Scenarios

⊞ Park and Read

When a worksheet is used as a model, certain key input values are varied to see the effect on the resulting solutions. Separate versions of the worksheet, showing different input values and solutions, can be saved as **Scenarios**. This helps in "What-If?" situations, where various solutions can be named and be displayed to compare, for example, the best and worst cases.

↷ Manoeuvres

1.   Open the workbook **Food**, which shows the ingredients available to make 3 products and the profit from each product. Varying the production mix for each product (**F5:H5**) will produce different total profit. 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 **Data Tools** 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**, then 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 maximise the profit. Click **Add**, enter the name as **Guess** and click **OK**. Enter the values of the 3 cells as **100, 120** and **110**.
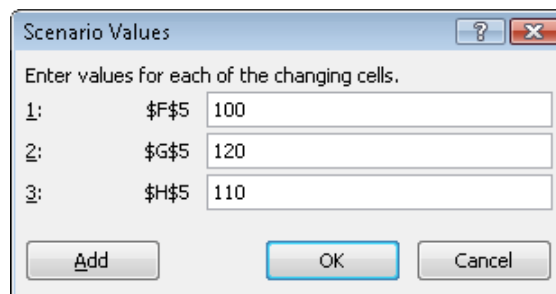
6.   Click **OK**. Click **Show** to see the results with these values.

7.   The next scenario will be another guess to try and maximise the profit. Click **Add**, enter the name as **Guess2** 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**. This **Scenario** will use figures that have been calculated elsewhere (using **Solver** - not included in this syllabus) to produce the best possible value of **Profit, G17**. 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.

Driving Lesson 39 - Using, Editing and Deleting Scenarios

▣ Park and Read

Once a set of **Scenarios** have been created, they can be viewed by selecting the required scenario from the list. **Scenarios** can also be edited and deleted using the **Scenario Manager** dialog box.

☞ Manoeuvres

1. The workbook **Scenario** should still be open. If not, open it.

2. Display the **Scenario Manager** from the **What-If Analysis** drop down. The four created scenarios are displayed in the list.
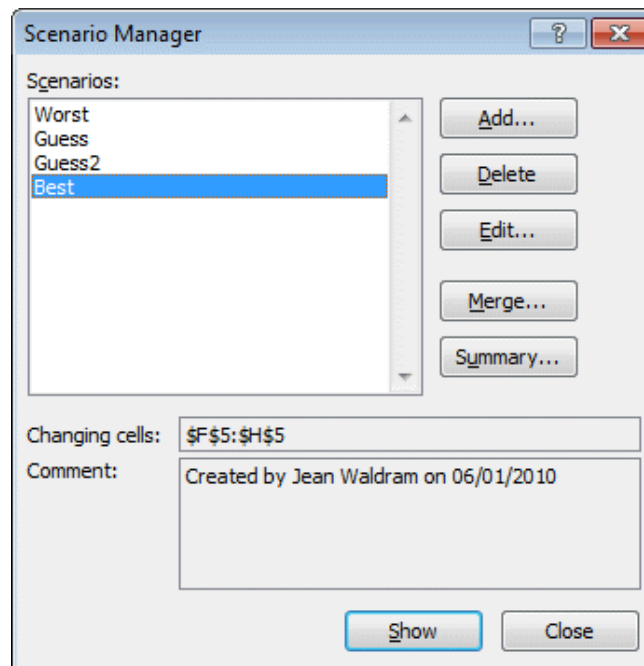
3. The scenario **Guess2** is not wanted, to delete it, click on **Guess2** and then click **Delete**. The **Guess2** scenario is removed from the list.

4. Select **Best** then select **Show** (the dialog box may have to be moved to see the values on the worksheet). The values and the solution for the **Best** scenario are now displayed. Note that most of the ingredients are used. Make a mental note of the **Total Profit**.

5. Show the **Guess** scenario. Note the **Total Profit** now.

6. Show the **Worst** scenario, click **Edit** and **OK**. The worst scenario can now be changed. Change the values so that they are all **50**. Click on **OK**.

7. Click **Show** to view the results then close the **Scenario Manager** dialog box.

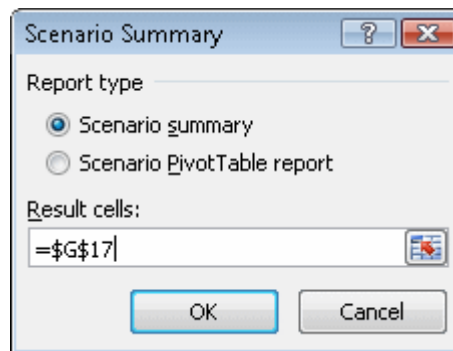8. Save the workbook using the same name and leave it open.

Driving Lesson 40 - Scenario Summary Report

▣ Park and Read

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

⮰ Manoeuvres

1.   The workbook **Scenario** should still be open. If not, open it.

2.   Display the **Scenario Manager**. Click on **Summary**.

3.   The **Result cell** is the **Total Profit**, **G17**. Click on the cell **G17**. Move the dialog box if necessary.

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

5.   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. The details of this process are covered in the **Adding Sub Totals** Driving Lesson.

6.   Note that the report is created on a separate sheet called **Scenario Summary** within the current workbook.

7.   Save the workbook using the same name and then close it.

Driving Lesson 41 - Revision: Scenarios

This is not an ECDL test. Testing may only be carried out through certified ECDL test centres. This covers the features introduced in this section. Try not to refer to the preceding Driving Lessons while completing it.

1. Open the workbook **Mailshot**.

2. The range **C7:C9** should be empty, if not delete the contents of the range.

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. Display **Guess2**.

7. Change the orientation to **Landscape** and print a copy of the worksheet.

8. Use the **Scenario Manager** to produce a **Scenario Summary**, the **Result Cell** is **I11**.

9. Print a copy of the **Scenario Summary**.

10. Display **Sheet1** and use the **Scenario Manager** to delete the Scenario **Guess3**.

11. Save the workbook as **Mailshot Scenarios**.

12. Close the workbook.

If you experienced any difficulty completing this Revision refer back to the Driving Lessons in this section. Then redo the Revision.

Once you are confident with the features, complete the Record of Achievement Matrix referring to the section at the end of the guide. Only when competent move on to the next Section.