7. John and Hywel are brothers living in the same house. The graph shows John's cycling trip from their home. He cycles for an hour, stops for a rest, then continues his journey.

(a) How far did John travel in the first 45 minutes?

....

[1]

(b) For how many minutes did John rest?

....
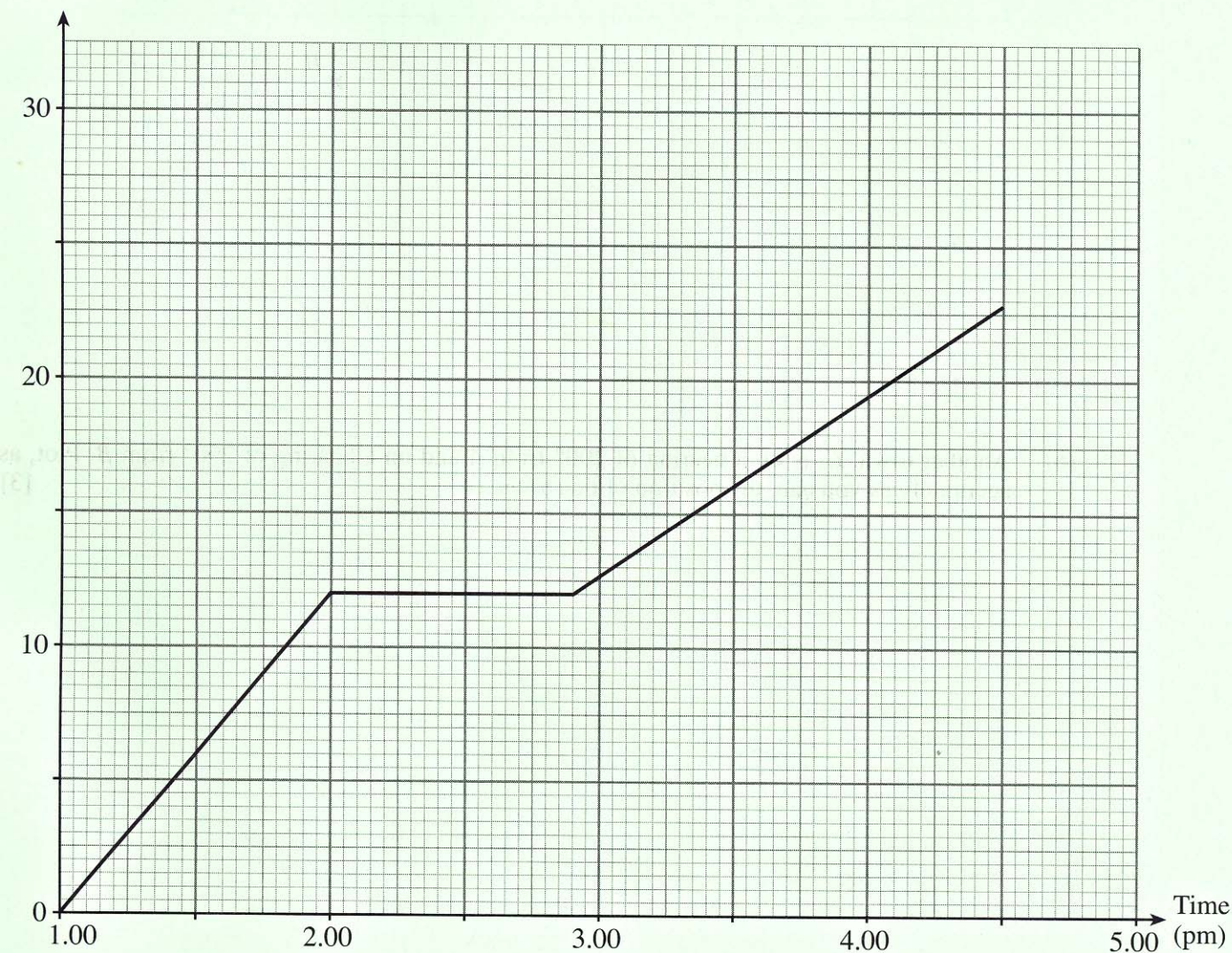
[1]

(c) Hywel sets out from their home at 3 p.m. and travels by car at 25 m.p.h. on the same route as John. Draw his journey on the graph paper. [2]

(d) Write down the time at which Hywel passes John.

....

[1]

Distance (in miles)
from home

10. Calculate the average speed, in m.p.h., of a car that travels 143 miles in 2 hours 45 minutes.

[3]

8. The graph shows Sue's journey by car from her home in Swansea to a services area and then on to Cheltenham, which is 120 miles from Swansea.

    (a)   How far did Sue travel in the first hour?

....
                                               [1]

    (b)   For how many minutes did Sue stay at the services area?

....
                                               [1]

    (c)   Without calculating any speeds, explain how you can tell whether Sue was, on average, travelling faster before or after her stop.

....

....
                                             [1]

    (d)   Louise sets out from Cheltenham at 10.30 a.m. and travels at an average speed of 40 m.p.h. to the services area. Draw her journey on the graph paper.   [2]

Distance (in miles) from Swansea

12. Beverley leaves home at 11.00 a.m. to go for a drive in her car. She travels a certain distance then stops for three quarters of an hour before starting back for home at a speed of 40 m.p.h.

The graph shows the first part of Beverley's journey up to the point where she stops.

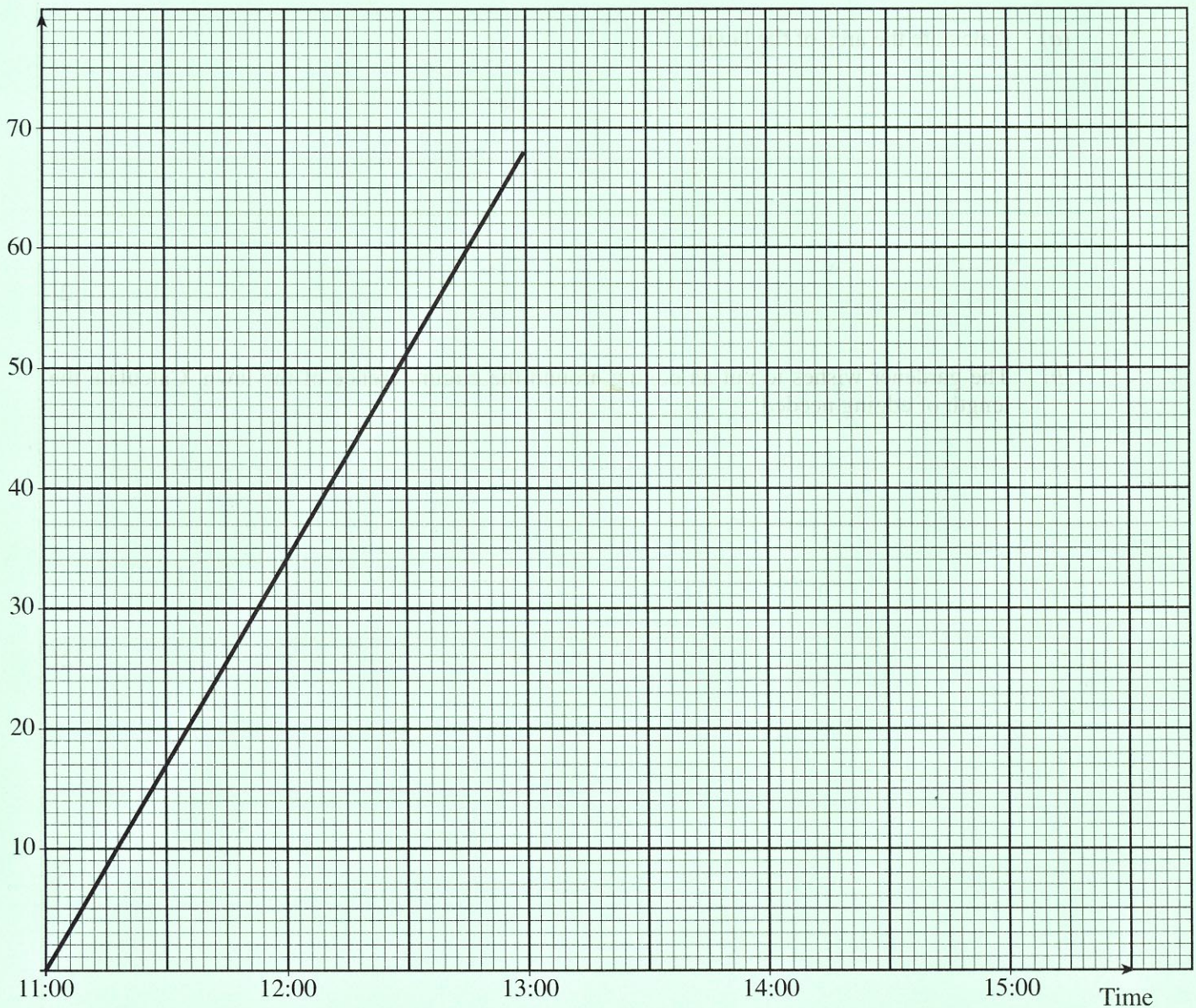(a) Calculate the speed for the first part of her journey.

....

....

....

[2]

(b) On the graph paper, draw lines to represent

    (i)   her $\frac{3}{4}$ hour stop and

    (ii)   her return journey home.   [2]

Distance (miles) from home

Time

10. 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]

Distance from
Gary's home
(miles)