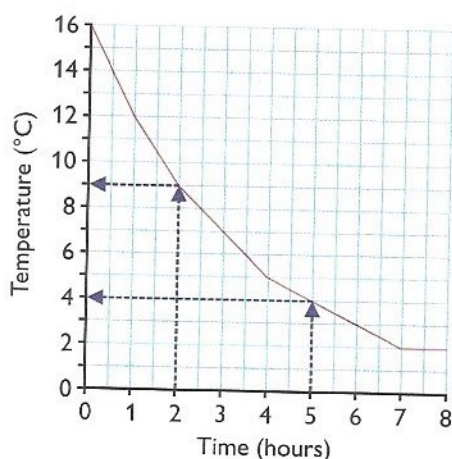


Line Graphs — 2

In Year 5, you have to be confident using line graphs to solve problems — the best way to do this is through practice.

Example

This line graph shows how the temperature of a mountain top changed after sunset. How much colder was the mountain top after 5 hours than it was after 2 hours?



Read up from each time, and across to find the temperature.

After 2 hours, the temperature was 9 °C.
After 5 hours, the temperature was 4 °C.

So the mountain top was $9 - 4 = 5$ °C colder after 5 hours than it was after 2 hours.



Set A

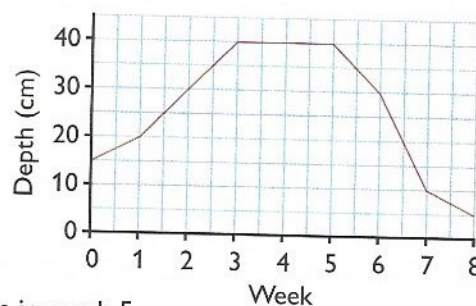
Eris records the depth of a stream each Saturday.

The line graph on the right shows how the depth changed over 8 weeks.

- How much had the depth increased from week 0 to week 3?
- In week 2, the depth was 30 cm. How many weeks later was the depth the same?

Are the following statements true or false?

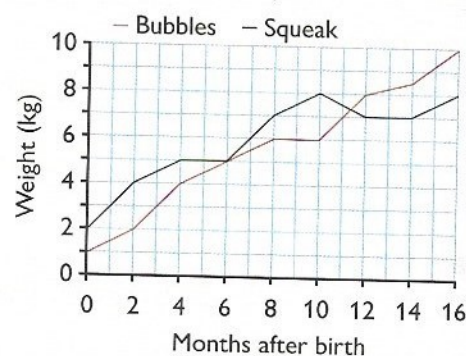
- In week 6, the stream's depth was 15 cm deeper than it was in week 0.
- The river was twice as deep in week 4 than in week 1.
- In week 8, the stream's depth was 25 cm shallower than it was in week 5.



A zookeeper monitored the weight of two newly born monkeys, Bubbles and Squeak. The line graph on the right shows how each monkey's weight changed.

Use the graph to find each missing number:

- Bubbles weighed 2 kg after months.
- After months Squeak weighed 2 kg more than she did when she was born.
- After 18 months, Bubbles weighed 13 kg. This means he had gained kg since birth.
- Squeak's mother weighs 40 kg. After months, Squeak was 34 kg away her mother's weight.
- The total weight of the two monkeys after 8 months was kg.

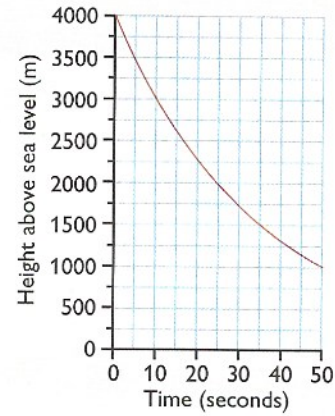


Set B

Joe did a skydive last month. The line graph shows how long it took him to fall to 1000 m after jumping from 4000 m.

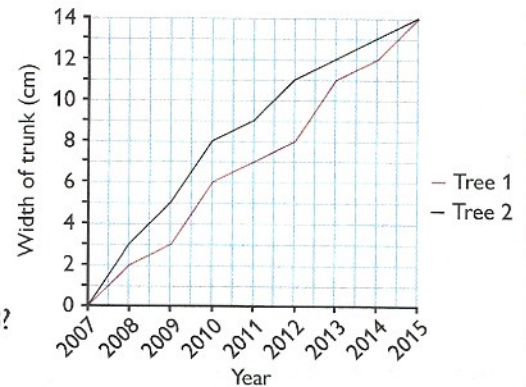
What numbers are missing from each sentence?

- 1 Joe fell m between 10 and 20 seconds.
- 2 It took Joe seconds to fall from 2250 m to 1500 m.
- 3 After 300 seconds, Joe reached the ground at 0 m. How long did it take him to fall the last 1000 m?



Mina planted two trees in her garden in 2007. The line graph on the right shows how the width of the trees changed over 9 years.

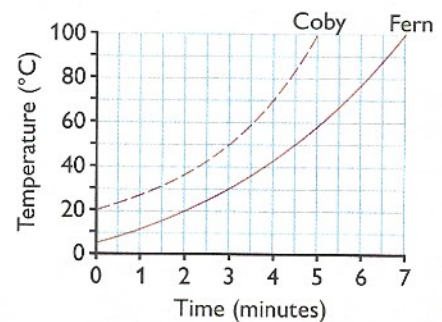
- 4 How much wider was tree 1's trunk in 2014 than 2012?
- 5 True or false? Tree 2's trunk was 8.5 cm wide in 2011.
- 6 How many years did it take before tree 1's trunk was 7 cm wide?
- 7 When was tree 2's width four times as wide as it was in 2008?
- 8 What was the total width of the tree trunks in 2012?



Set C

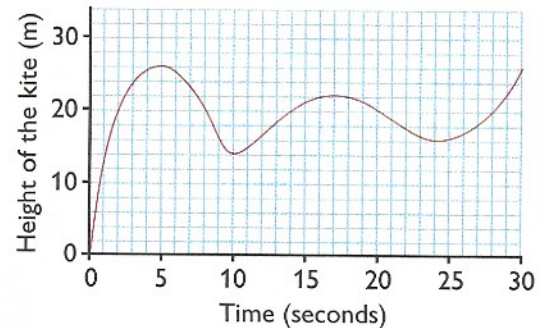
Coby and Fern each boiled a pan of water. The line graph shows how the temperature of the water changed over time.

- 1 What temperature was Coby's water to start with?
- 2 How much cooler was Fern's pan of water after 3 minutes than Coby's?
- 3 By how many degrees did the temperature of Fern's water increase between 4 and a half and 7 minutes?



Arnie is flying a kite in his garden. The line graph below shows the height of the kite above the ground during the first 30 seconds of the flight.

- 4 How far did the kite fall between 5 and 10 seconds?
- 5 The height of the kite increased between 0 and 5 seconds. Find the two other time intervals when the height of the kite increased.
- 6 What was the total height gained by the kite during the three time intervals in Question 5?



Arnie writes down these statements about the flight.

- The height of the kite was above 20 m for 14 seconds in total.
 - Once the kite was above 16 m, it didn't drop below 16 m again.
- 7 For each statement, work out if Arnie is correct and explain how you know.

