

DISTANCE - TIME GRAPH & AVERAGE SPEED

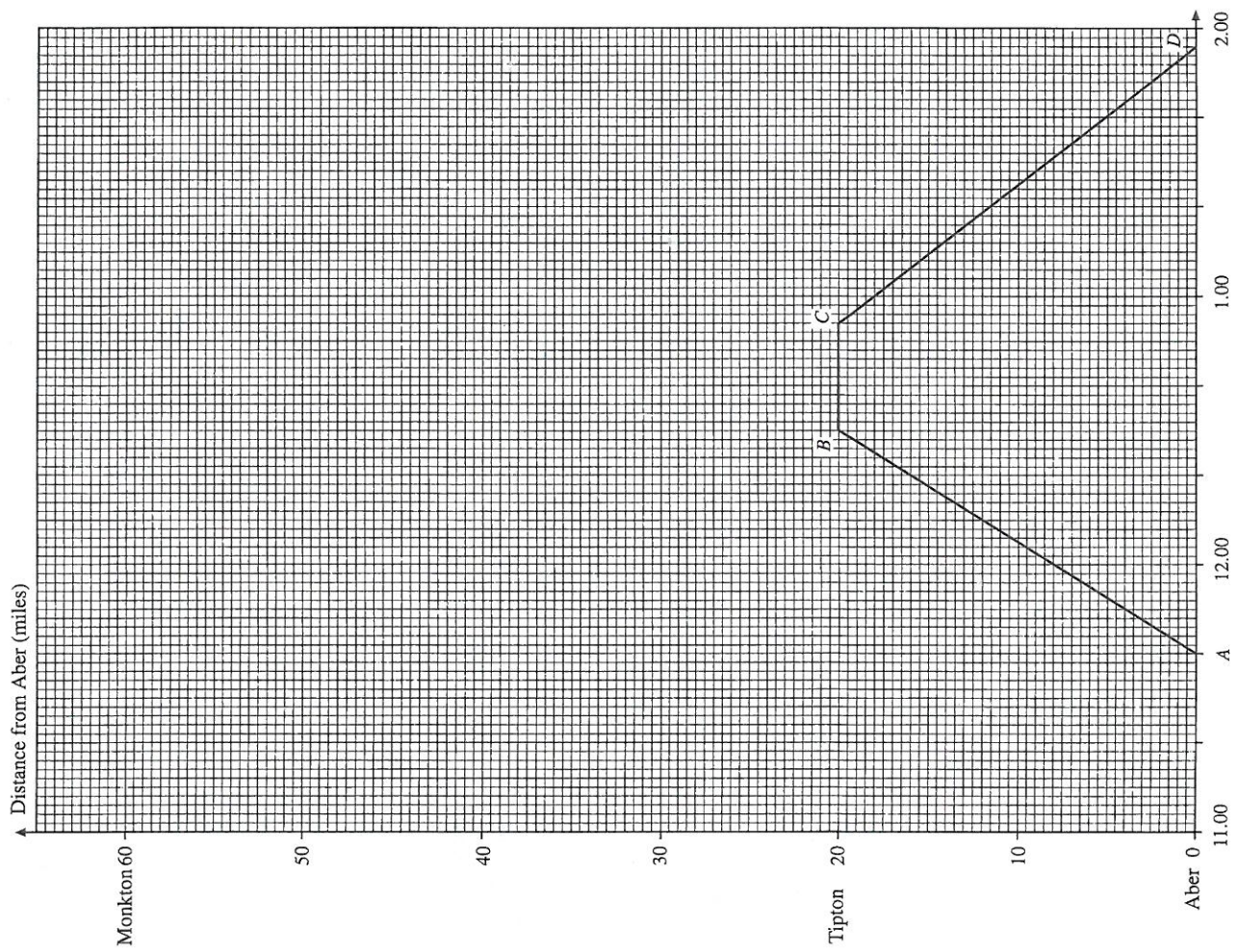
Examiner
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For use with question 5.

1 Aber, Tipton and Monkton are three towns on a bus route. Tipton is 20 miles from Aber and Monkton is a further 40 miles from Tipton.

Gareth catches a bus from Aber to go to Tipton. The distance-time graph drawn opposite represents the journey of Gareth's bus.

- (a) At what time did Gareth's bus leave Aber?
..... [1]
- (b) At what speed, in m.p.h., did the bus travel from Aber to Tipton?
.....
..... [2]
- (c) Explain fully what the part BC represents.
..... [1]
- (d) Gareth's friend Roy lives in Monkton. Roy starts out at 11.00 to meet Gareth's bus at Tipton. He travels at a speed of 30 m.p.h. On the same graph paper, draw a distance-time graph of Roy's journey. [1]
- (e) Explain whether or not Roy gets to Tipton in time to meet Gareth.
..... [1]
- (f) Roy stays in Tipton until 1.00 then returns home by 2.00. Draw the distance-time graph of these parts of his journey. [1]



Turn over.

2

The graph opposite shows Gary's journey by car from his home to a services area, where he stops for a while before returning home.

(a) How far is the services area from Gary's home?

[1]

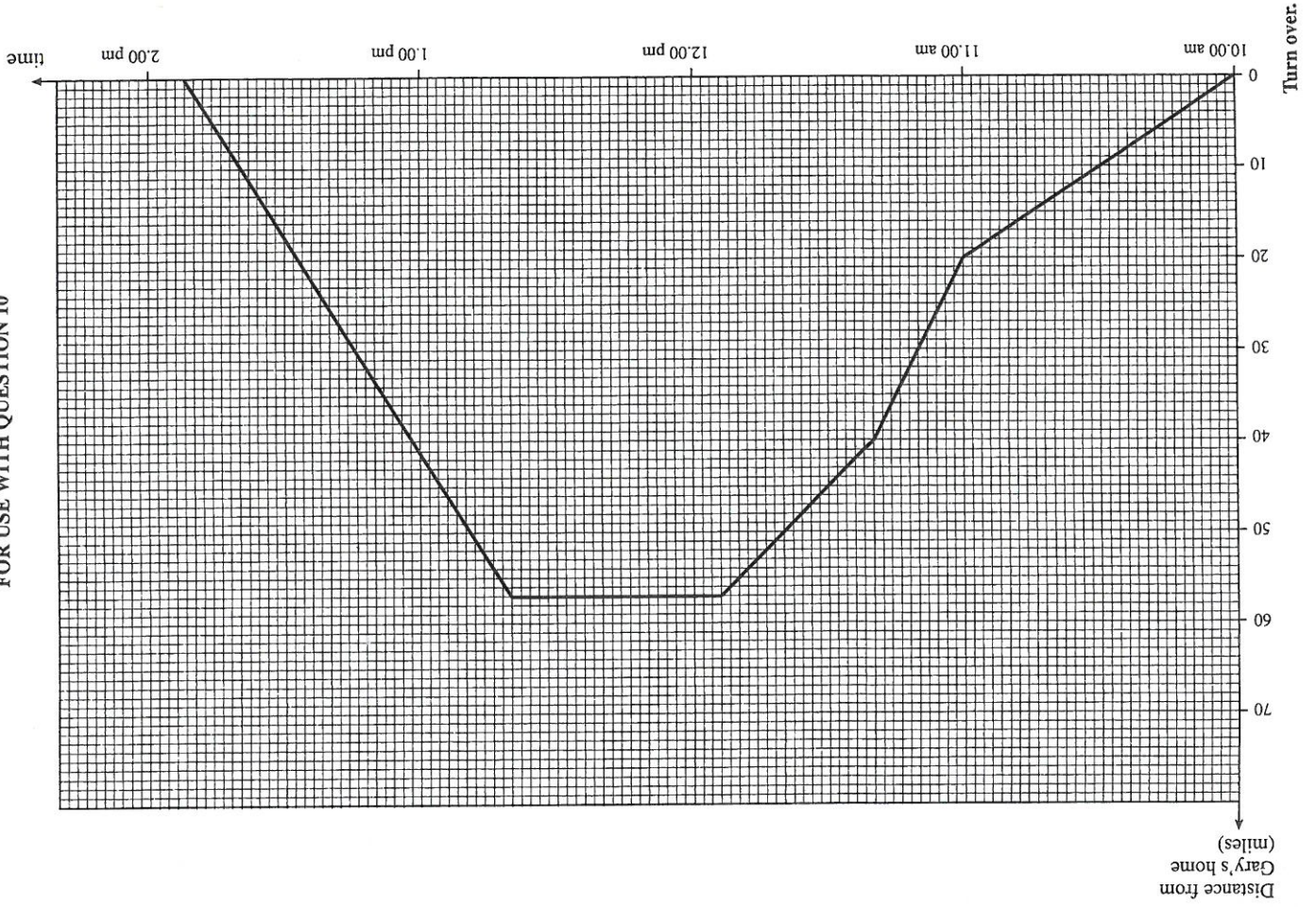
(b) How long did Gary stop at the services area?

[1]

(c) Use the graph to find Gary's average speed, in m.p.h., for his return journey home.

[2]

FOR USE WITH QUESTION 10



Turn over.

For use with Question 10

3 Jackie lives in Whitchurch and Brian lives in Bishopston, which is 50 miles from Whitchurch. One day they decide to meet at Baglan, which is a place somewhere between their two villages. After meeting they each return home. The graphs on the next page show part of their journeys.

(a) How far is Baglan from Bishopston?

[1]

(b) How long has Jackie been waiting at Baglan when Brian arrives?

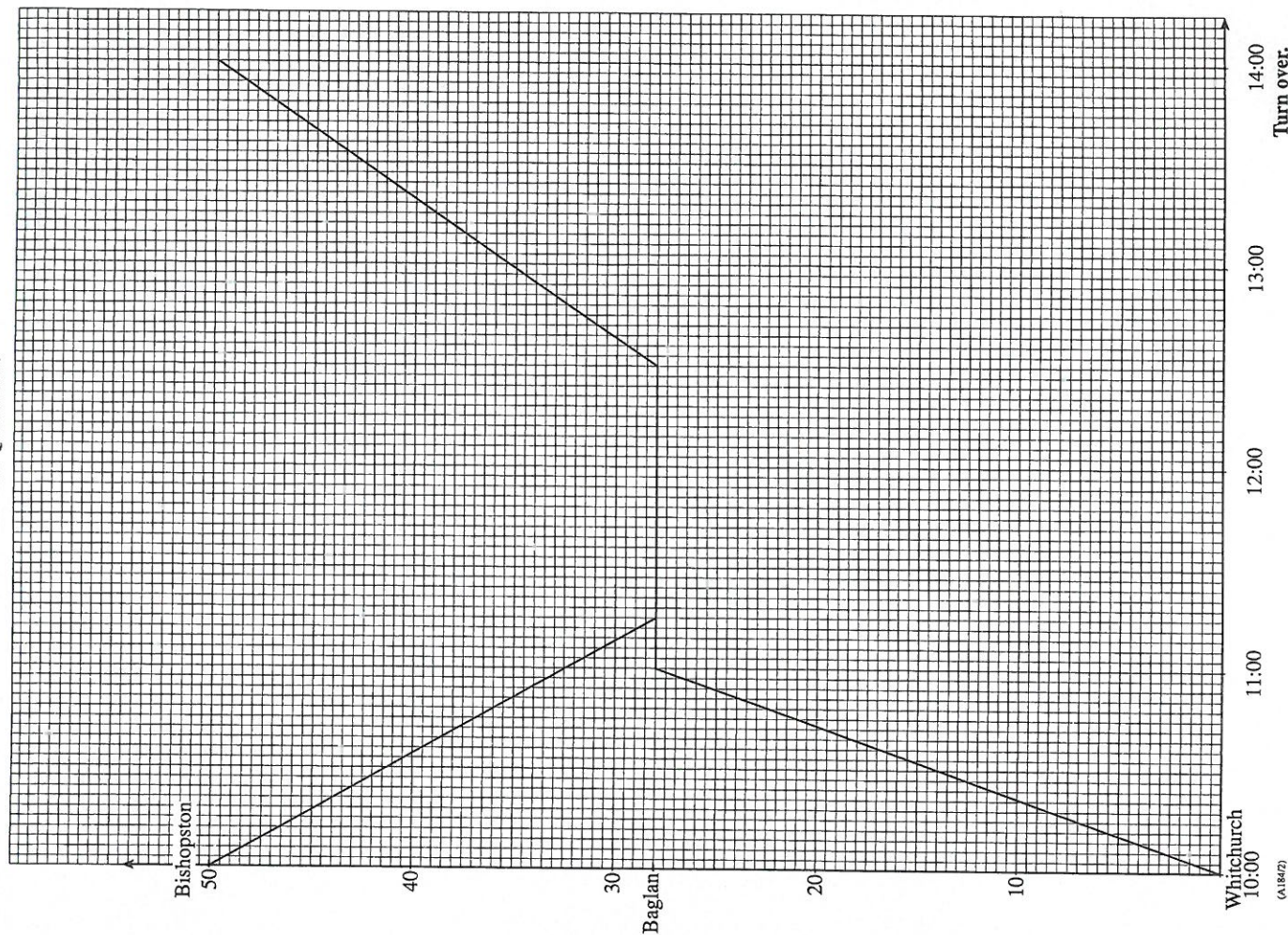
[1]

(c) Without calculating any speeds, explain how you can tell whether or not Jackie had a higher average speed on her way to Baglan, than Brian had on his way home from Baglan.

[1]

(d) Jackie leaves for home at the same time as Brian. She travels home at an average speed of 25 m.p.h. Draw this part of her journey on the graph paper.

[2]



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- [4]

[1]

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Turn over.

Sammi left home and drove to work. Along the way she had to stop at a school crossing. She then travelled at an increased speed until she arrived at work.

Which graph best shows her journey? Give a full explanation for your answer.

