Bishops Online Tutoring

Education Consultancy

Edexcel GCSE Mathematics

DISTANCE TIME GRAPHS

Materials Required:

- Pen
- HB Pencil
- Ruler (in centimetres and millimetres)
- Protractor
- Compass

Instructions:

- Use a black ink pen to answer all questions
- Fill your name in the section below
- Answer the questions in the spaces provided
- Show your working out for all answers

Information:

- The marks allocated for each question are displayed within brackets – utilise this information to gauge the appropriate amount of time to dedicate to each question
- Questions marked with an asterisk (*) will assess your written communication; be careful of spelling, punctuation and grammar with these questions

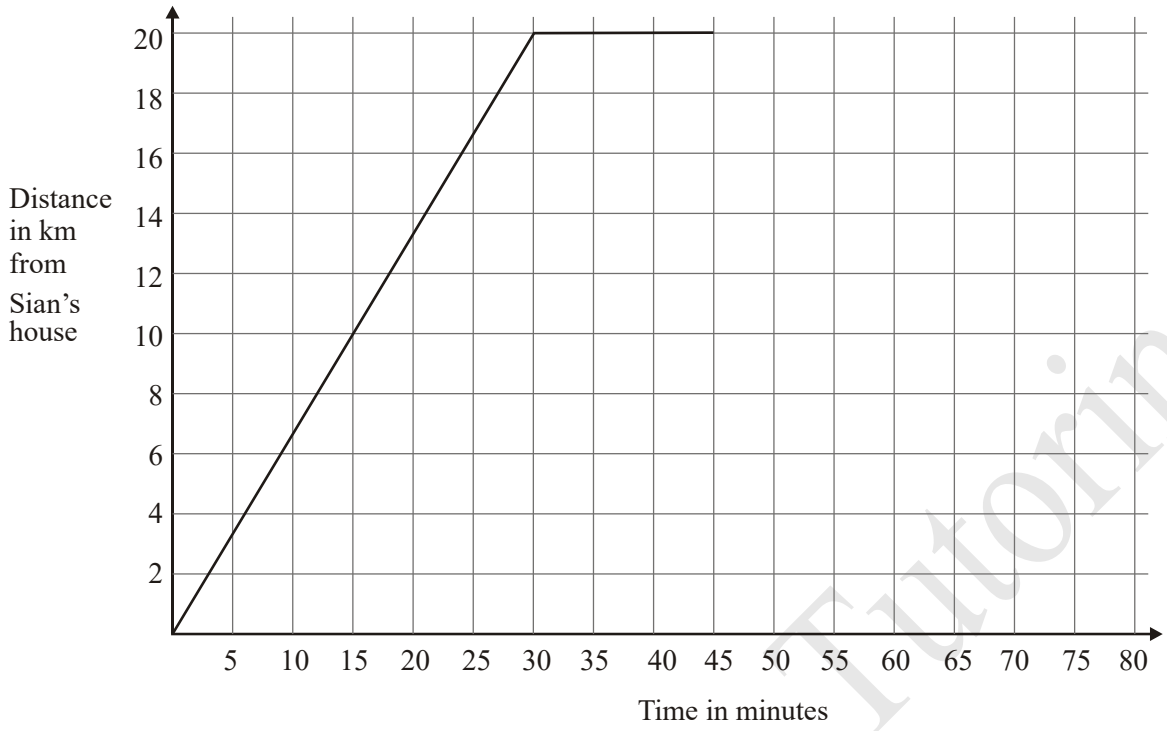
Advice:

- Carefully read the question before attempting to answer it
- Be vary of time and try to answer every question
- If you have enough time in the end, go back and check your answers. A good way to check your answers is to retry the question with the hope of getting the same answer as before without looking at your working out from before

NO CALCULATOR ALLOWED

NAME:	

1. Here is part of a travel graph of Sian's journey from her house to the shops and back.



(a) Work out Sian's speed for the first 30 minutes of her journey.
Give your answer in km/h.

..... km/h

(2)

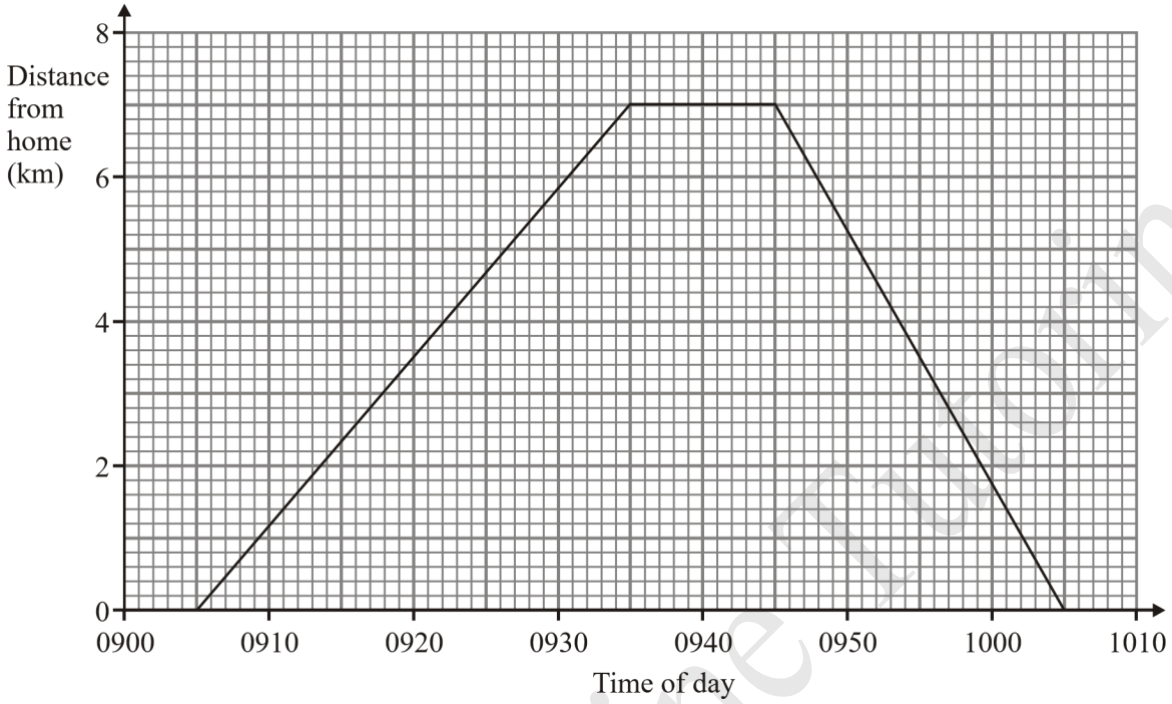
Sian spends 15 minutes at the shops.
She then travels back to her house at 60 km/h.

(b) Complete the travel graph.

(2)

(Total 4 marks)

2. Anil cycled from his home to the park.
Anil waited in the park.
Then he cycled back home.
Here is a distance-time graph for Anil's complete journey.



(a) At what time did Anil leave home?

.....

(1)

(b) What is the distance from Anil's home to the park?

..... km

(1)

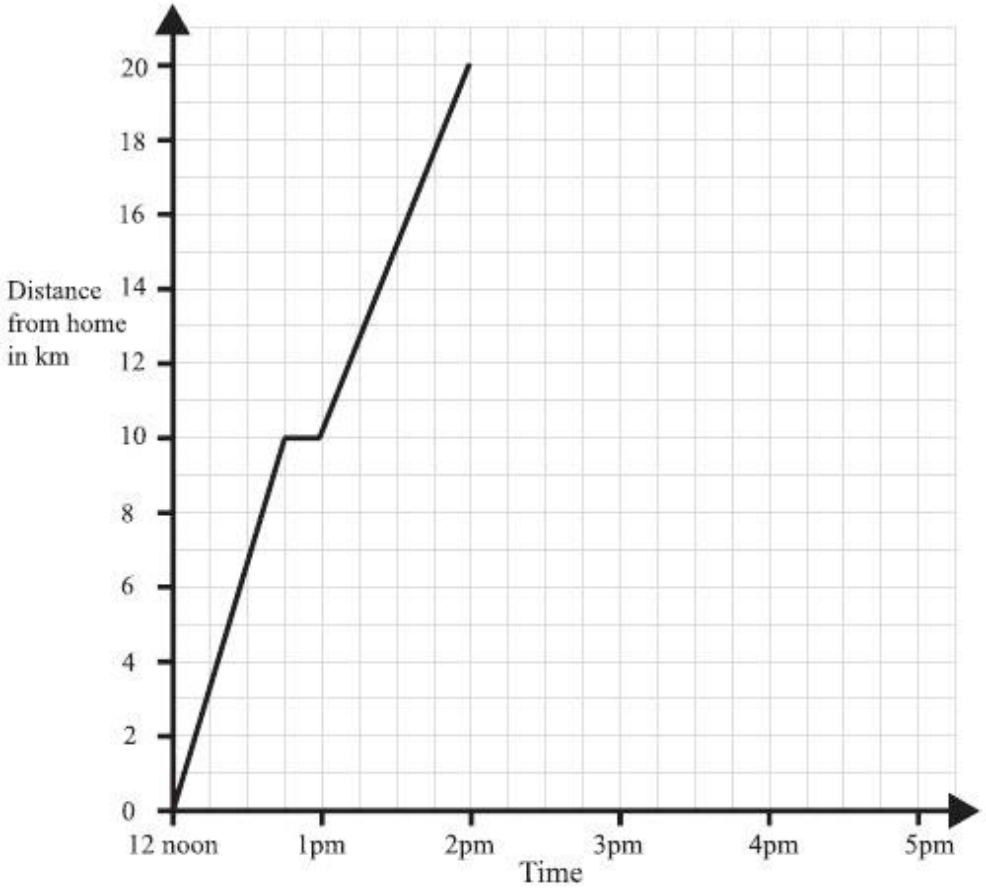
(c) How many minutes did Anil wait in the park?

.....

(1)

(Total 3 marks)

3. A man left home at 12 noon to go for a cycle ride.
The travel graph represents part of the man's journey.



At 12:45pm the man stopped for a rest.

(a) For how many minutes did he rest?

……minutes

(1)

(b) Find his distance from home at 1:30pm.

…….km

(1)

The man stopped for another rest at 2pm.

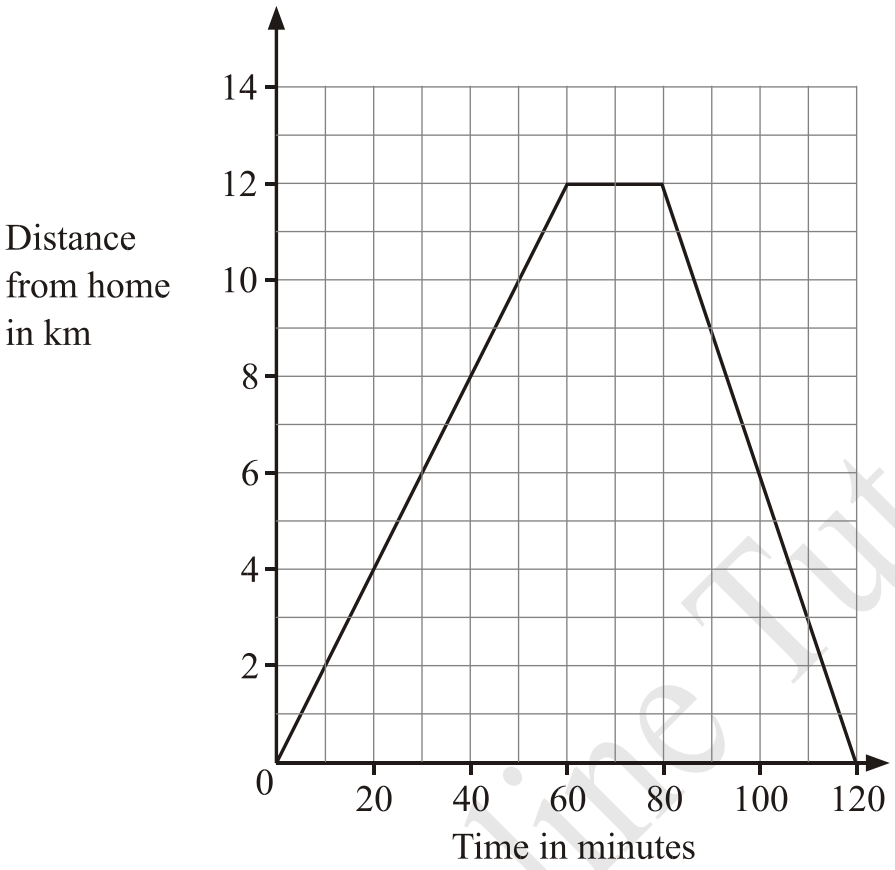
He rested for one hour.

Then he cycled home at a steady speed. It took him 2 hours.

(c) Complete the travel graph.

(2)

4. Margaret went on a cycle ride.
The travel graph shows Margaret's distance from home on this cycle ride.



(a) How far had Margaret cycled after 30 minutes?

..... km

(1)

After 60 minutes, Margaret stopped for a rest.

(b) For how many minutes did she rest?

..... minutes

(1)

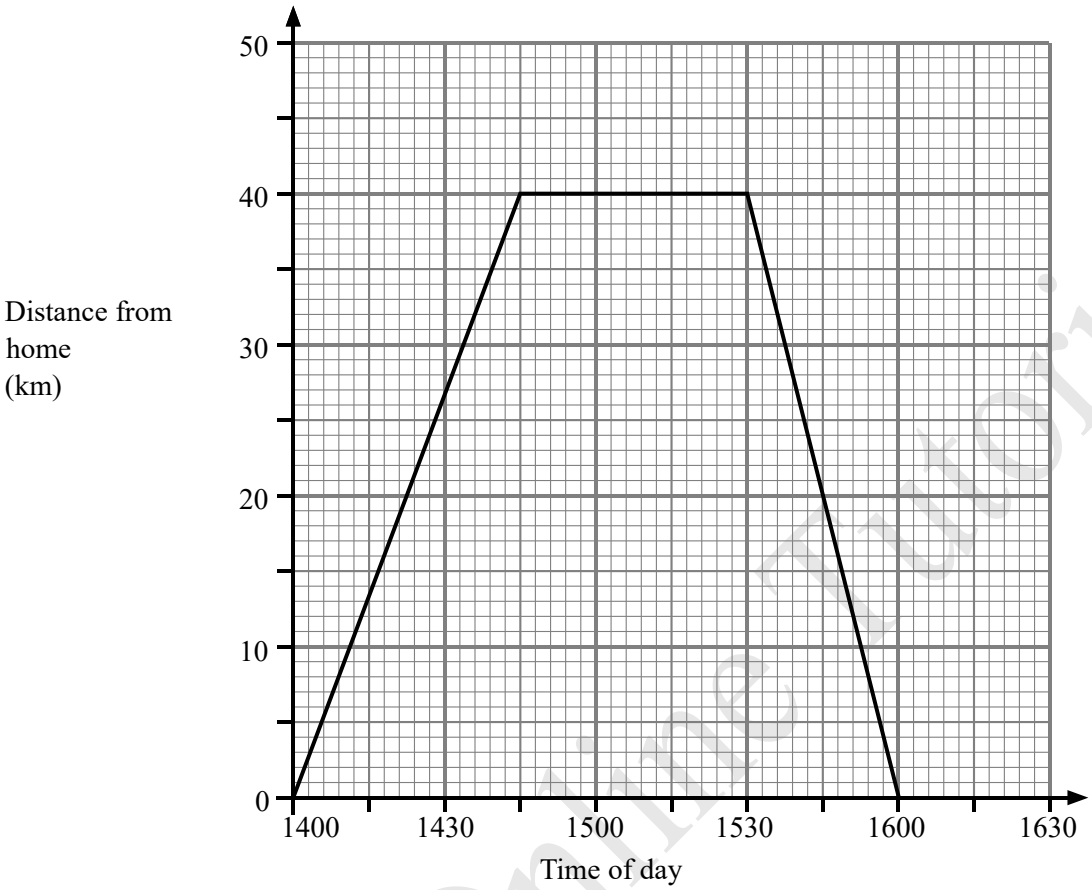
(c) How far did Margaret cycle in total on her ride?

..... km

(1)

(Total 3 marks)

5. Judy drove from her home to the airport.
She waited at the airport. Then she drove home.
Here is the distance-time graph for Judy's complete journey.



(a) What is the distance from Judy's home to the airport?

..... km

(1)

(b) For how many minutes did Judy wait at the airport?

..... minutes

(1)

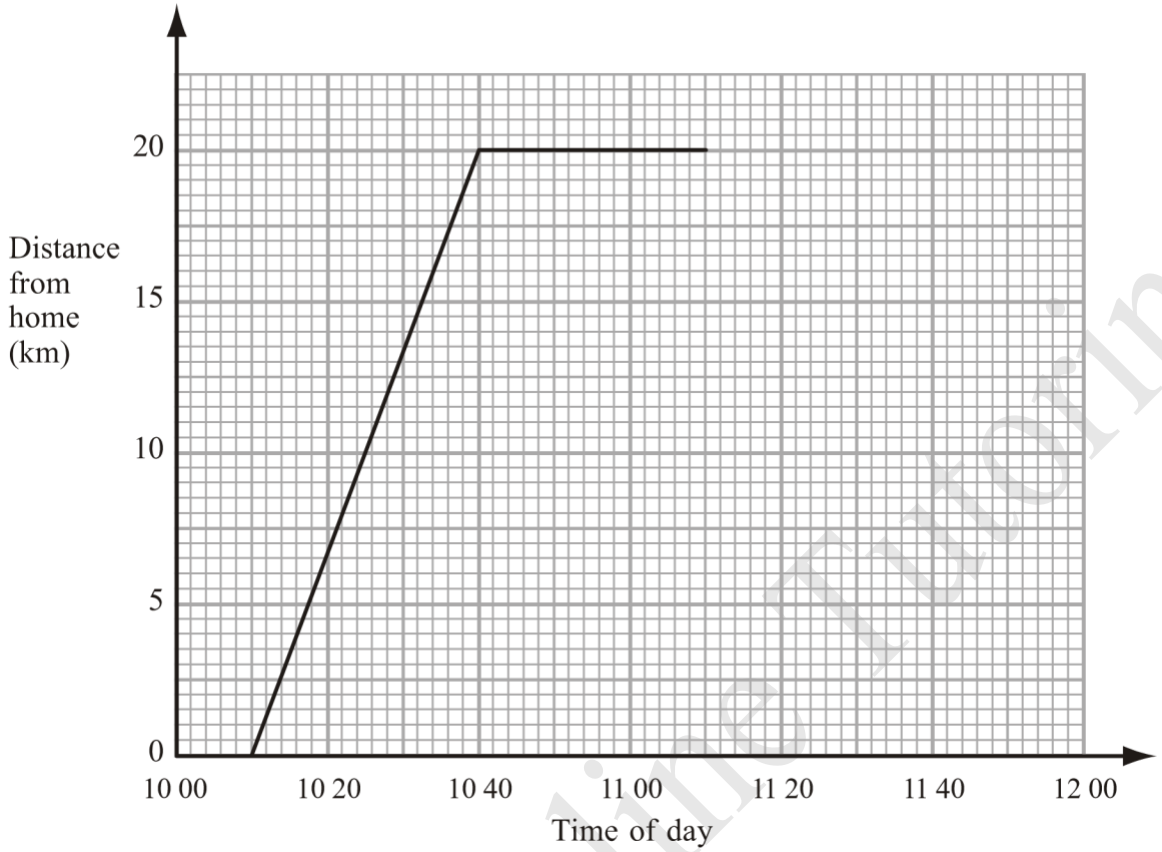
(c) Work out Judy's average speed on her journey home from the airport.
Give your answer in kilometres per hour.

..... kilometres per hour

(2)

(Total 4 marks)

6. Jamie travelled 20 km from his home to his friend's house.
Jamie then spent some time at his friend's house before returning home.
Here is the travel graph for part of Jamie's journey.



(a) Write down the time that Jamie left home.

……...

(1)

(b) Write down Jamie's distance from home at 10:20

..... km

(1)

Jamie left his friend's house at 11:10 to return home.

(c) Work out the time in minutes Jamie spent at his friend's house.

..... minutes

(1)

Jamie returned home at a steady speed.
He arrived home at 11:50

(d) Complete the travel graph.

(1)

(e) Work out Jamie's average speed on his journey from his home to his friend's house.
Give your answer in kilometres per hour.

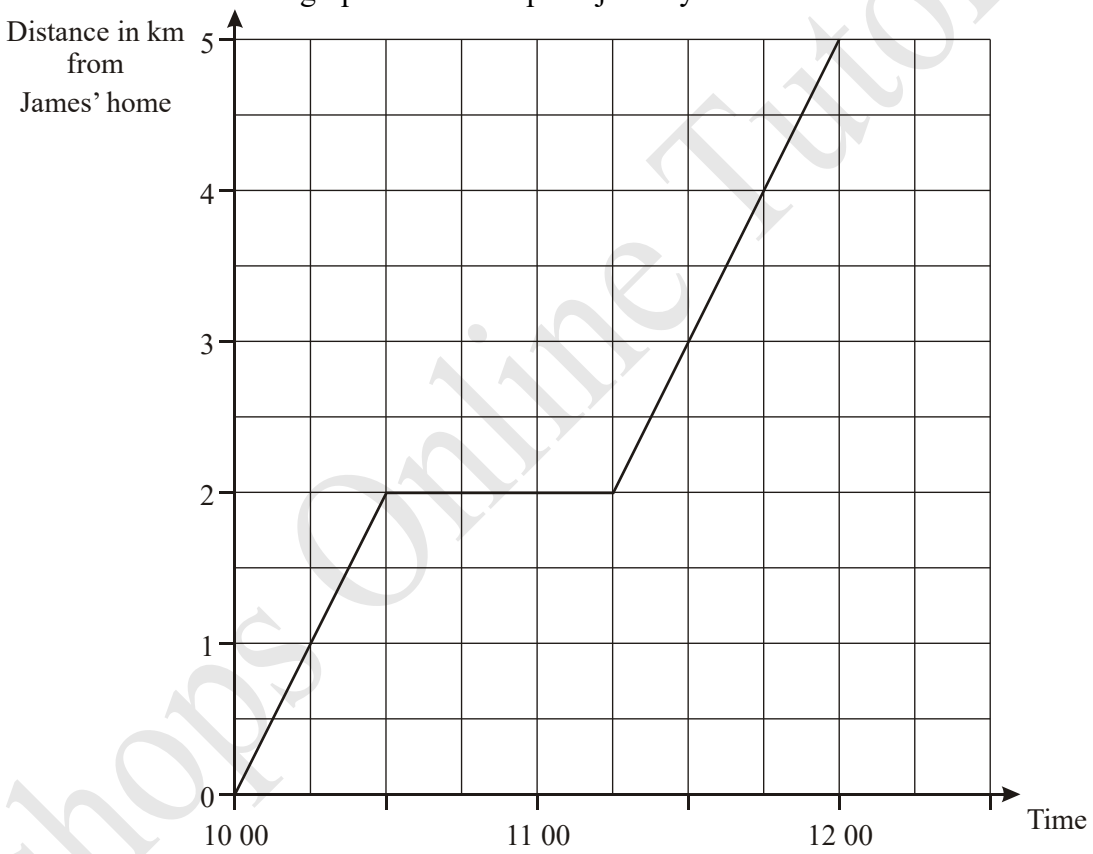
..... kilometres per hour

(2)

(Total 6 marks)

7. James left home at 10:00 am.
He walked to the swimming pool.
On the way to the swimming pool he stopped to talk to a friend.

Here is the distance-time graph for his complete journey.



(a) For how many minutes did James stop and talk to his friend?

…… minutes

(1)

(b) What is the distance from James' home to the swimming pool?

…… km

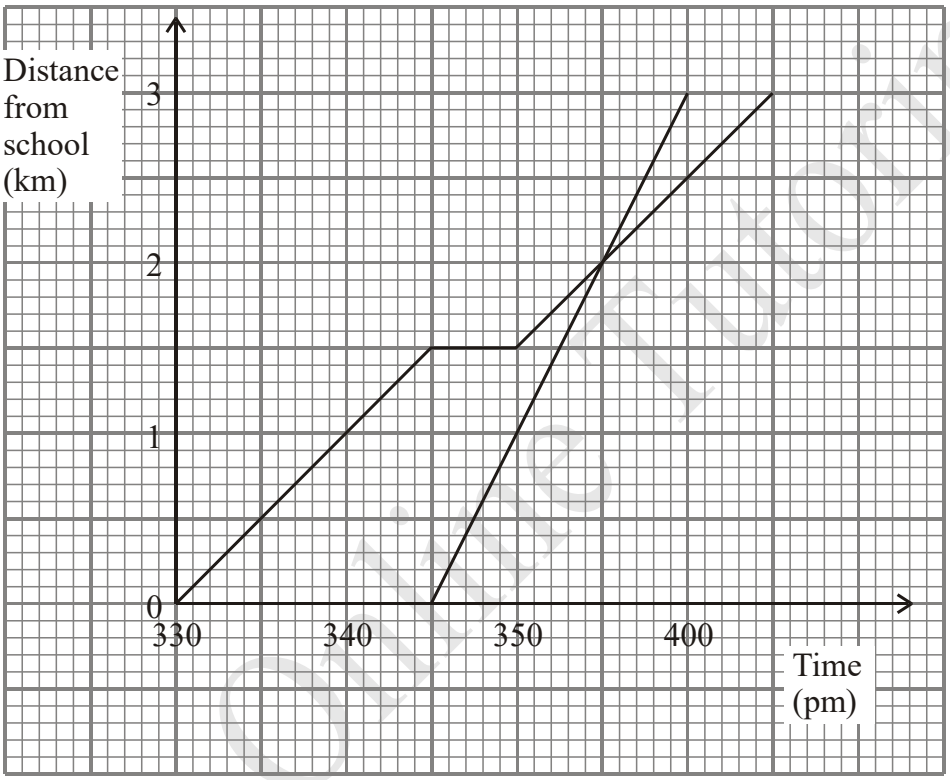
(1)

(Total 2 marks)

8. Robert left school at 3:30 pm.
He walked home.
On the way home, he stopped to talk to a friend.

His sister, Sarah, left the same school at 3:45 pm.
She cycled home using the same route as Robert.

Here are the distance-time graphs for Robert's and Sarah's complete journeys.



(a) Find the distance Robert walked during the first 10 minutes of his journey.

..... km

(1)

(b) Find the total time that Robert stopped to talk to his friend.

..... minutes

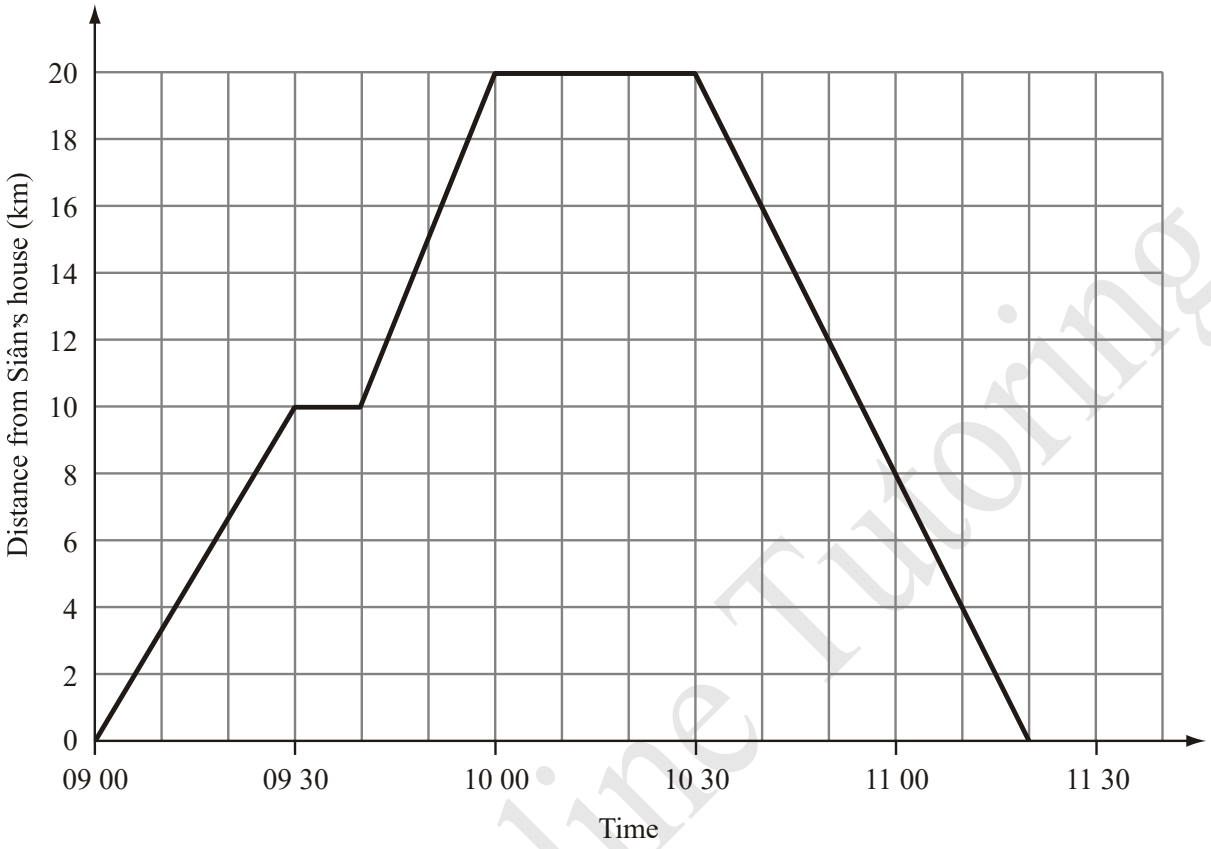
(1)

(c) Write down the distance that Robert had walked when Sarah cycled past him.

..... km

(1)

9. Here is a travel graph of Siân's journey from her house to the library and back to her house.



(a) How far is Siân from her house at 09:30?

..... km

(1)

The library is 20 km from Siân's house.

(b) (i) At what time did Siân arrive at the library?

.....

(ii) How long did Siân spend at the library?

..... minutes

(2)

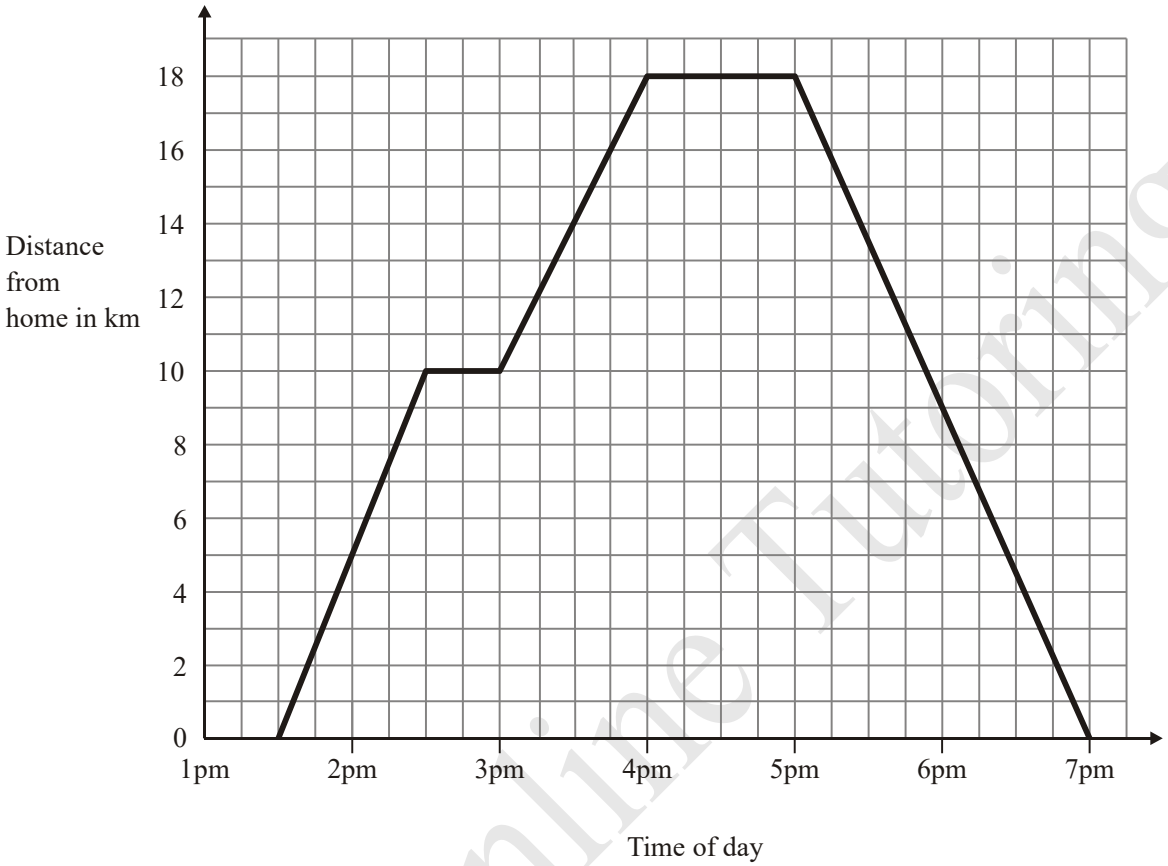
Siân left the library at 10:30 to travel back to her house.

(c) At what time did Siân arrive back at her house?

.....

(1)

10. Pete visited his friend and then returned home.
The travel graph shows some information about Pete's journey.



(a) Write down the time that Pete started his journey.

.....

(1)

At 2:30 pm Pete stopped for a rest.

(b) (i) Find his distance from home when he stopped for this rest.

..... km

(ii) How many minutes was this rest?

..... minutes

(2)

Pete stayed with his friend for one hour.
He then returned home.

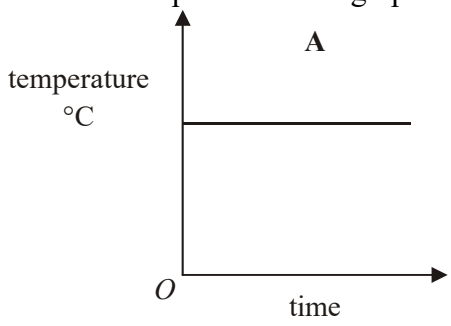
(c) Work out the total distance travelled by Pete on this journey.

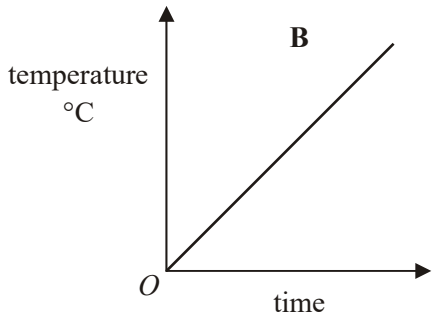
..... km

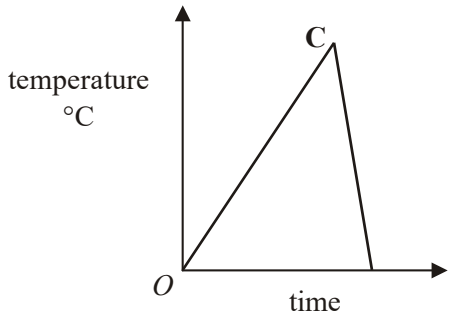
(2)

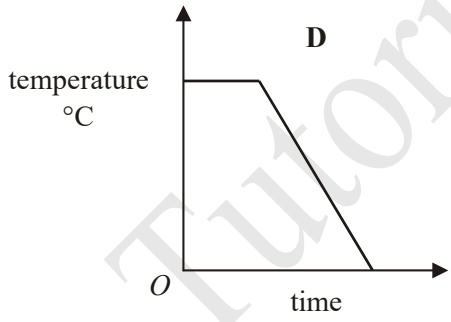
(Total 5 marks)

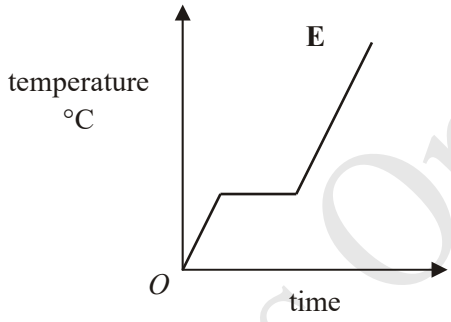
11. Here are six temperature/time graphs.

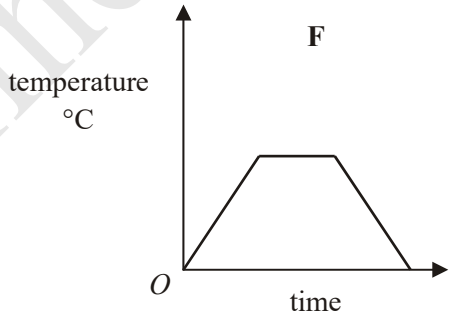












Each sentence in the table describes one of the graphs.
Write the letter of the correct graph next to each sentence.

The first one has been done for you.

The temperature starts at 0°C and keeps rising.	**B**
The temperature stays the same for a time and then falls.	
The temperature rises and then falls quickly.	
The temperature is always the same.	
The temperature rises, stays the same for a time and then falls.	
The temperature rises, stays the same for a time and then rises again.	

(Total 3 marks)