

SHQ: How do I interpret a line graph?

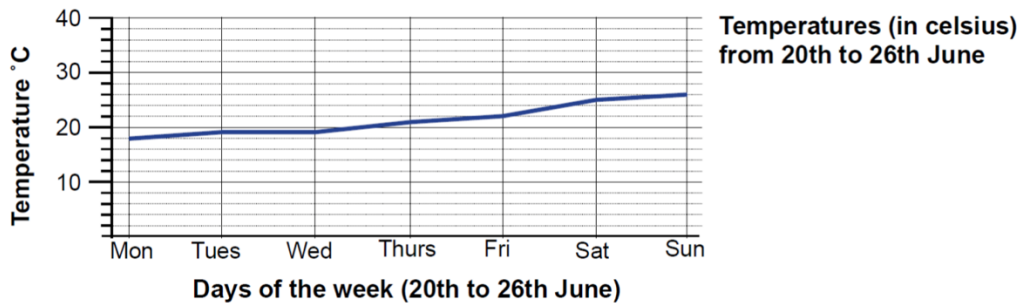
Line graphs are usually use to represent data that shows how a variable changes over time.

For example,

- the temperature in a classroom throughout the day might be recorded each hour.
- Line graphs can be used to convert between one unit and another (eg currency)

Have a look at the line graphs below and try the questions with each:

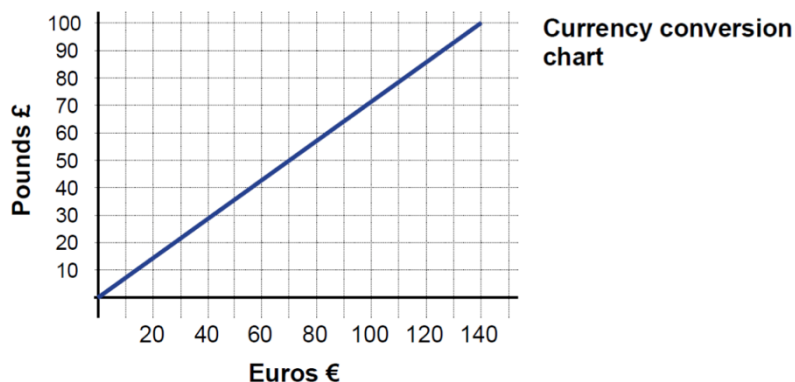
Use the temperature chart to answers questions 1 to 4.



1. Which day was the warmest?
2. Which was the coldest?
3. What was the temperature on Saturday?
4. When was the biggest change in temperature?

Use this currency conversion chart to answer questions 5 to 8.

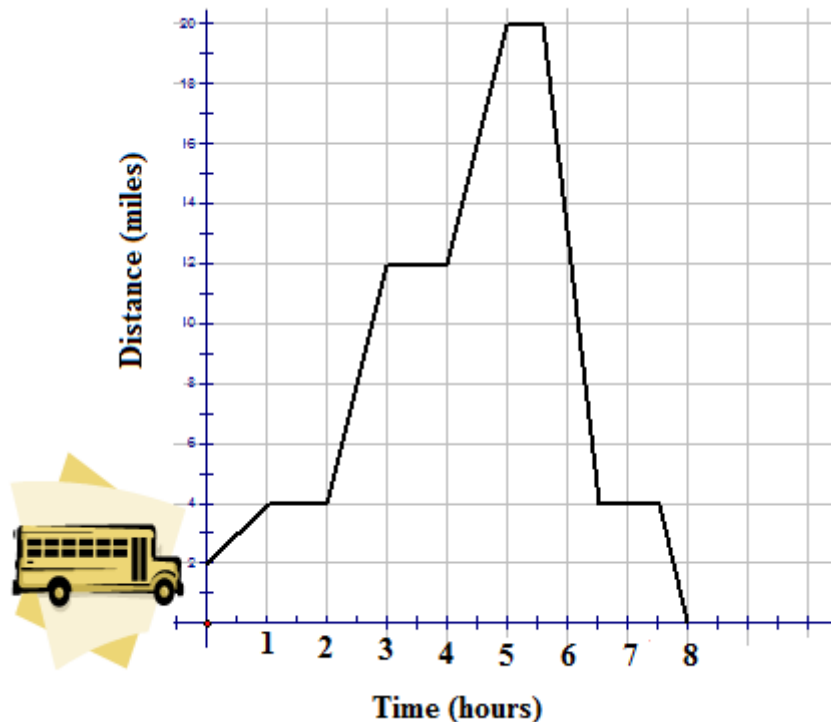
The chart shows pounds (£) and euros (€)



5. About how many euros will I get for these amounts: £25, £50, £70, £100?
6. About how many pounds will I get for these amounts: €25, €50, €70, €100?
7. I exchanged £100 into euros. On my holiday I spent €110 altogether. When I got home I exchanged the money left over back into pounds. Using the conversion chart about how much money did I get back?

Sometimes, line graphs are used to track journeys. On these occasions, the line graph may have some parts of the line that are horizontal, rather than on a gradient.

Look at the following example which shows a bus journey over a 8 hour period:



You will notice that there are three parts of the line which are horizontal: this shows that at these points, the bus wasn't moving.

However, time was still passing. It is possible to work out how long the bus was stopped for on each occasion by looking at the 'Time' on the X axis.

Here, the bus stopped for one hour each time.

The steeper the gradient (or slope) the faster the bus is travelling. For example, in hours 2-3, the bus travelled from the 4 mile to the 12 mile point (8 miles) but in hours 0-1, it travelled from 2 to 4 miles (2 miles in total)

Using the information above have a go at the Power Maths problems on the resource sheet for **worksheet 9**. If you want a challenge, try **Question 4**.

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