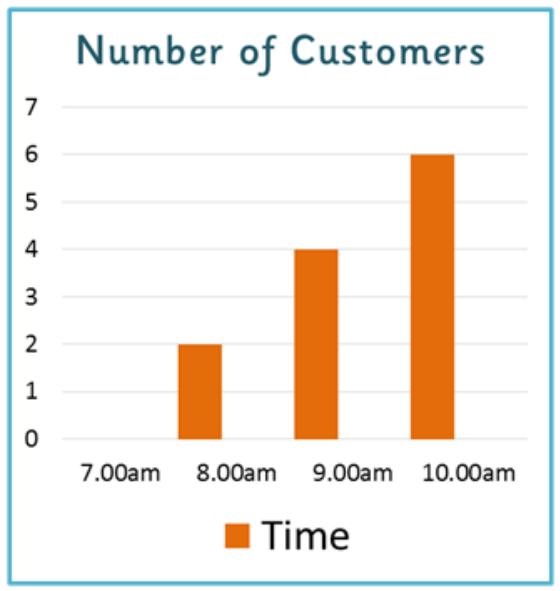
22.10.2021

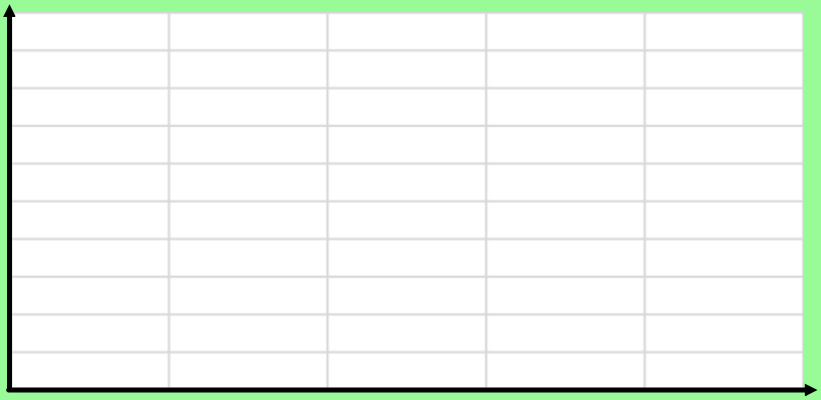
LO: read and interpret line graphs



Data is very useful because it can be used to show patterns.

Shops look at data to know how much of their stock sells at each time of the year. They use this information to predict how much they will need at certain points of the next year, or when busier periods might be.

Line graphs are used to represent continuous data (data that is measured over time, such as your height, temperature). They are not used to represent discrete data (data that is counted, such as your favourite colour, chocolate, game).

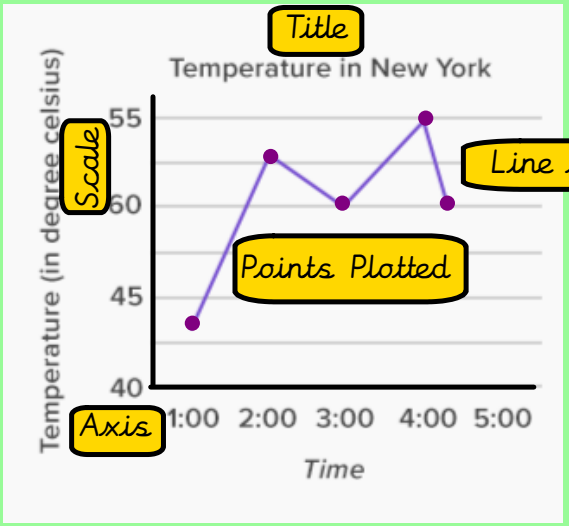


This is the vertical axis or the 'y axis'.

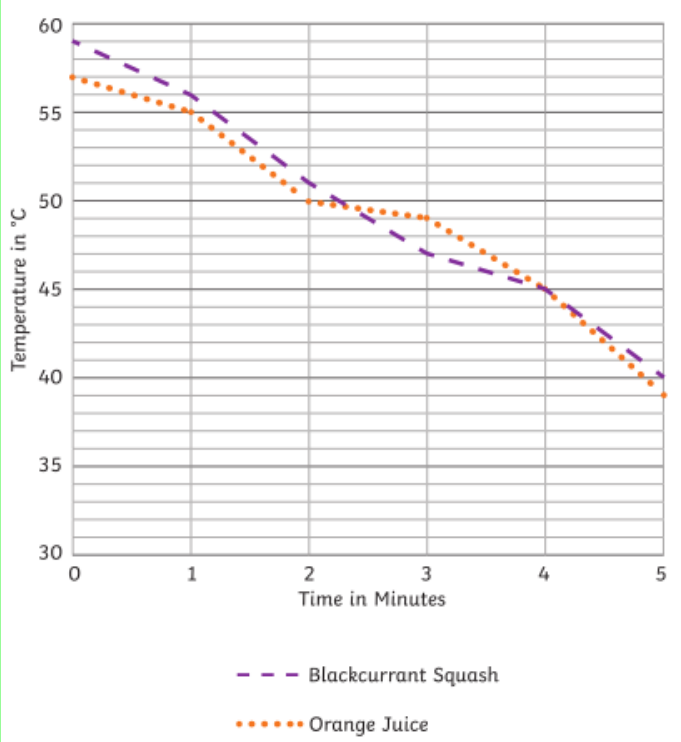
This is the horizontal axis or the 'x axis'.

Axes are the horizontal and vertical lines used to frame a graph or chart:

Features of a line graph:



Year 5 are investigating how quickly different liquids cool over 5 minutes after heating them up in the microwave. They measure the liquid every minute as they cool down.



1) What was the temperature of the orange juice after 2 minutes?

2) At which minute was the temperature of blackcurrant squash 47 degrees?

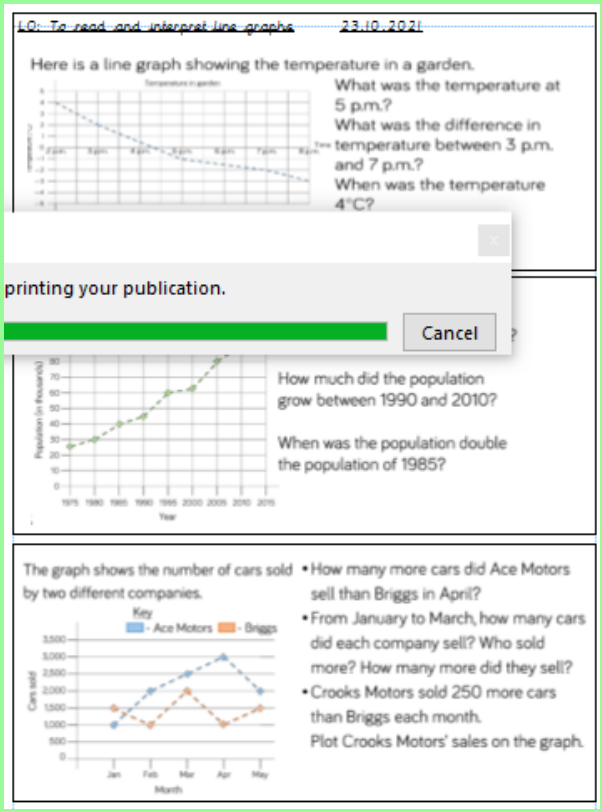
3) By how many degrees did the temperature of the orange juice cool from minute 1 to minute 2?

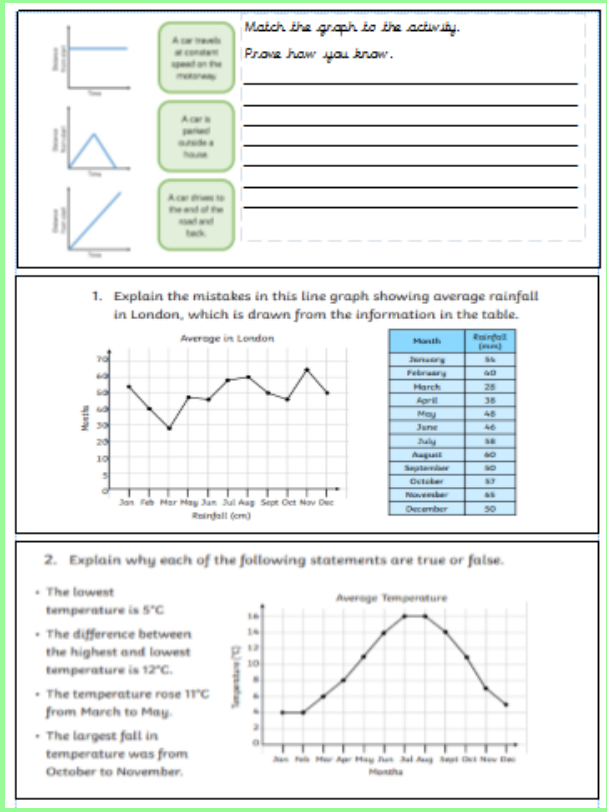
4) By how many degrees did the temperature of the blackcurrant squash col from minute 3 to minute 4?

5) Approximately how long did it take for the temperature of the orange juice to drop by 10 degrees?

6) By how many degrees did the temperature of the blackcurrant squash cool altogether?

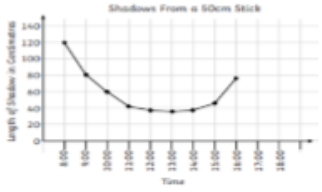
Main Task

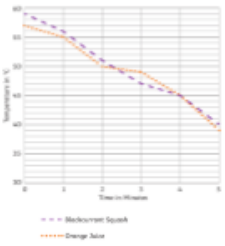

LO: To read and interpret line graphs 23.10.2021
Here is a line graph showing the temperature in a garden.
What was the temperature at 5 p.m.?
What was the difference in temperature between 3 p.m. and 7 p.m.?
When was the temperature 4°C?
printing your publication.
Cancel
How much did the population grow between 1990 and 2010?
When was the population double the population of 1985?
The graph shows the number of cars sold by two different companies.
Key
Ace Motors
Briggs
Cars sold
Month
Jan
Feb
Mar
Apr
May
• How many more cars did Ace Motors sell than Briggs in April?
• From January to March, how many cars did each company sell? Who sold more? How many more did they sell?
• Crooks Motors sold 250 more cars than Briggs each month. Plot Crooks Motors' sales on the graph.


A car travels at constant speed on the motorway.
A car is parked outside a house.
A car drives to the end of the road and back.
Match the graph to the activity.
Prove how you know.
1. Explain the mistakes in this line graph showing average rainfall in London, which is drawn from the information in the table.
Average in London
Months
Jan Feb Mar May Jun Jul Aug Sept Oct Nov Dec
Rainfall (cm)
Month
Rainfall (mm)
January 54
February 40
March 28
April 38
May 48
June 46
July 58
August 60
September 90
October 97
November 65
December 50
2. Explain why each of the following statements are true or false.
• The lowest temperature is 5°C
• The difference between the highest and lowest temperature is 12°C.
• The temperature rose 11°C from March to May.
• The largest fall in temperature was from October to November.
Average Temperature
Temperature (°C)
Months

3. This graph shows the length of a shadow at each hour:

- When was the shadow shortest?
- What was the difference between the shortest and longest shadow?
- By how much did the shadow change between 8:00am and 10:00am?
- What time would you expect the shadow to be 120cm again?





Decide whether these children's thoughts are true/false and explain how you know.

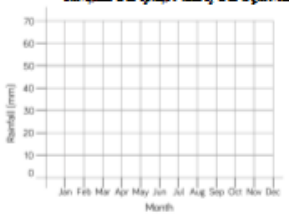
Jamal, " After two minutes, the difference in temperature between the two drinks was 1 degrees Celsius."

Kayden, "After three minutes, the orange juice was cooler than the orange squash."

Next Step:

The table shows the average rainfall in Leicester over a year.

Complete the graph using the information from the table.



Month	Rainfall (mm)
Jan	54
Feb	40
Mar	38
Apr	38
May	48
Jun	46
Jul	58
Aug	60
Sep	50
Oct	57
Nov	65
Dec	50