

Diving into Mastery



Read and Interpret Line Graphs



Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:



Diving



Deeper



Deepest

These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

Aim

- Solve comparison, sum and difference problems using information presented in a line graph.



Read and Interpret Line Graphs

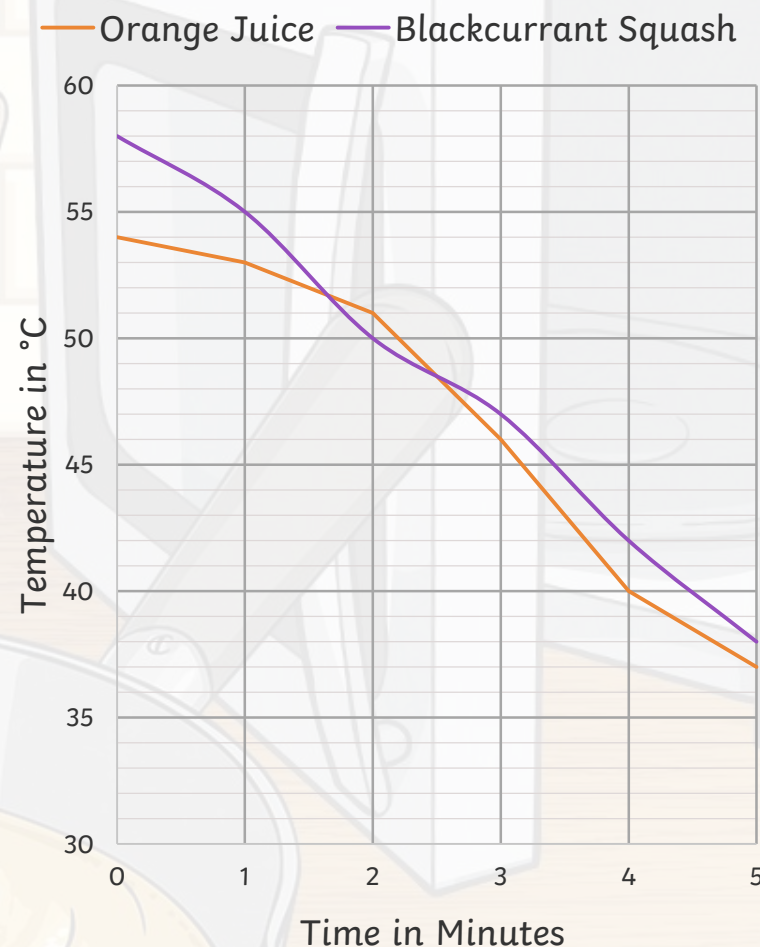
Diving



Miss White's class are investigating how quickly two different liquids cool over five minutes. They start their investigation by warming the two liquids in the microwave and then measure the temperature of each liquid every minute as they cool down.

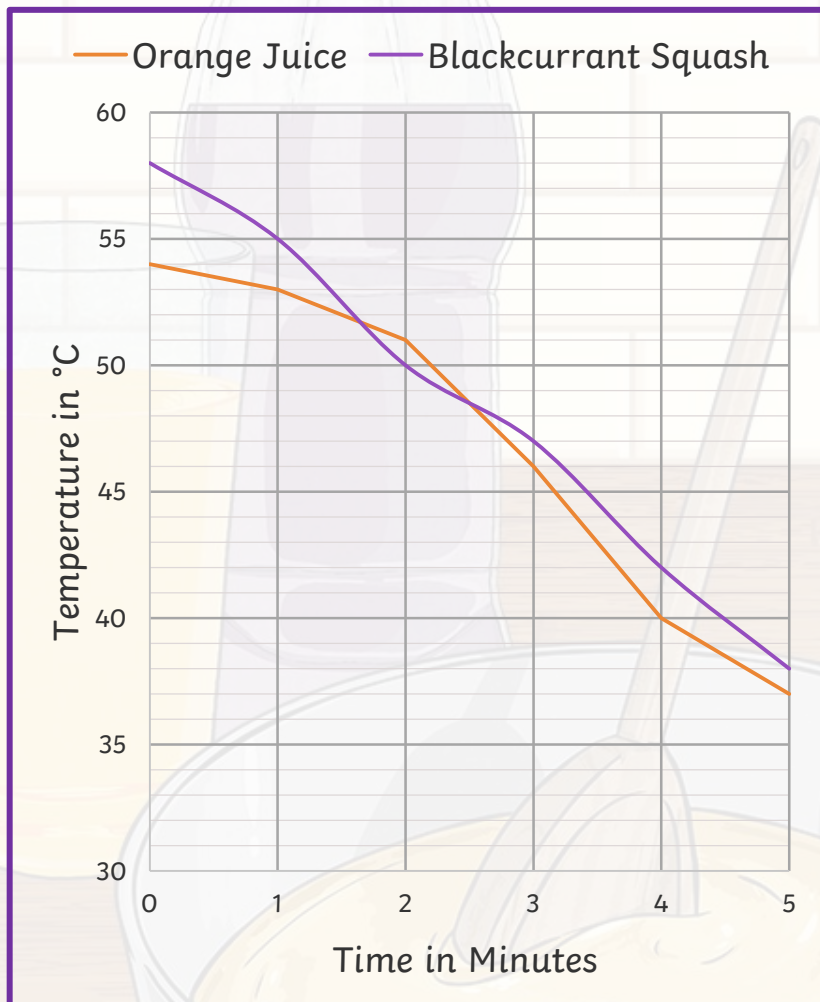
By how many degrees did the temperature of the orange juice cool from minute 2 to minute 3?

5100ute 4



Read and Interpret Line Graphs

Deeper



Prove whether each statement is true or false. If you think the statement is false, explain the mistake you think the child has made when they read the line graph.

The temperature of the orange juice and blackcurrant squash are the same at 2 and 4 minutes.

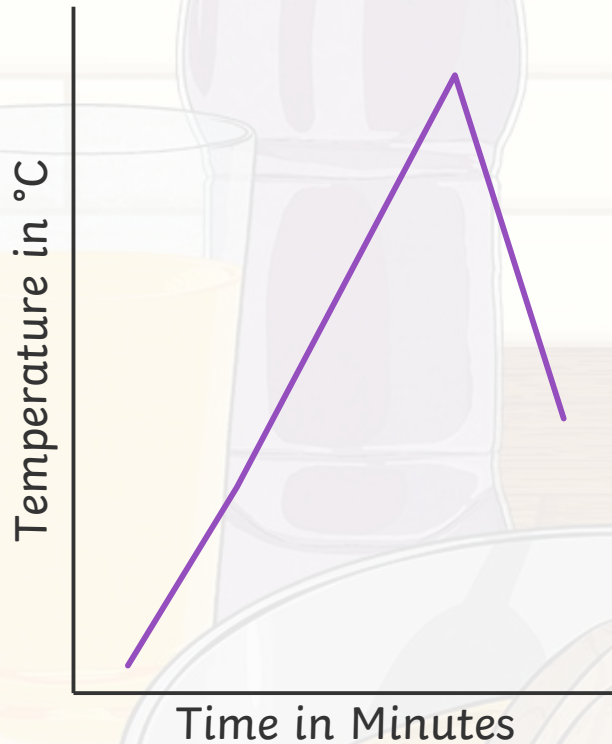
After approximately two and a half minutes, the temperature of the two drinks was the same.

False – it dropped by 3°C.

She has looked at the horizontal axis instead of the vertical axis to find the difference.



Which story describes this line graph the best? Explain your reasoning.



Benji gets the soup out of the fridge and gradually heats it up in a saucepan on the hob. He eats it straight away while it is warm.

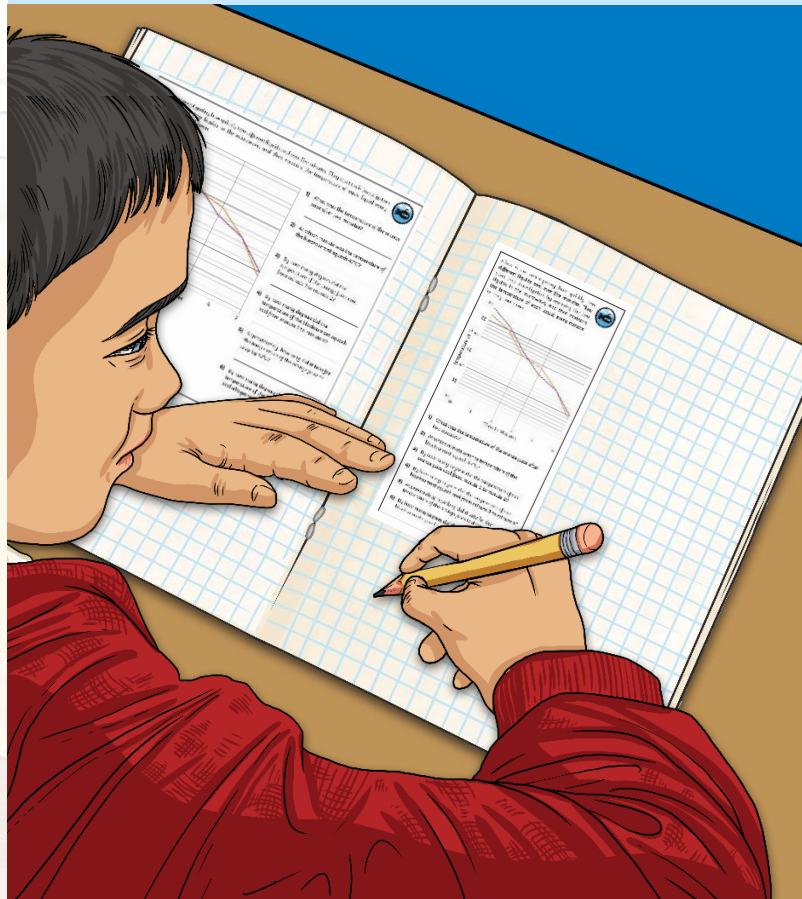
Benji gets the soup out of the fridge and gradually heats it in a saucepan on the hob. However, it is too hot to eat, so he lets it cool back down a bit.

Benji gets the soup out of the fridge and eats it cold.



Read and Interpret Line Graphs

Dive in by completing your own activity!



Class 5 are investigating how quickly two different liquids cool over five minutes. They start their investigation by warming the two liquids in the microwave, and then measure the temperature of each liquid every minute as they cool down.

Time in Minutes	Orange Juice Temperature (°C)	Blackcurrant Squash Temperature (°C)
0	60	58
1	56	55
2	50	50
3	48	48
4	45	45
5	40	44

- 1) What was the temperature of the orange juice after two minutes?
- 2) At which minute was the temperature of the blackcurrant squash 47°C?
- 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 cool from minute 3 to minute 4?
- 5) Approximately, how long did it take for the temperature of the orange juice to drop by 10°C?
- 6) By how many degrees did the temperature of the blackcurrant squash cool altogether?

Journal: After two minutes
Kayden: After three minutes
Molly: The temperature
Isha: There was never

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Need Planning to Complement this Resource?

National Curriculum Aim

Solve comparison, sum and difference problems using information presented in a line graph.

For more planning resources to support this aim, [click here](#).

Temperature Investigation
Find the average temperature of a cup of hot drink over time. The temperature of coffee, about 70°C, drops over time.

Hot Drinks Line Graphs

Soup Temperature Reveal
Change a spoon in seconds about the first group. Cook or boil. Try to cook your soup. Use a spoon or small pot. All the ingredients are in the soup. (Hot or Cold?)

Statistics: Hot Drinks Line Graphs

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Jogging Line Graph
At the 15th hour, Class A swam 100m. Class B swam 150m. Class C swam 200m. Class D swam 250m. Class E swam 300m. Class F swam 350m. Class G swam 400m. Class H swam 450m. Class I swam 500m. Class J swam 550m. Class K swam 600m. Class L swam 650m. Class M swam 700m. Class N swam 750m. Class O swam 800m. Class P swam 850m. Class Q swam 900m. Class R swam 950m. Class S swam 1000m.

Running Line Graphs

Find My Match Fun Run Line Graph
Find the match number and colour for the line graph.

Statistics: Running Line Graphs

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