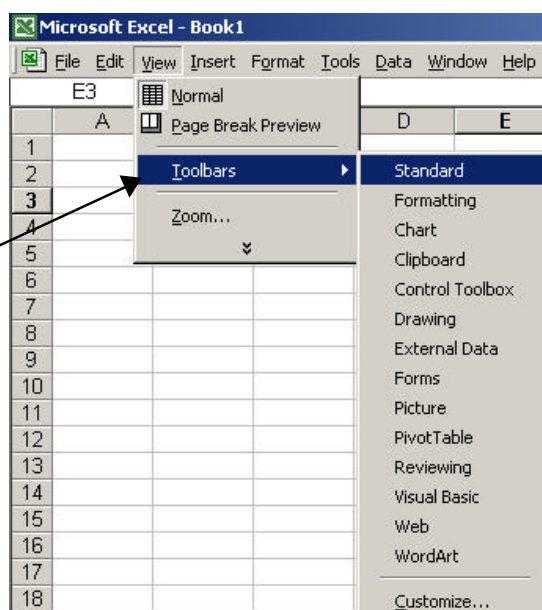# Draw pie charts in Excel

This activity shows how to use a spreadsheet to draw pie charts.
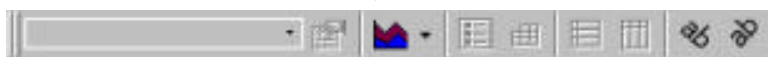
- Open a new **Excel** workbook and look for the **Standard Toolbar**.

- If it is not there, left click on **View** then **Toolbars**, then **Standard** to make it appear.

- Now look for the **Chart Toolbar.**

- If it is not there, left click on **View** then **Toolbars**, then **Chart** to make it appear.

- Now **enter data** onto the spreadsheet. The data given here are the % of European holidays sold by a travel agent in different countries in Europe. Use this or use your own data if you wish - put the categories in column A and the number of items or percentages in column B.

	A	B
1		%
2	Spain	38
3	France	24
4	Greece	12
5	Italy	8
6	Other	18
7		

- Left click on **File**, **Save As** and **save your spreadsheet** using an appropriate name.

- **Highlight the figures in column B** (as shown above) – to do this left click on the first figure, drag the mouse downwards over the other figures and release the mouse when you reach the bottom of the list.
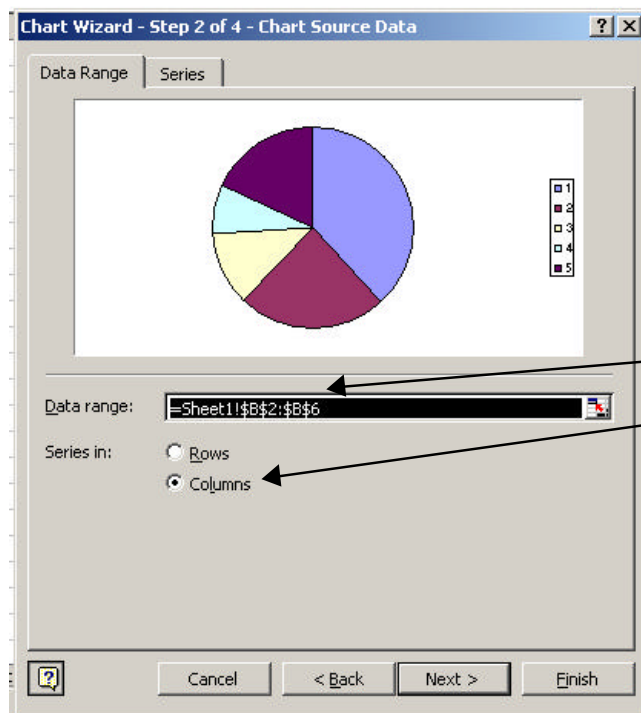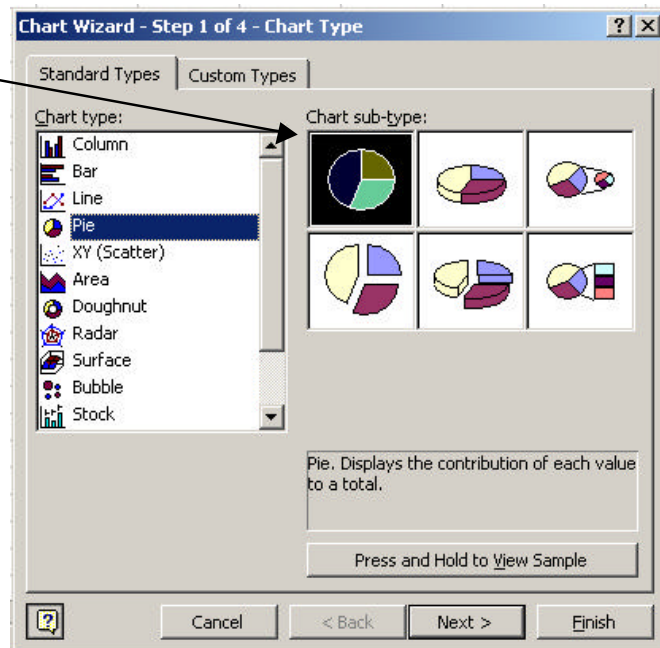
- Left click on the **Chart Wizard**, then **Pie** to select the chart type.

In this case the first 2D option is selected – using a 2D pie chart has the advantage that you can check it by measuring the angles once it is drawn.

- To continue, left click **Next.**

The menu for Step 2 is shown here. It shows the cell references for the **Data range** and that the data was in columns rather than rows.

If you highlighted the data correctly in Step 1, you will not need to alter anything here.

- Left click **Series** at the top of the menu.

- When you left click **Series,** this menu will appear.

- Enter a **Name** for your data.

- **To label the categories** in your pie chart left click on the button at the end of the **Category Labels** box. Excel will take you back to the data.
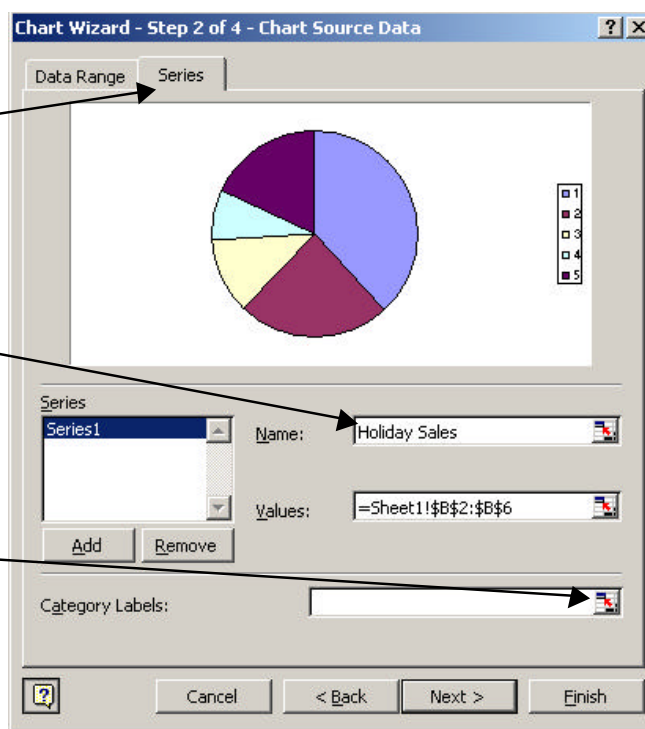
- **Highlight the categories in column A** – to do this left click on the first category, drag the mouse downwards over the other categories and release the mouse when you reach the bottom of the list.
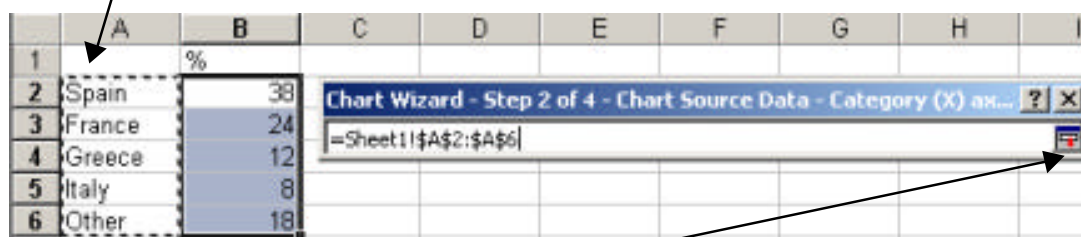
- Left click on the letter box button at the end of the **Chart Source Data Category Labels** box. This enters the cell references of the category labels into the Step 2 menu.

- To continue, left click **Next** – this will take you to Step 3.

- Look at the **Chart title** - the name you entered for your data will be here. Decide whether you would like to alter the wording. Here the wording has been extended to give more information about what the pie chart shows.
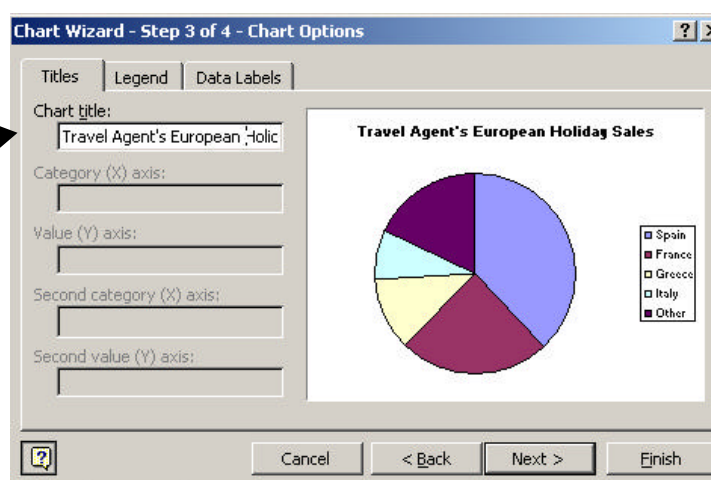
- Left click on **Legend**
  This menu shows that the key is to the right of the pie chart. **Experiment** with the other options and choose the one you prefer.
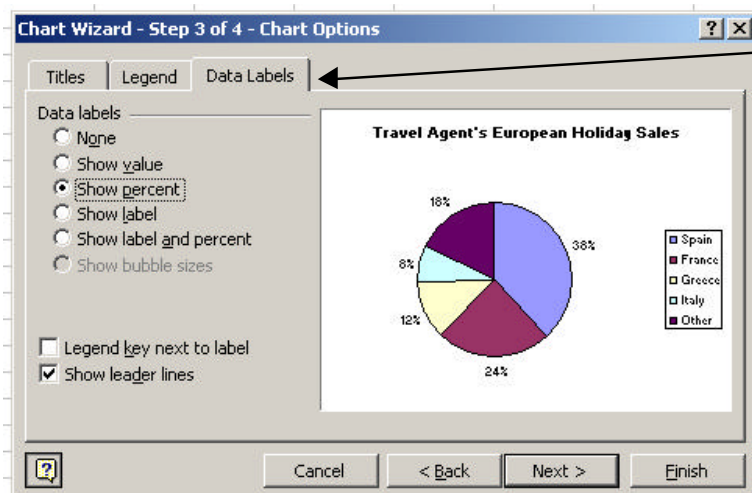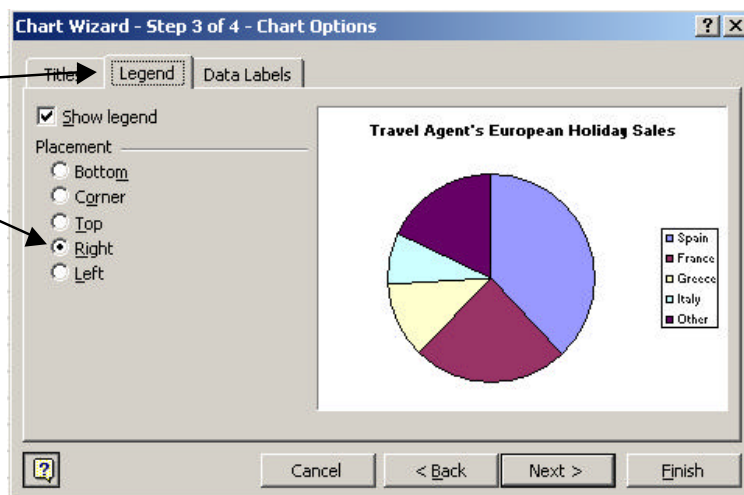
- Left click on **Data Labels**
  This menu allows you to label the sectors of your pie chart with the category names, frequencies (value) and/or percentages.

- **Experiment** with these options now.

- When you have chosen the data labels you want, left click **Next** to take you to Step 4.

The next menu allows you to decide whether you want your chart on the same sheet as your data or on a new sheet.

- Choose to have the pie chart as an object on the same sheet as the data (as shown here).
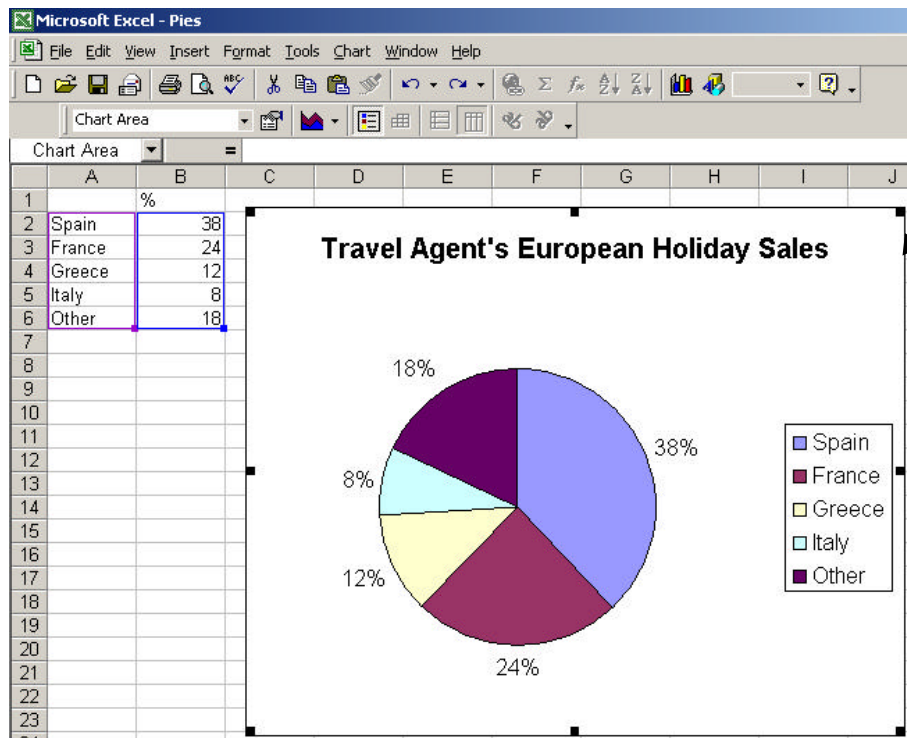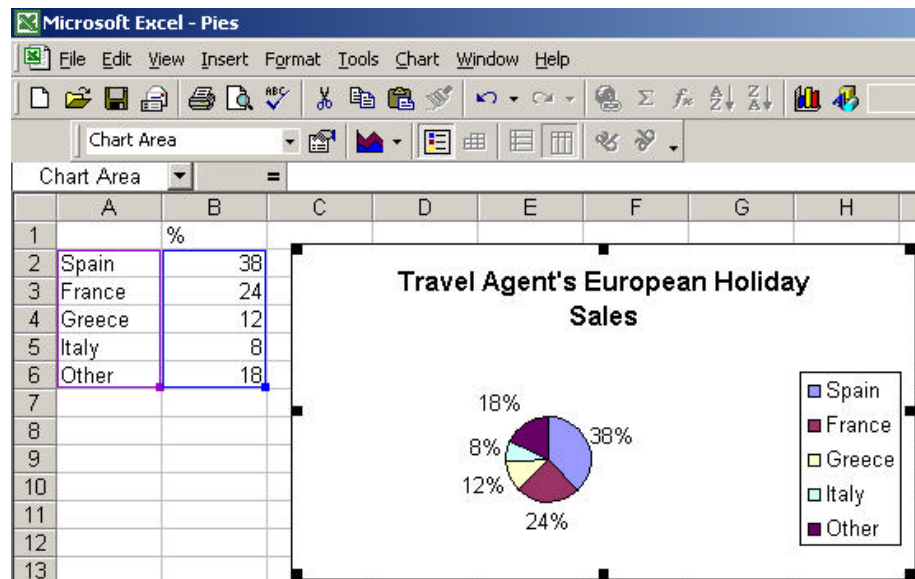
- Then left click **Finish**.
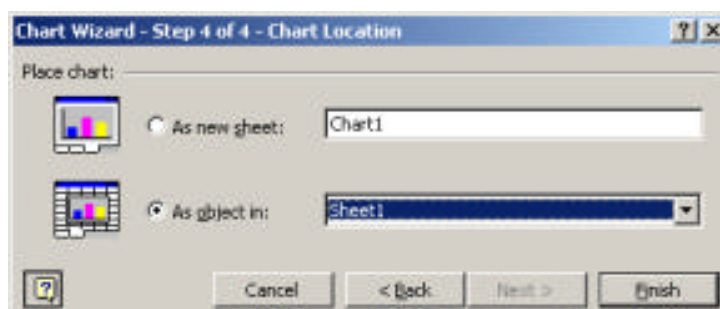
The pie chart should appear next to your data.

- **Save** the spreadsheet again (and **remember to do this regularly as you proceed**).

- **To move the chart** left click on the chart and *at the same time* drag the mouse.

- **To change the size of the chart**, left click on the **handles** and *at the same time* drag the mouse.

There are other ways in which you can change the appearance of your chart.
The following pages describe some of the things you can do.

- **Experiment** with the different things you can do.
  Remember that you can undo anything you
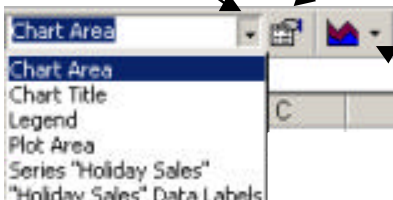 don't like by left clicking the **Undo** button. ⟶

Using the Chart Toolbar

Left click on this arrow to get a list of items you can change.

Left click on one of the items in the list then left click on this button to get menus related to that item. Experiment with the different options.
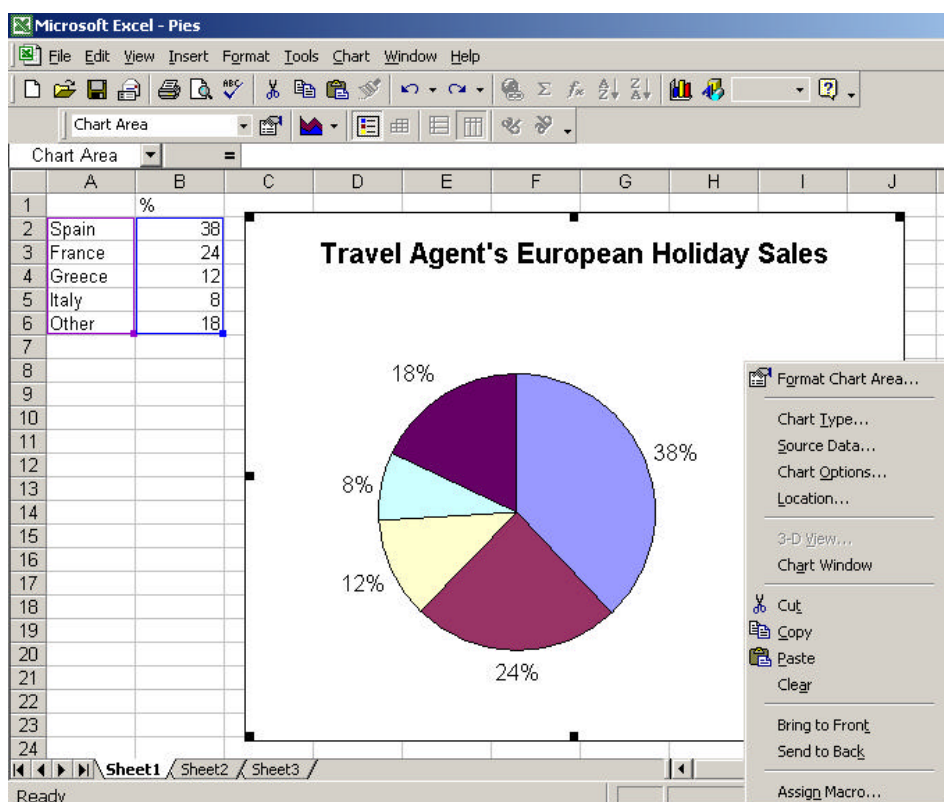
Note that this button allows you to change the type of chart (eg you can change the pie chart to a bar chart).

Alternative ways of changing things

Right clicking on different parts of the chart also gives different menus and options.

For example, right clicking on an empty part of the chart gives the menu shown below.

Left clicking **Format Chart Area** on this menu allows you to change things like the background colour of your chart, the colour, style and thickness of the border around the chart and the size and style of the text.

Left clicking **Chart Type**, **Source Data**, **Chart Options** or **Location** on this menu takes you back to the menus you used when setting up your chart.

Right clicking on the pie itself gives the menu shown below.
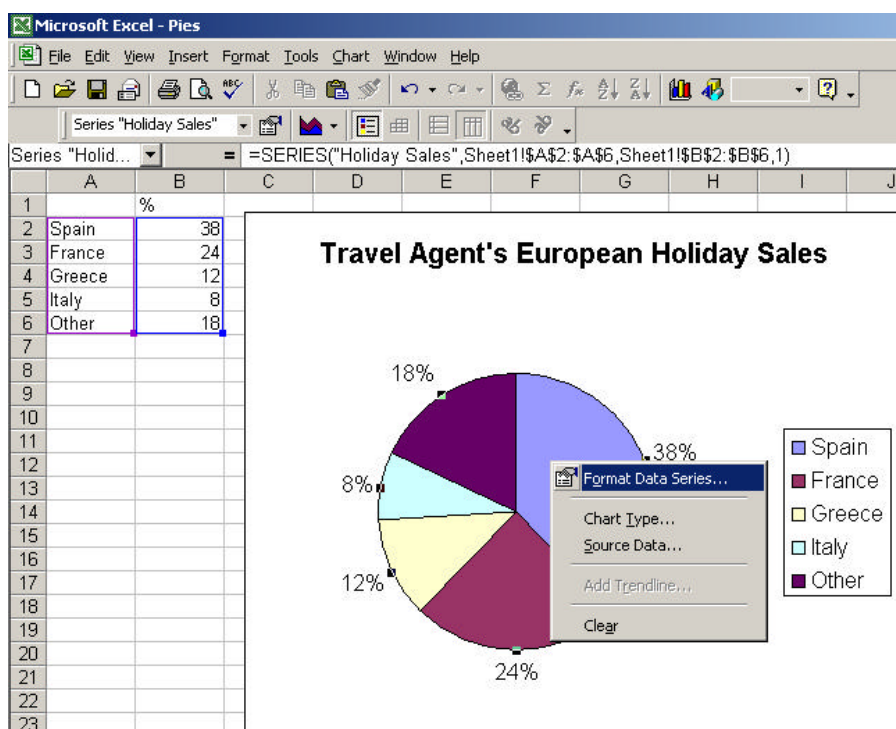
Left clicking **Format Data Series** allows you to change things like the colour and thickness of the border line around the pie.

If you wish to change the colour of *just one sector of the pie*, you need to select that sector first. To do this left click once or twice on it until handles appear just round that sector. Then right click to obtain a menu saying **Format Data Point** instead of **Format Data Series** (as shown below).
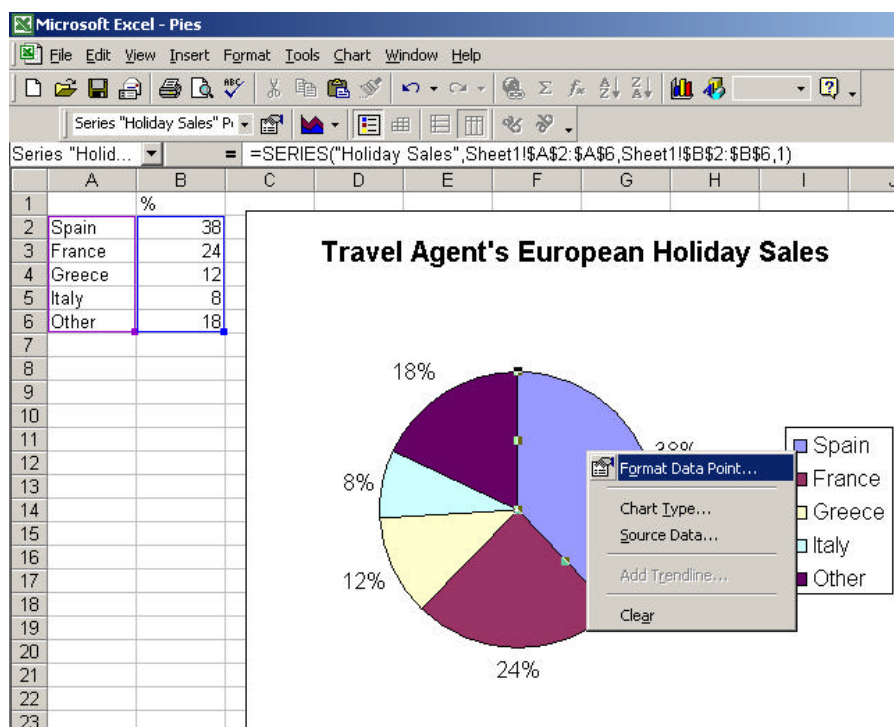
Left clicking **Format Data Point** gives this menu.

You can select a different colour for the sector as well as changing the colour and thickness of the border line around the sector.

Fill Effects gives other options such as the patterns shown below. Using black and white patterns is useful if you have not got a colour printer.
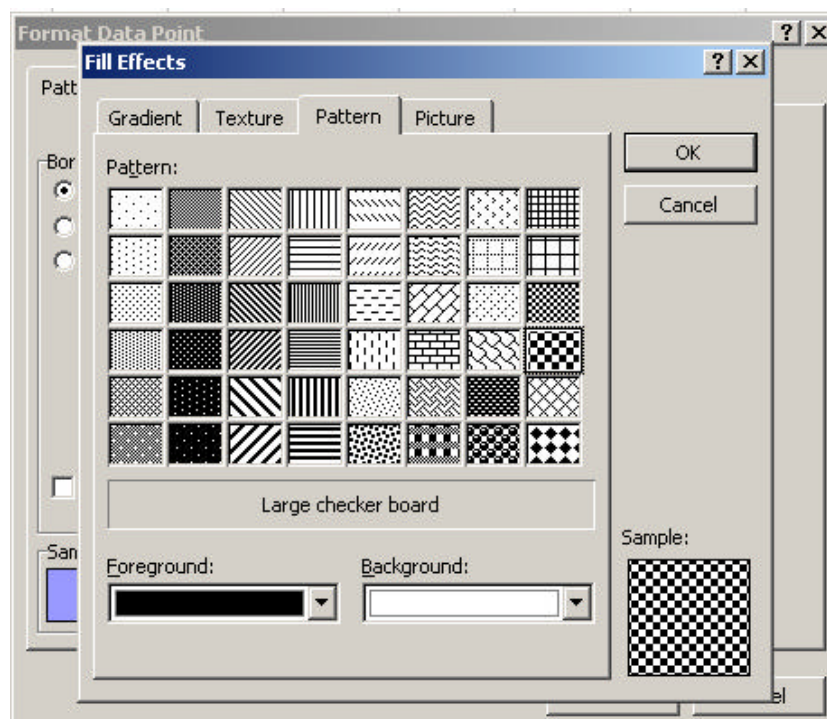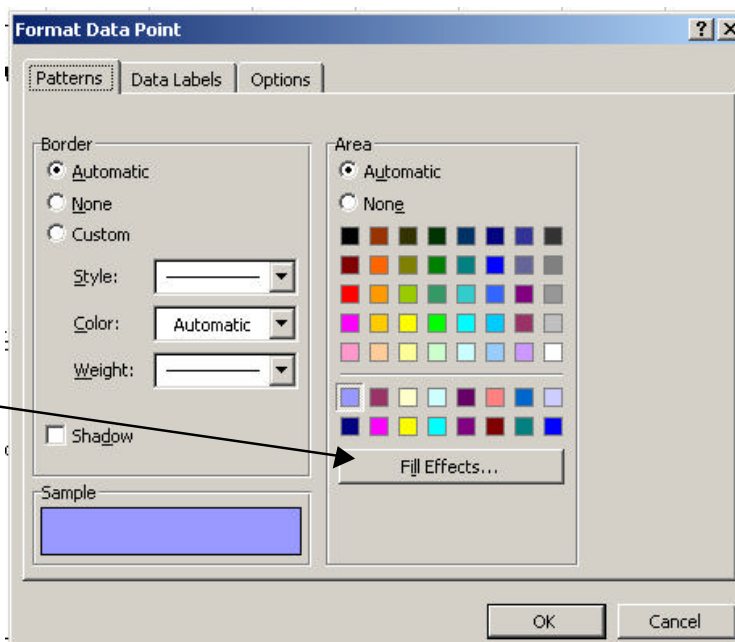
- **Experiment** with these options to find out about the wide variety of effects you can produce.

- **Draw other pie charts.**

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Teacher Notes

Units   Foundation Level, Making sense of data
Intermediate Level, Handling and interpreting data
Advanced Level, Using and applying statistics.

Skills used in this activity:

- drawing pie charts in Excel

Preparation
Students will need to have some basic knowledge of computer terminology and the use of computers (eg how to use the mouse and menus in Excel).

Notes
Another activity called 'Pie Charts' shows students how to draw pie charts by hand.
This resource contains lots of other data that could also be used for extra practice in Excel.

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