

GRAYS TUITION CENTRE – Online Tutoring

WEEK: 13

Week Beginning: (15/03/2021)

Subject: MATHS

Year: 7

Lesson Objective:

- Continue to expand our knowledge understanding of distance-time graphs
- Begin to understand how distance-time graphs questions are projected in GCSE format

Class Worksheets

- The Learning Pack – see below

Homework

- Homework outlined below

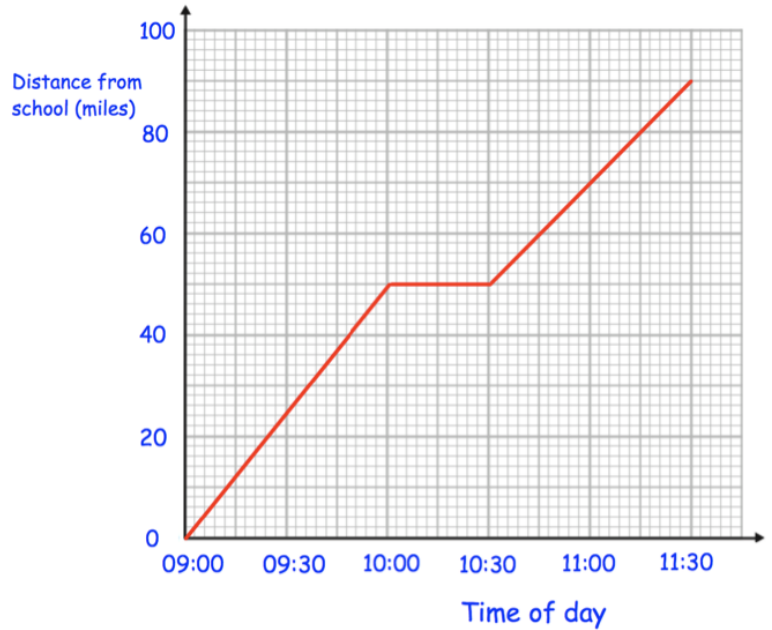
Additional Notes

- All lesson worksheets and **homework for next week (due Week 14)** worksheets can be found below

Please print 2 a page or open this document during the lesson to save paper!

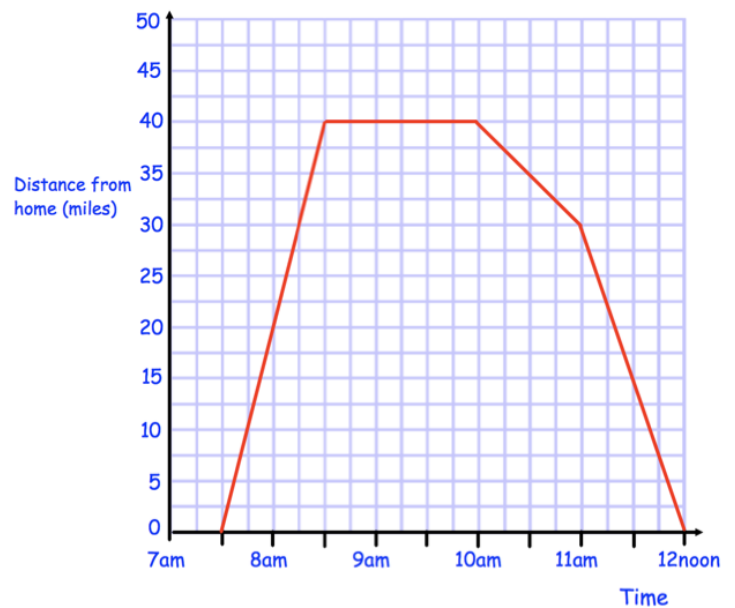
Question 1: The distance-time graph shows class 8A's journey to the zoo.
They stopped for a picnic on the way to the zoo.

- (a) What time did the bus leave school?
- (b) What time did they stop for a picnic?
- (c) How far had they travelled when they stopped for a picnic?
- (d) How long did they stop for?
- (e) What time did they arrive at the zoo?
- (f) How far is the zoo from school?



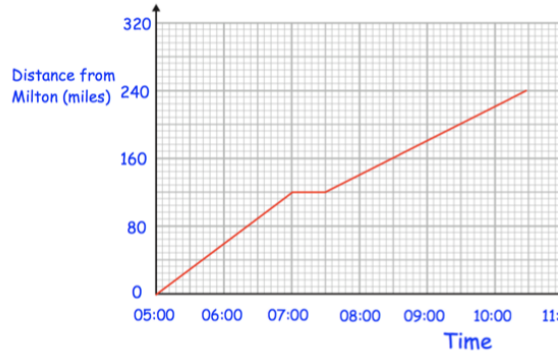
Question 2: Emma travelled to her Grandmother's house and back.
The distance-time graph shows information about her journey.

- (a) What time did Emma begin her journey?
- (b) How far was Emma from home at 8am?
- (c) How long did Emma stay at her Grandmother's house?
- (d) What time did Emma leave her Grandmother's house?
- (e) How far was Emma from home at 11:45?
- (f) How far did Emma travel in total?



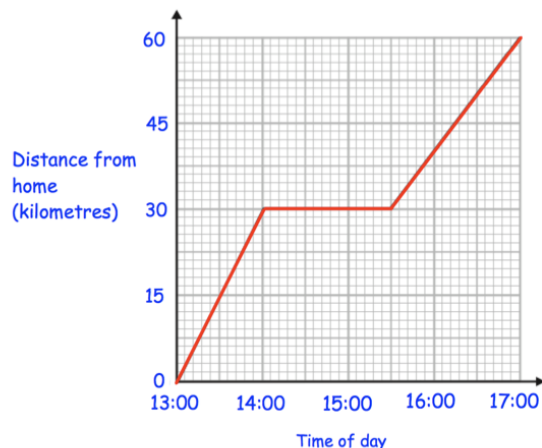
Question 3: A train travels from Milton to Redville, stops for 30 minutes, then travels to Leek.

- How long did it take the train to travel from Milton to Redville?
- How far is Redville from Milton?
- Work out the speed of the train for the journey from Milton to Redville.
- How long did it take the train to travel from Redville to Leek?
- How far is Leek from Redville?
- Work out the speed of the train for the journey from Redville to Leek.



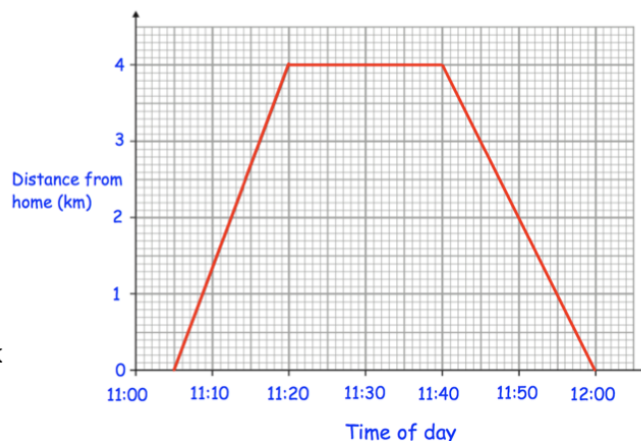
Question 4: Ben drove 60 kilometres, from his home to Liverpool. He stopped and visited his friend Tim on the way.

- Work out Ben's speed for the first part of his journey.
- How long did Ben spend visiting Tim?
- Work out Ben's speed for the last part of his journey.



Question 5: Laura goes for a cycle from her house to the post office, 4km away.

- How long did it take Laura to cycle to the post office?
- Work out Laura's speed cycling to the post office.
- How long did Laura spend at the post office?
- Work out Laura's speed cycling back home.

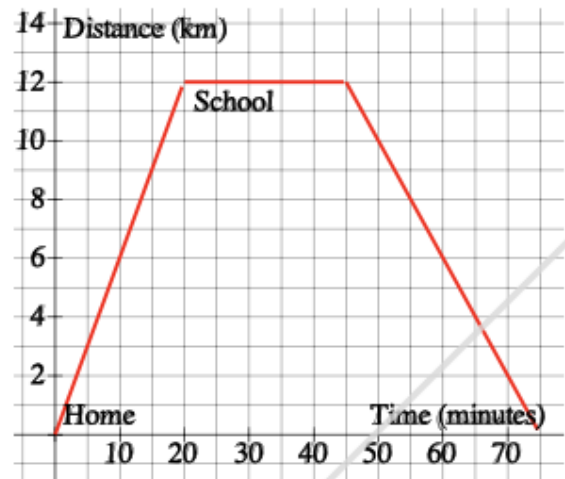


3) The travel graph below shows Cody's journey from his home to his school and back.

Find

- the distance to his school.
- the speed for the first 20 minutes of his journey.
- the speed on his journey home.

Leave answers to nearest whole number where necessary.



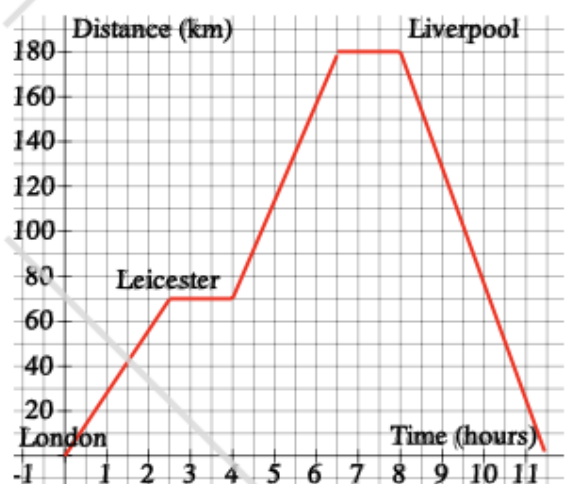
[1]

4) The distance-time graph below shows the journey a business man made from London to Liverpool via Leicester and the direct return journey back to London.

Find

- the distance to Leicester.
- the time he spent in Leicester.
- the speed he travelled from Leicester to Liverpool.
- his average speed over the whole journey.

Leave answers to nearest whole number where necessary.

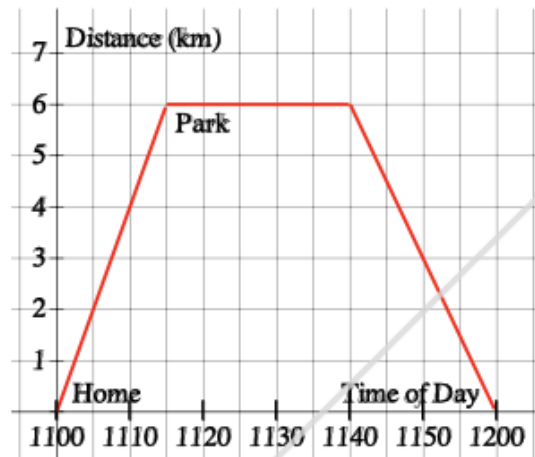


[1]

5) Finn cycled from his home to the park where he took a rest. He then cycled back home. Below is a distance-time graph for Finn's complete journey.

Find

- the time he arrived at the park.
- the distance to the park.
- how long he rested at the park.

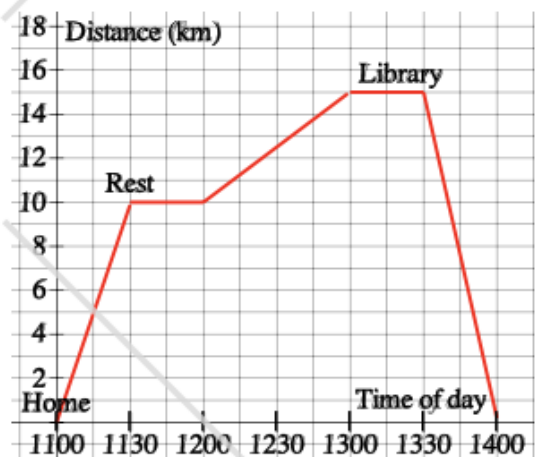


[1]

6) Here is a travel graph of Reece's journey from his house to the library and back to his house.

- How far is Reece from his house at 1130?
- At what time did Reece arrive at the library?
- How long did Reece spend at the library?
- At what time did Reece arrive back at his house?

Leave answers to nearest whole number where necessary.

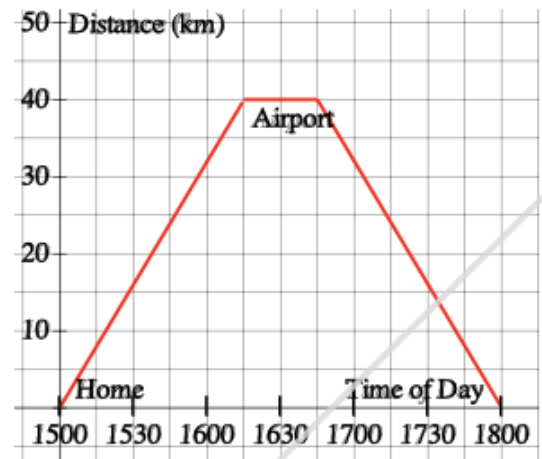


[1]

Homework:

7) Beatrice drove from her home to the airport to collect her parents. She then drove home. Here is the distance-time graph for Beatrice's complete journey.

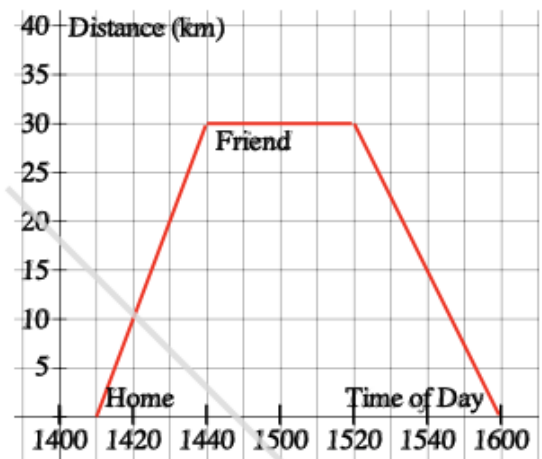
- a) What is the distance to the airport?
- b) For how many minutes did Beatrice wait at the airport?
- c) Work out Beatrice's average speed for the journey home in km/h.



[1]

8) Kieran travelled 30 km from his home to his friend's house. Kieran then spent some time at his friend's house before returning home. Here is the travel graph for Kieran's journey.

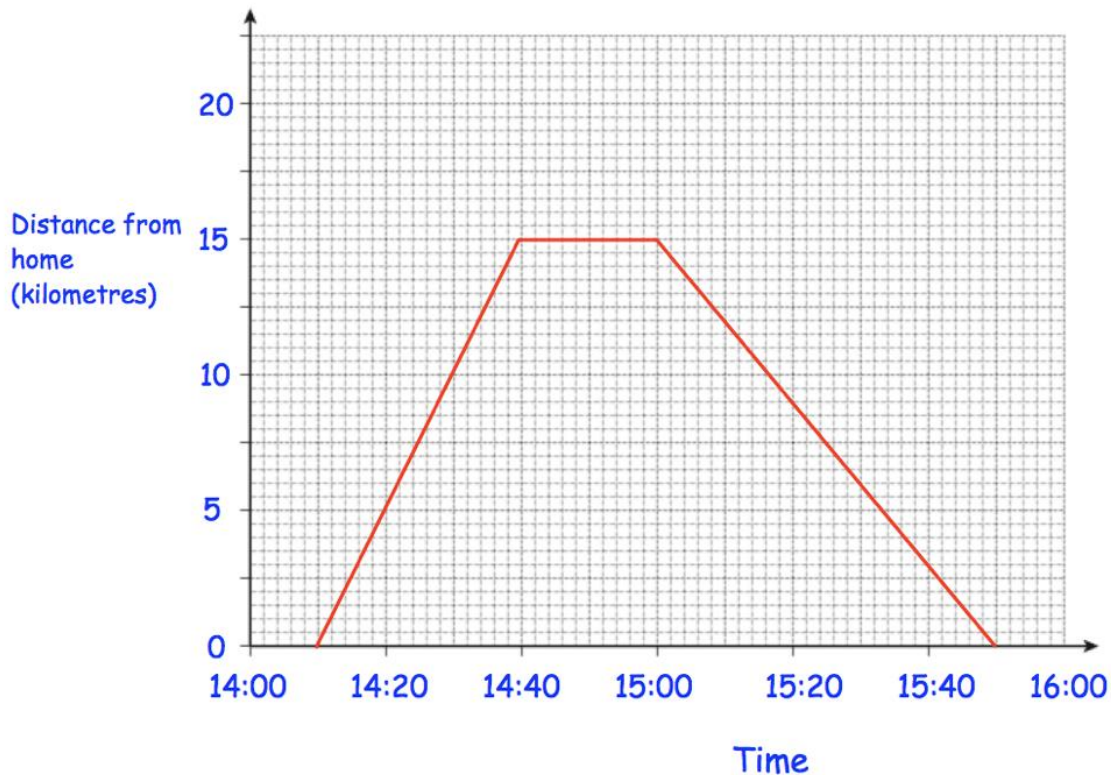
- a) What time did Kieran leave his home?
- b) For how many minutes did Kieran spend at his friend's house?
- c) Work out Kieran's average speed for the journey home in km/h.



[1]

3. Joseph travelled from his home to his friend's house 15 km away. Joseph stayed for some time and then returns home.

Here is the distance-time graph



- (a) At what time did Joseph leave home?

.....
(1)

- (b) How far was Joseph from home at 14:30?

.....km
(1)

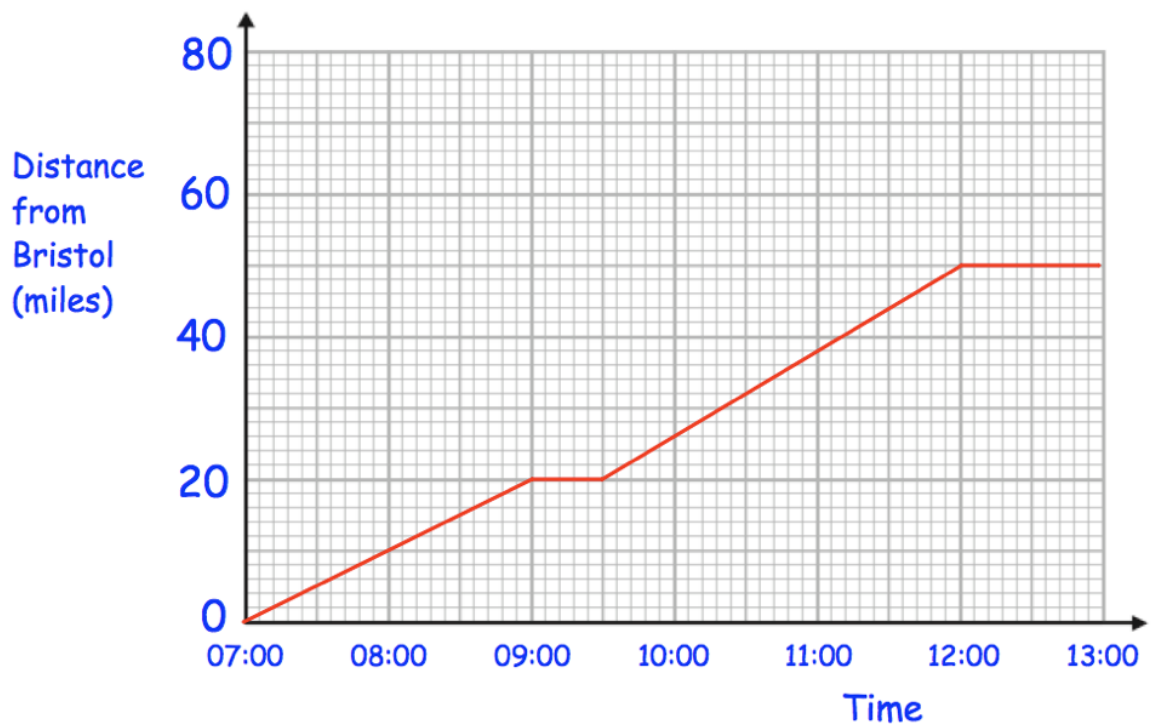
- (c) How long did Joseph spend at his friend's house?

.....minutes
(1)

- (d) How far did Joseph travel in total?

.....km
(1)

4. Anne cycles from Bristol to Salisbury.
The diagram shows the distance-time graph of her journey.



- (a) How far from Bristol is Anne at 08:00?

.....miles
(1)

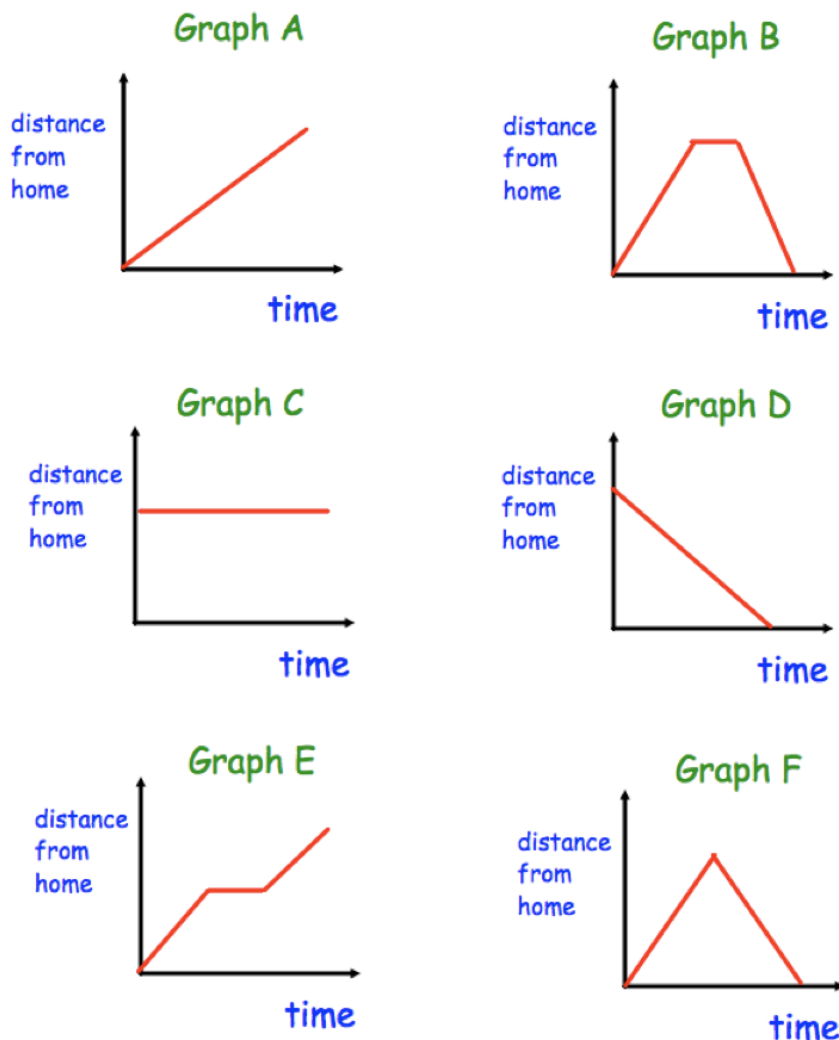
- (b) Describe what is happening between 09:00 and 09:30

.....
(1)

- (c) Work out Anne's speed for the first two hours of her journey

.....miles per hour
(2)

8. Shown below are six distance-time graphs

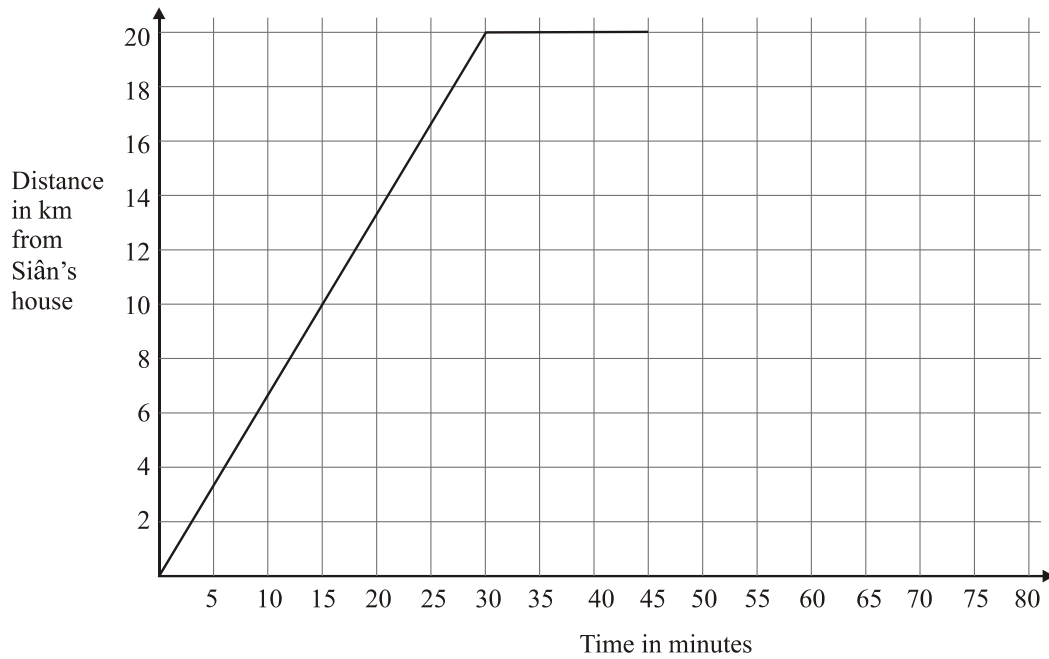


Each sentence in the table describes one of the graphs.
Write the letter of the correct graph next to each sentence.

Mr.Jones travels to work and immediately returns	F
Mr.Jones leaves work and travels home at a steady speed	
Mr.Jones leaves home and travels to work at a steady speed	
Mr.Jones stays at work	
Mr.Jones travels to work, stays there for some time and then returns home	
Mr.Jones leaves home and travels to work, stopping at the shop on the way	

(3)

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



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

..... km/h

(2)

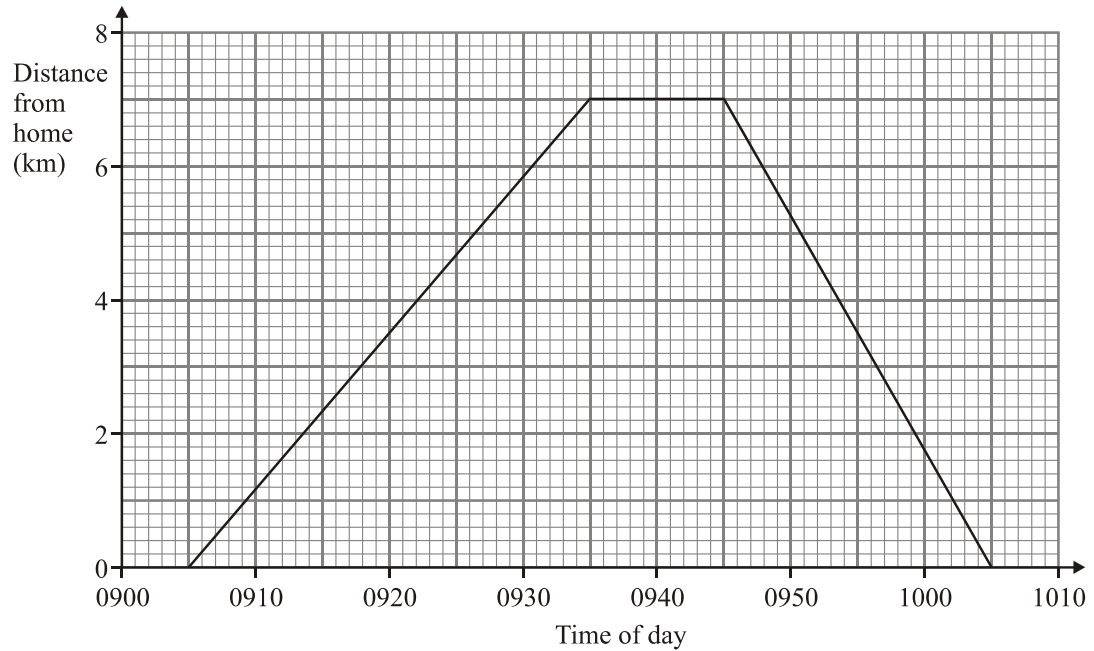
Siân spends 15 minutes at the shops.
She then travels back to her house at 60 km/h.

- (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?

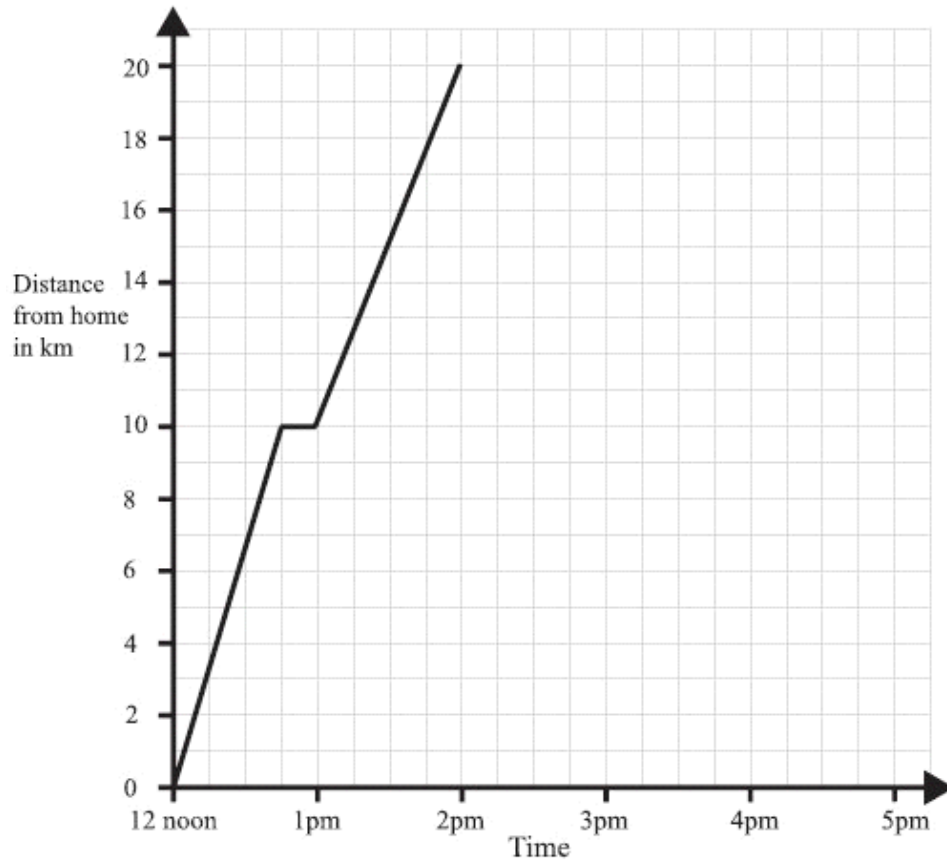
.....

(1)

(Total 3 marks)

Optional Homework:

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.

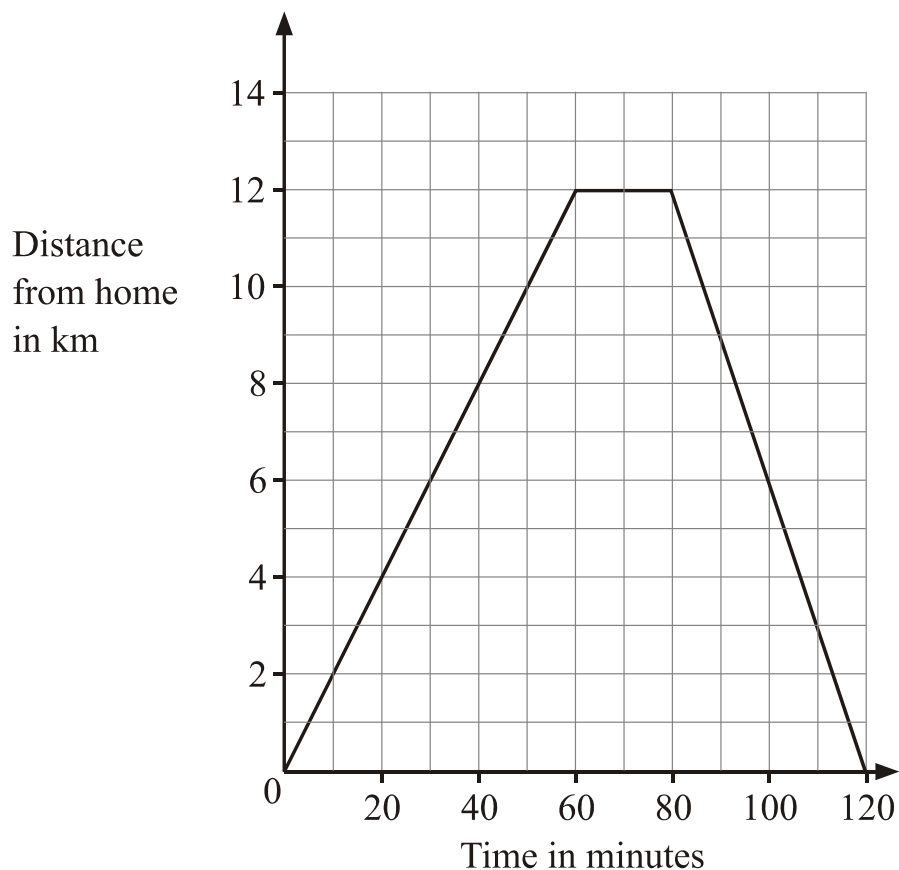
He rested for one hour.

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)

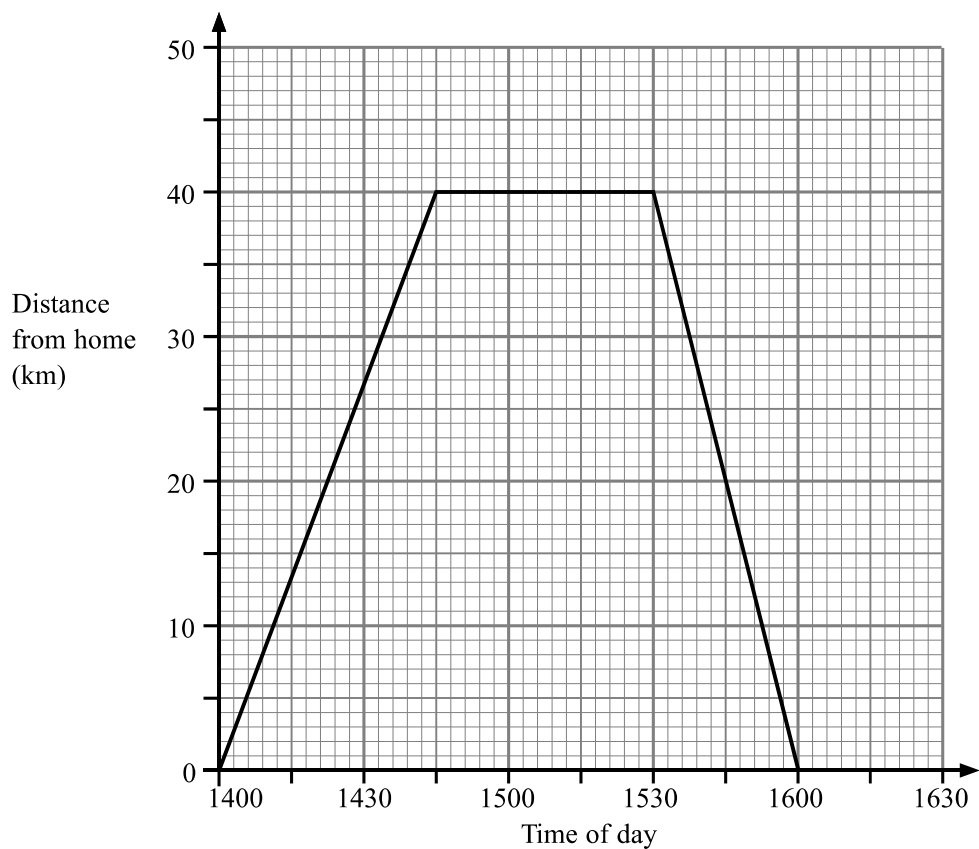
- (c) How far did Margaret cycle in total on her ride?

..... 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)