

SHQ: How do I interpret a pie chart?

There are different ways to present the same information – look at the graphs below taken from BBC Bitesize. They each show the same information presented in a different way. Which is the easiest to understand?

Bar chart



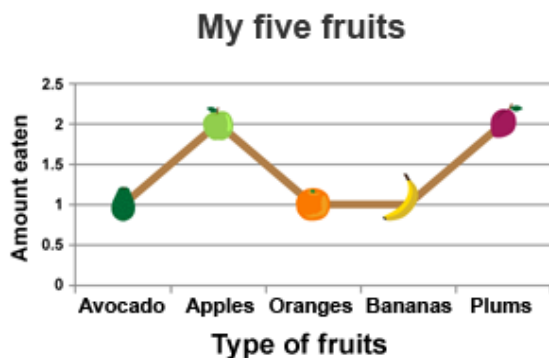
SOURCE: The family fruit bowl

Each bar in a bar chart represents a different category and its height or length shows its value or quantity. The longer the bar, the more things there are in that category.

You might use a bar chart to represent pupils' favourite meals in your school.

In this bar chart you can see that two apples and two plums have been eaten.

Line chart



SOURCE: The family fruit bowl

Line charts can be used to display data that has been gathered over a period of time.

The data is plotted using points, which are then connected together to form a line. This line shows how the quantity changes over time.

A line chart is a good choice for a chart that shows changes in temperature over a year.

Pie charts



SOURCE: The family fruit bowl

Pie charts are simply circles divided into sections. Each section represents a fraction of the total data.

This enables you to easily compare sizes or to see how a total is shared between different categories.

In this lesson, we will be looking at pie charts. The pie chart is split into segments to show how each part fits into the whole. The whole circle represents ALL the results.

Usually a tally chart is used to collect results before putting these into a pie chart.

For example:

Here is a tally chart to show the favourite type of crisps chosen by a group of 40 children:

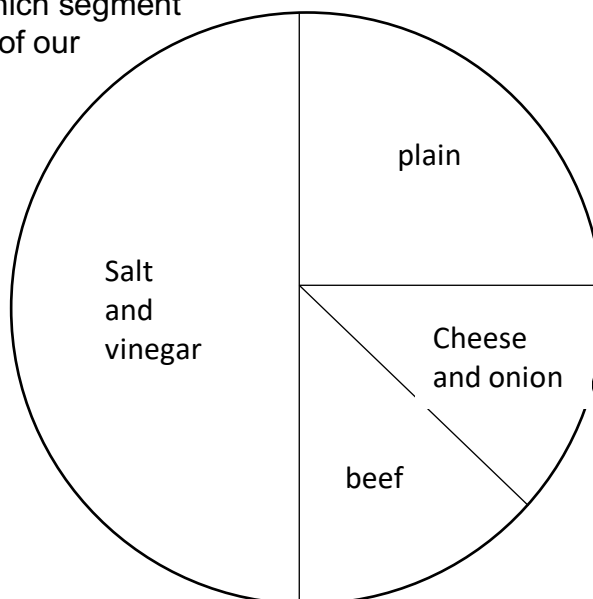
Flavour of crisp	Number of children who chose this flavour	Total per flavour
Plain		10
Salt and vinegar		20
Cheese and Onion		5
Beef and onion		5

The information can then be shown in a pie chart.

We know that $\frac{1}{2}$ of the children preferred salt and vinegar; $\frac{1}{4}$ of the children preferred plain, $\frac{1}{8}$ of the children preferred cheese and onion and $\frac{1}{8}$ preferred beef.

We can split the pie chart up into segments representing these fractions:

It is important to label the pie chart to show which segment refers to which part of our tally chart.



A pie chart is often an easier way of interpreting data quickly. Here, for example, we can see immediately that salt and vinegar was the most popular flavour as it is the biggest segment in the pie chart.

Using the information above have a go at the Power Maths problems on the resource sheet for **worksheet 8**. If you want a challenge, try **Question 5**.
When you have completed the questions you are going to try, look back over your work and try the 'reflect' question at the end. The answers for all the questions can be found in the Week 9 Maths Answers resource