

Distance-Time Graphs

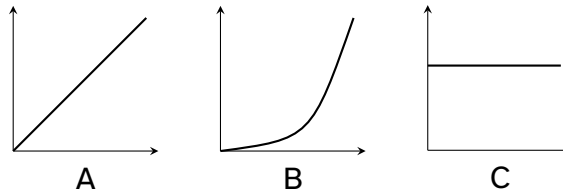
For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

Name _____

Total marks: **24**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

1 Here are three distance-time graphs.



Match each description to a graph.

Travelling at a constant speed

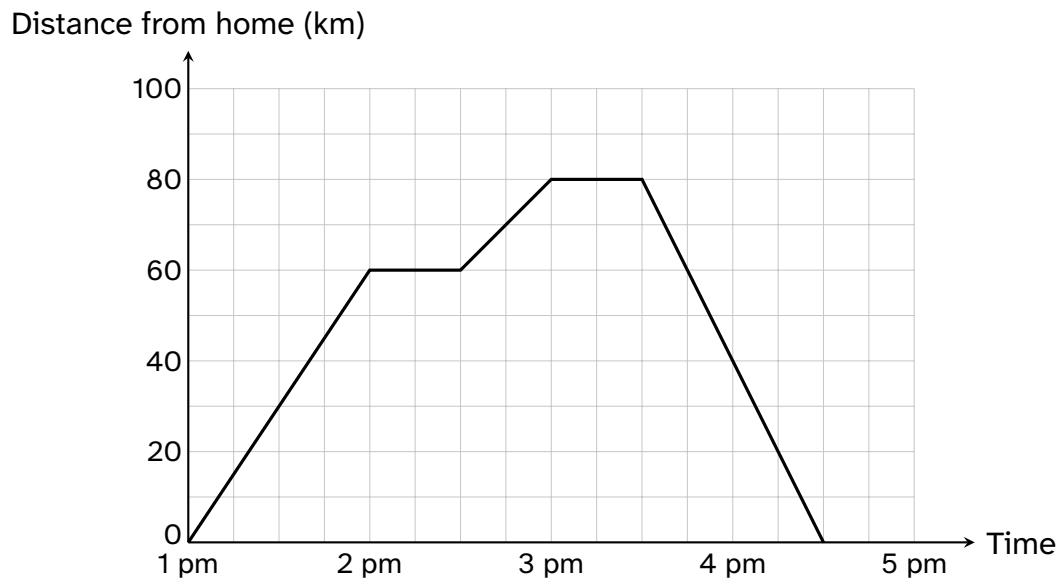
Stationary

Speeding up

(3)

(Total for Question 1 is 3 marks)

- 2 Kim drove from her home to a garden centre and back.
Here is the travel graph for her journey.



- (a) At what time did Kim stop for the first time?

.....
(1)

- (b) How far from home was Kim at 3 pm?

..... km
(1)

- (c) Work out Kim's average speed on the journey home.

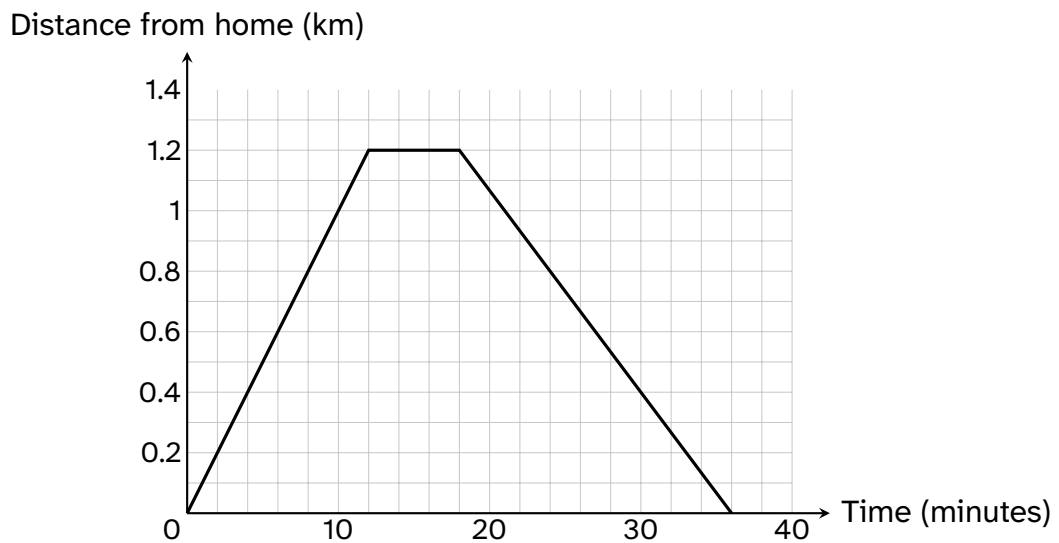
..... km/h
(2)

- (d) Between which two times was Kim travelling fastest on the way to the garden centre?
Give a reason for your answer.

(1)

(Total for Question 2 is 5 marks)

- 3 Owen walked from his home to the post office.
He stayed at the post office for a few minutes.
Then he walked home.
Here is the travel graph for his walk.



- (a) Work out Owen's speed on the way home.
Give your answer in km/h.

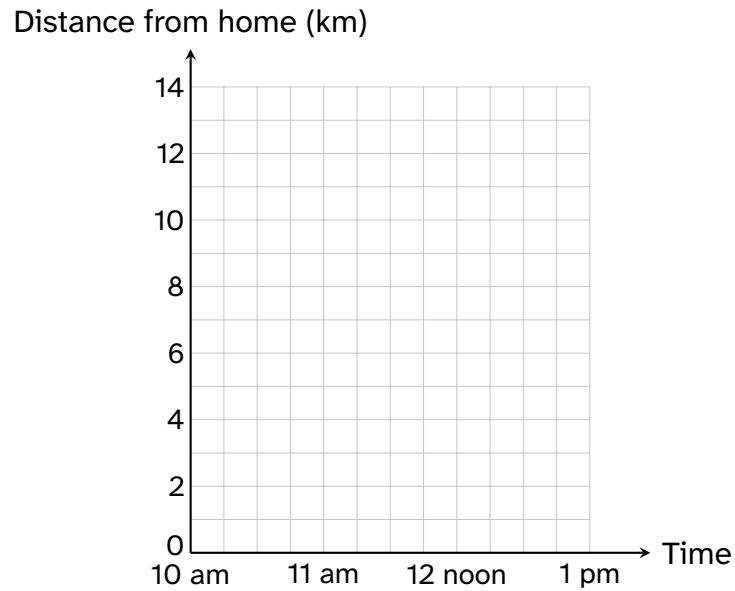
..... km/h
(2)

- (b) Owen says,
"I walked faster on the way to the post office than on the way home."
Is Owen correct?
You must show how you get your answer.

(2)

(Total for Question 3 is 4 marks)

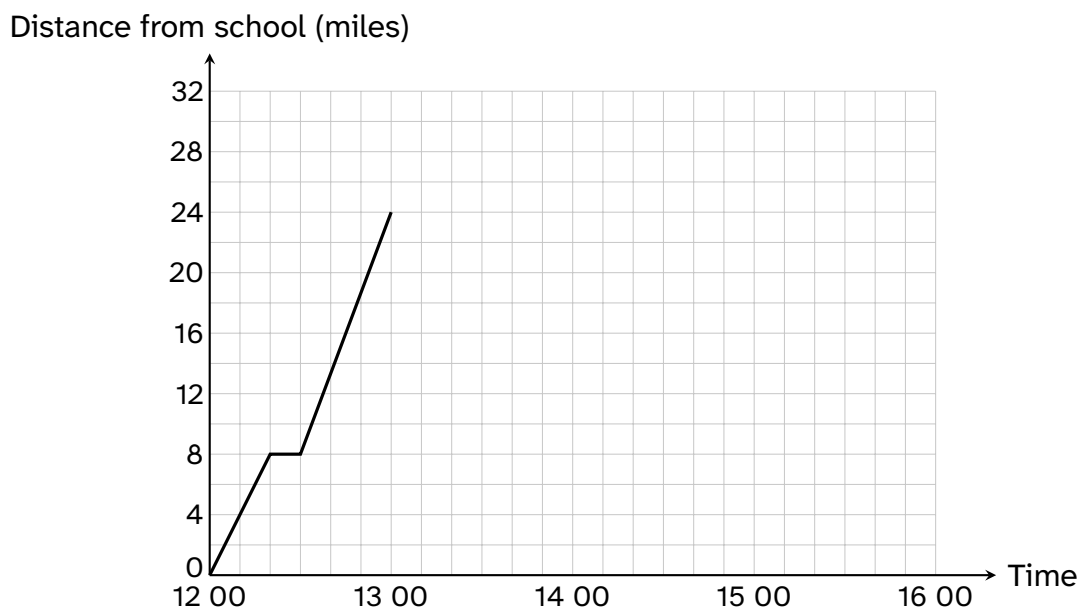
- 4** Ben leaves home at 10 am.
He cycles 12 km to a lake at a speed of 16 km/h.
He stays at the lake for 30 minutes.
He then cycles home at a speed of 12 km/h.
- On the grid, draw a travel graph for Ben's journey.



(4)

(Total for Question 4 is 4 marks)

- 5 A minibus took a football team from their school to a football ground. On the way, it stopped to pick up one of the players. Here is the travel graph for the journey to the football ground.



- (a) At what time did the minibus arrive at the football ground?

.....
(1)

- (b) Work out the average speed of the minibus between 12 30 and 13 00

..... miles per hour
(2)

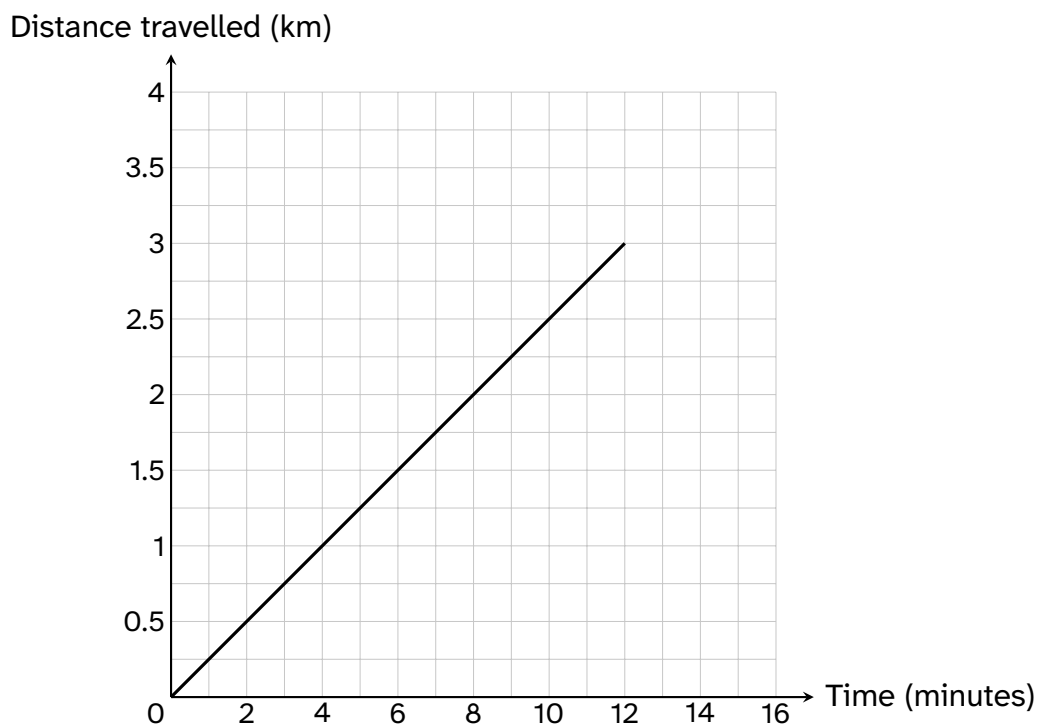
- (c) The minibus stayed at the football ground for 2 hours. It then travelled back to the school without stopping, at an average speed of 36 miles per hour.

On the grid, complete the travel graph.

(2)

(Total for Question 5 is 5 marks)

- 6** A cable car travels up a mountain from the bottom station to the top station. The graph shows how far the cable car has travelled at different times during its journey.



- (a) Work out the speed of the cable car.
Give your answer in km/h.

..... km/h
(2)

- (b) How many minutes does the cable car take to travel the first 1 km?

..... minutes
(1)

(Total for Question 6 is 3 marks)