Spreadsheet Methods 5N1977

8. Generate Spreadsheet Graphs

Contents

RMN

## 1. CREATE BASIC GRAPH TYPES

What is a graph or chart?

They are a visual method of comparing and interpreting data. They are used because a chart or graph is much easier to read and interpret than the spreadsheet data.

Create a Chart

1. To create a chart, type the information into a spreadsheet vertically as shown.

2. Highlight the data and the headings.

3. Then go to the **Insert** tab and go to the **Chart** group choose the style of chart required from this group. In this example a clustered column has been selected. This will automatically create the chart type selected.
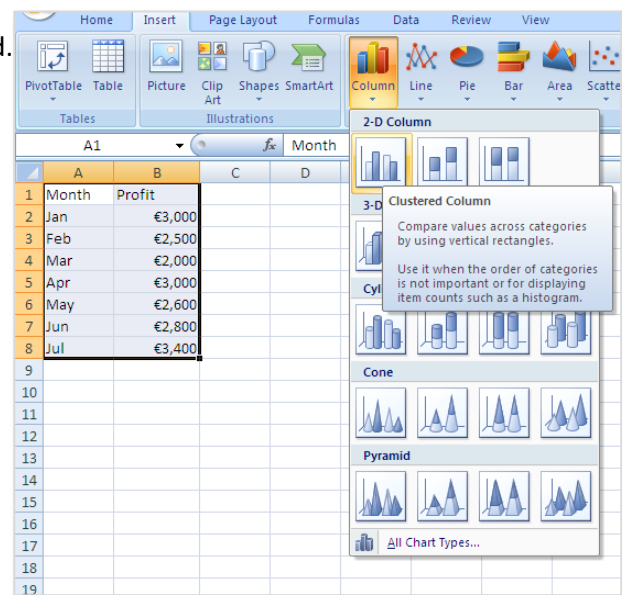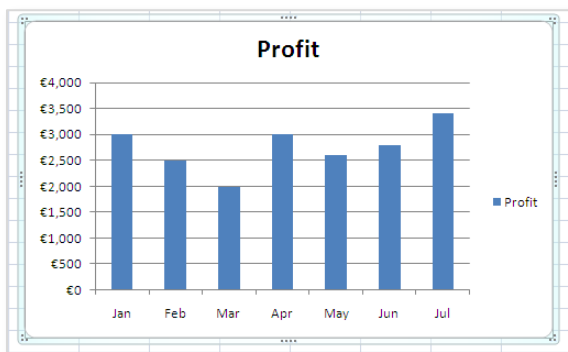

NOTE:

No blank rows and no blank columns in the highlighted area.

The highlighted area should only contain the heading and the numbers that create the chart.

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When the chart is selected three additional tabs are available on the ribbon at the top of the excel application – **Design**, **Layout**, **Format**.
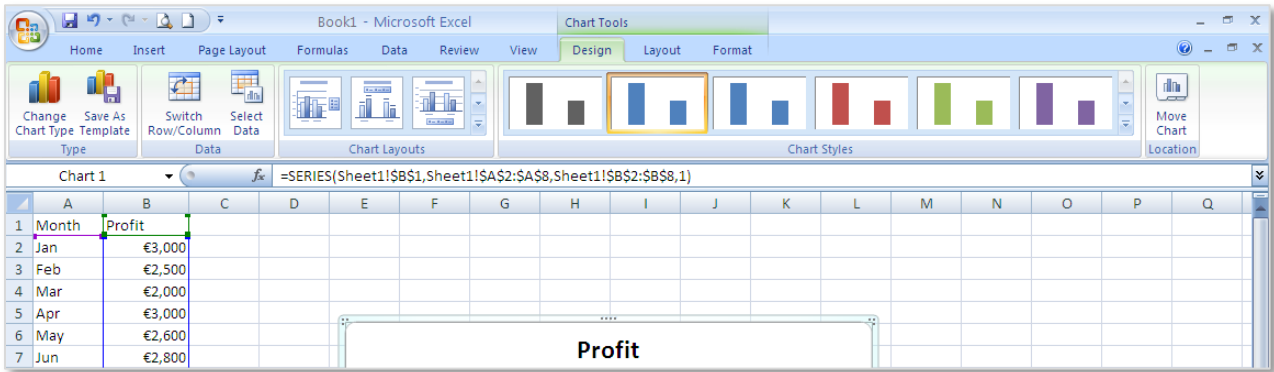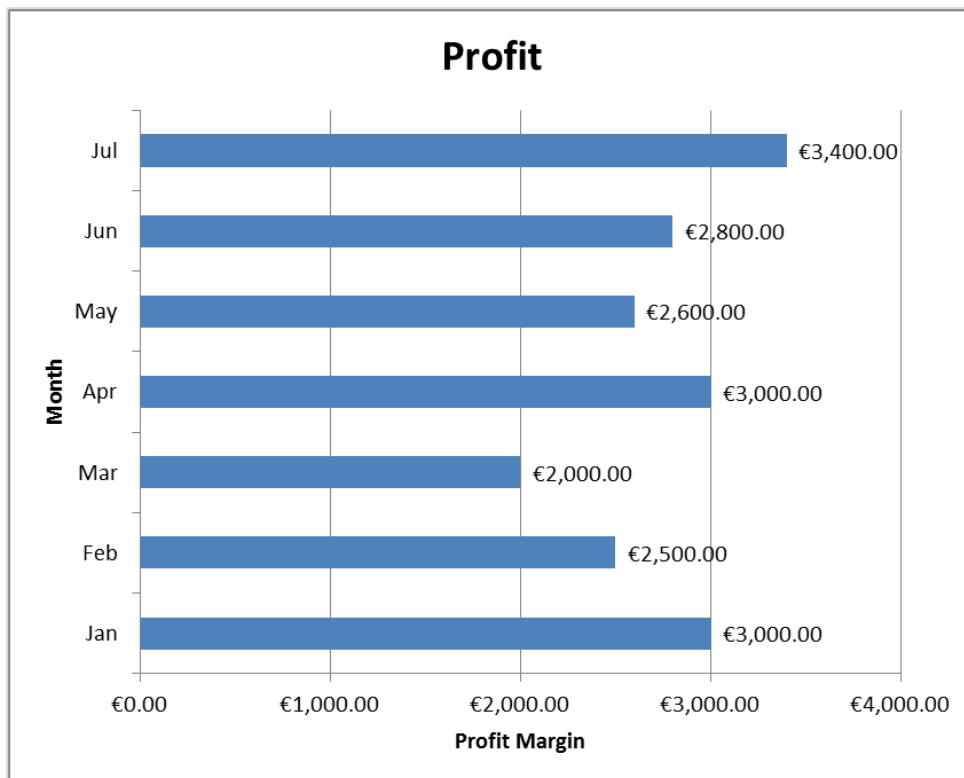

Create a Range of Different 2D and 3D Chart Types, e.g. Bar, Pie, Column

A variety of different chart types can be created the following are some examples and variations on these examples.
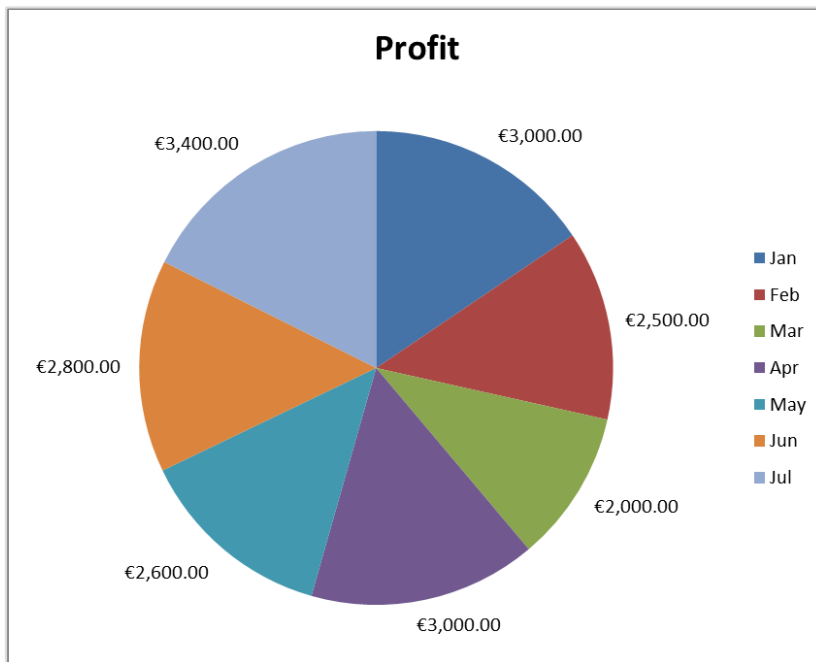
Bar Chart

A **bar** chart compares values across categories using horizontal rectangles.
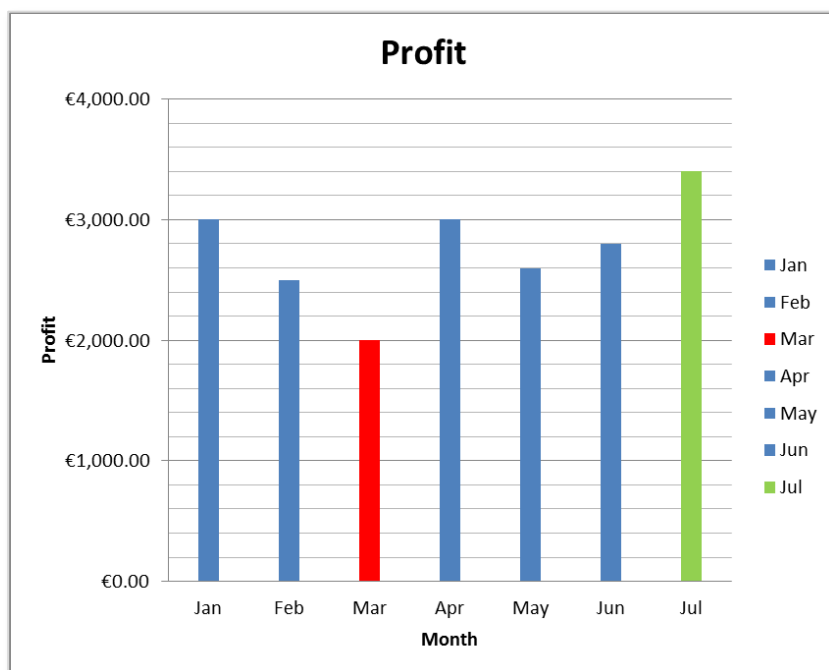
Pie Chart

A **pie** chart displays the contribution of each value to a total as a percentage area of a circle.

Column Chart

A **column** chart compares values across categories using vertical rectangles.

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Change a Chart to another Chart Style

Any chart can easily be changed to another chart type in the **Design** tab after the chart has been created. To do this click on the chart to select it and click on the **Change Chart Type** button then select ok.
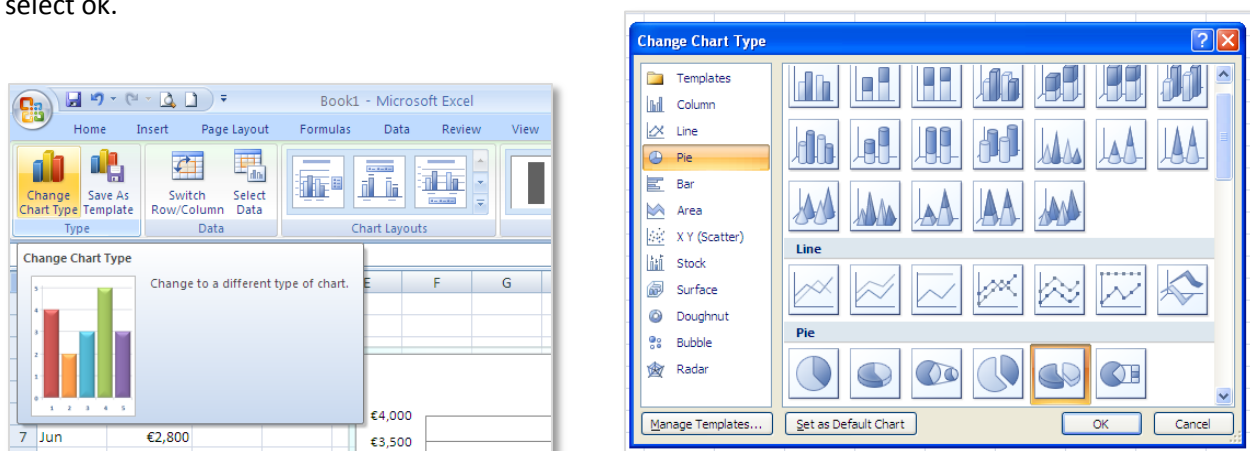
This will allow the chart to be changed to any type other chart option; the options available are as follows: Column, Line, Pie, Bar, Area, Stock, Doughnut, Surface, Bubble and Radar. Within these options the charts can be stacked, clustered and 3D.

Change a Chart Layout

To change the layout of the objects within a chart click on the **Chart Layouts** option in the **Design** tab, then choose the layout which is most appropriate. In addition to this the features of a chart can be moved by clicking and dragging.
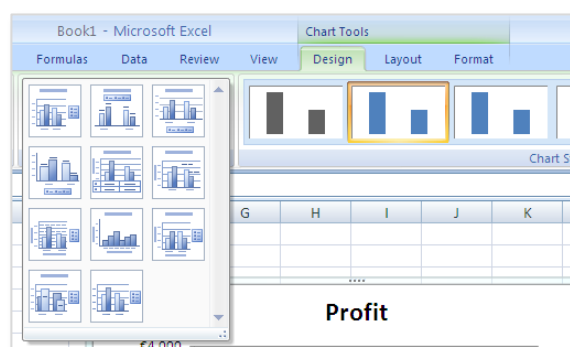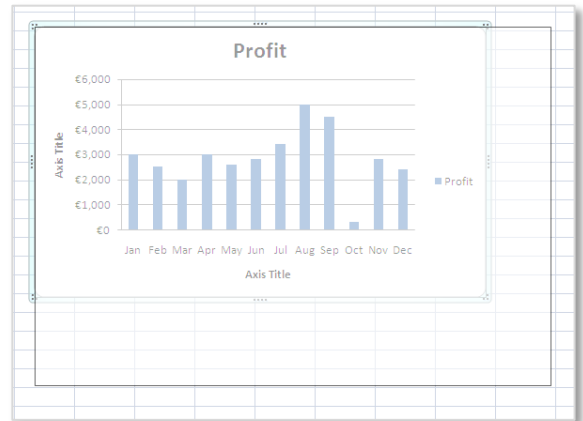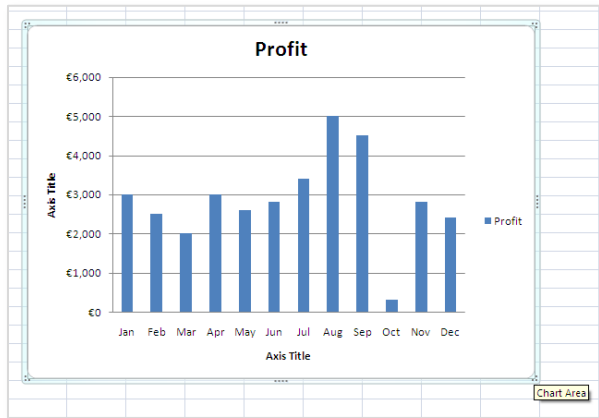
Checklist - ensure you can complete the following tasks:

☑ **Add a Chart Title**

☑ **Add X and Y Axis Titles**

☑ **Turn On/Off a Legend**

☑ **Turn On/Off Data Labels**

Change Chart Size

To change the size of a chart click on the bottom corner of the chart and using the movement tool drag out or in to the required size.

Change Colour Size

To change the Colour of any part or shape within the chart go to the **Format** tab. To change the **text** click on the text and choose and option from the **WordArt Styles** box.

To change the colour of the bars or shapes click on the shape and use the **Shape Styles** box to change the style of the shape.
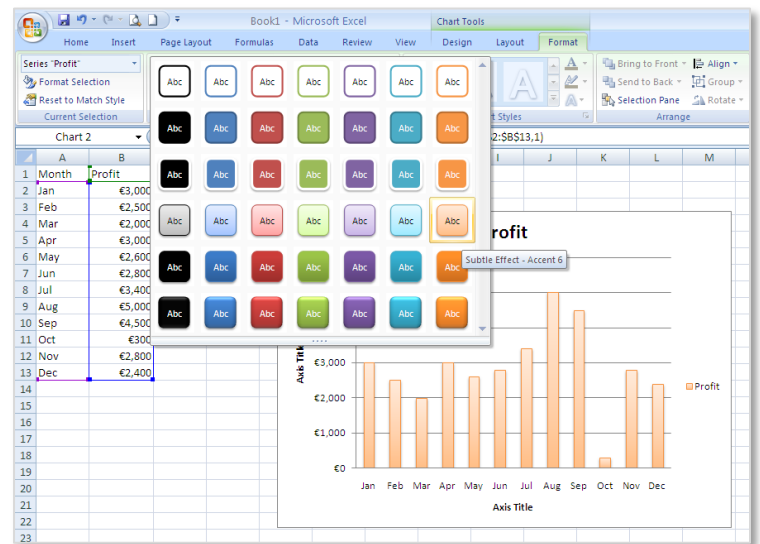
NOTE:

To individually change one bar to a different colour click on the bar, which will select all of the bars, wait for two seconds and click on the bar a second time. This will individually select the bar and allow it to be changed on it's own.

Change Data Selected

To add additional data to a chart type the extra information into the spreadsheet next to the original data with no blank lines between them.

Click on the chart and go to the **Select Data** button on the **Design** tab.

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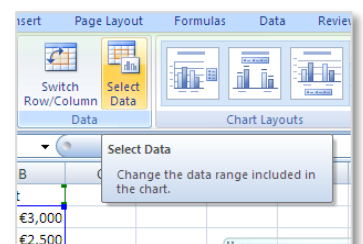
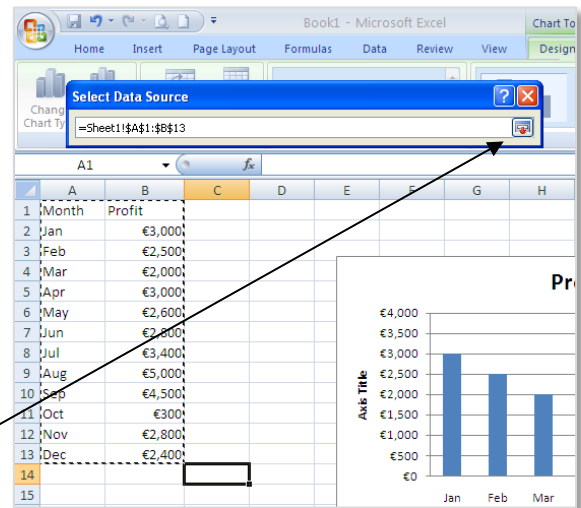This will open the **Select Data Source** window which will allow the selection of a new version of the source of the data. To change the data source click on the button to the right of the **Chart Data Range** and highlight the new data range. When the new data range is selected, click on the data range button to return to the chart. The chart will be automatically updated.

2. SAVE AND RETRIEVE GRAPHS

Graphs can be saved in the following two ways **embedded** or on a **separate sheet**.

Embedded

An embedded chart is a chart which is based or sitting on the same worksheet as the data it was created from, as with the example above.

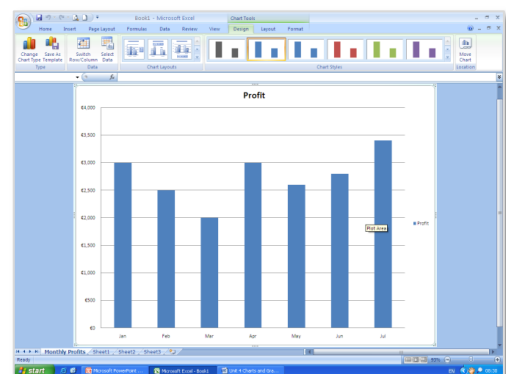### On Separate Sheet

To create a chart as a separate sheet click on the chart and select **Move Chart** option in the top right corner of the software in the design window. This will open the **Move Chart** window. Select the
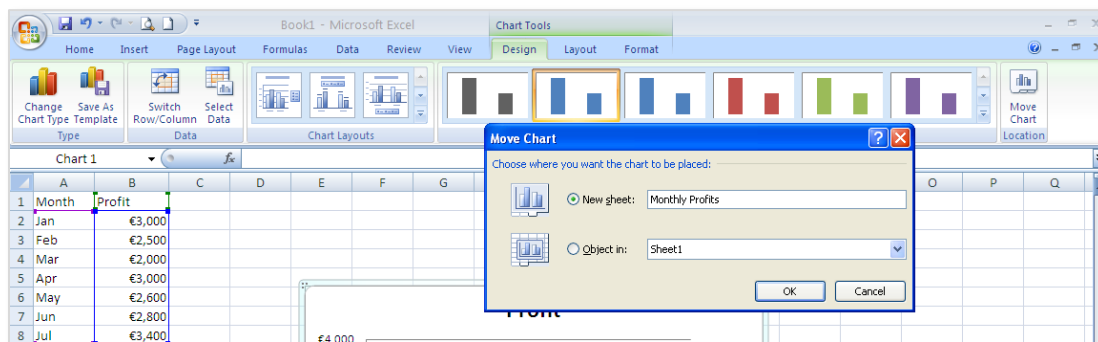
New Sheet option and **name** the sheet the chart will be moved to, then click on **Ok**.

This will create the table on a new separate sheet as a full A4 page size.

Add a Graph to Microsoft Word

When copying a chart to Microsoft Word there are a variety of different paste options. Copy the chart from Excel and paste it into the Word document, directly after pasting note the **Paste Options** button at the bottom corner of the chart. The five different options are as follows:

1. Use Destination Theme & Embed Workbook
2. Keep Source Formatting & Embed Workbook
3. Use Destinatin Theme & Link Data (if Excel and Word document are open at the same time and the data is updated in the Excel document the chart in the Word document will update).
4. Keep Source Formatting & Link Data
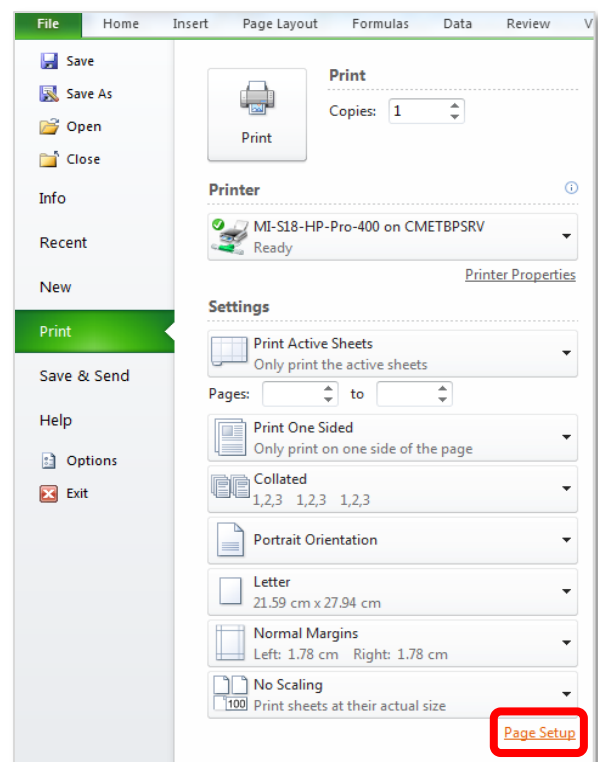5. Picture (image is pasted as a jpg and will not change if the chart is resized.

Experiment with each type of pasting to understand how it works.
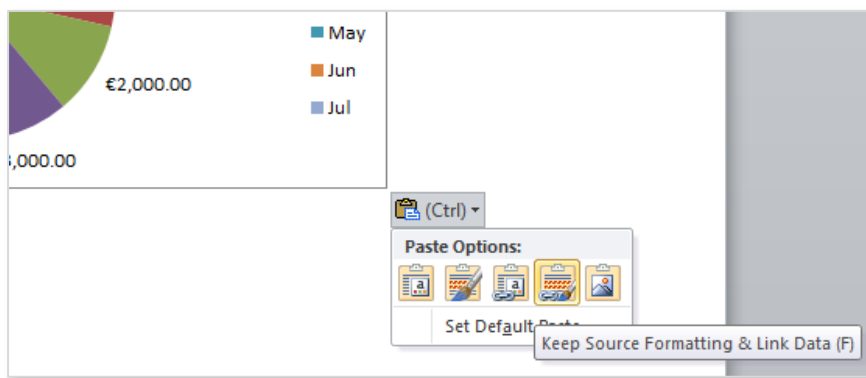
3.   PRINT GRAPHS WITH APPROPIATE TITLES AND LABELS

1. To add a title to the printed page go to:

File → Print → Page Setup

2. Under the **Header/Footer** tab a title can be added to the page before it is printed.

3. To enter a title click on **Custom Header** or **Custom Footer**. The header or footer added to the page will display only when the page is **printed** or in the **print preview**.
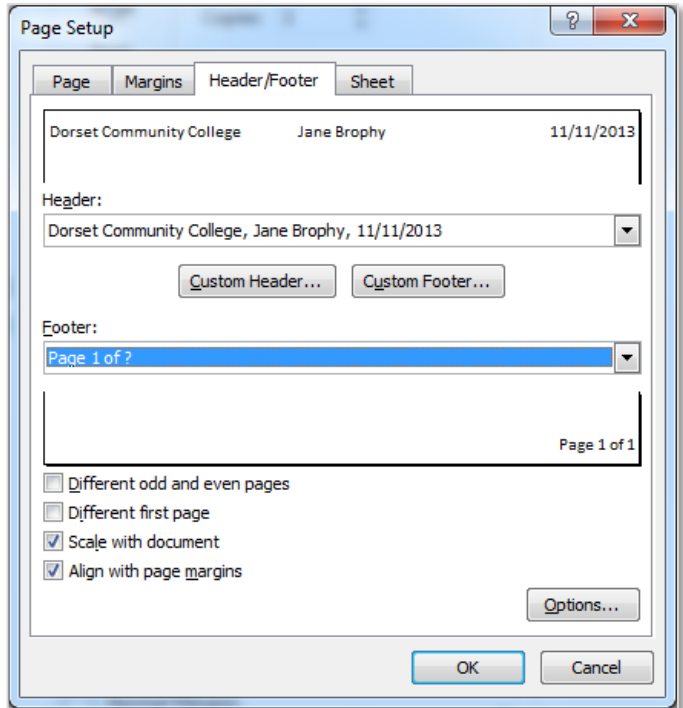
The header can be entered to the left, centre and right of the page. Read the instructions available in the paragraph to the top of this window.
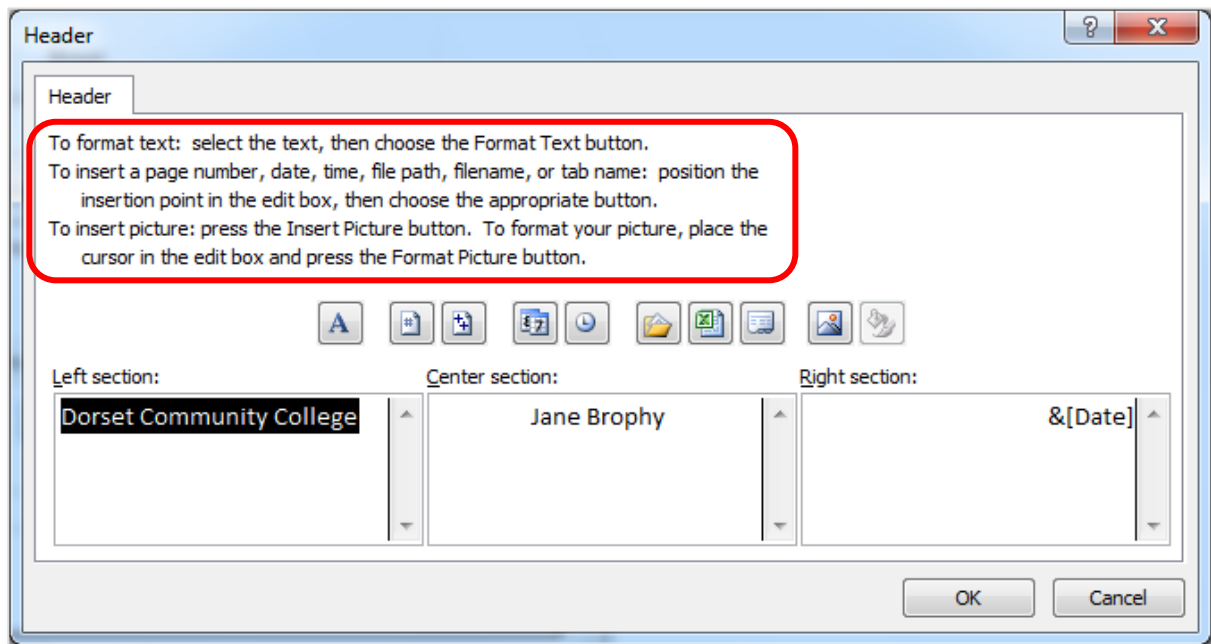
The date, page number and saved location of the file can be entered using the buttons available in the centre of this window.

Formatting for the page footer can be applied in a similar way.

NOTE:

In **2010** software forward:

The header and footer can also be added by going to **Insert** tab → **Header & Footer**.

The spreadsheet is automatically changed to **Page Layout View**, from here you can type directly into the header or the footer of the document.

Note the Header and Footer toolbar are available in the when they are selected. Become familiar with all the buttons available on this tab.

To change back to the normal view **click onto the spreadsheet page** and go to **View** tab →**Normal**.
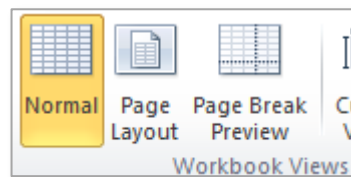
4. CREATE A CHART WITH NON-ADJACENT RANGES

When creating a chart with columns that are not adjacent - highlight the first column, **then** press the **Ctrl** key on the keyboard and highlight the subsequent columns (it is a common mistake to press the **Ctrl** key before the first column is highlighted – this will result in Excel not creating the chart correctly as an additional empty cell will have been selected).

	A	B	C	D	E	F	G	H
1	Artist	Date	Stalls	% Full	Circle	% Full	Balcony	% Full
2	The Corrs	08/09/2003	150	50%	300	100%	220	73%
3	The Frams	10/09/2003	276	92%	245	82%	141	47%
4	Aslan	11/09/2003	290	97%	307	102%	209	70%
5	Jack L	14/09/2003	250	83%	312	104%	196	65%
6	Westlife	18/09/2003	300	100%	350	117%	250	83%
7	Ronan Keating	20/09/2003	100	33%	267	89%	233	78%

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