**1** A plane flew from Madrid to Dubai.

The distance the plane flew was 5658 km.
The flight time was 8 hours 12 minutes.

Work out the average speed of the plane.

..... km/h

**(Total for Question 1 is 3 marks)**

**2** A train takes 6 hours 39 minutes to travel from New Delhi to Kanpur.
The train travels a distance of 429 km.

Work out the average speed of the train.
Give your answer in km/h correct to one decimal place.

..... km/h

**(Total for Question 2 is 3 marks)**

**3** An aeroplane travelled from New York City to Los Angeles.

The aeroplane travelled a distance of 3980 kilometres in 5 hours 24 minutes.

Work out the average speed of the aeroplane.
Give your answer in kilometres per hour correct to the nearest whole number.

..... kilometres per hour

**(Total for Question 3 is 3 marks)**

**4** Change a speed of 72 kilometres per hour to a speed in metres per second.

..... metres per second

**(Total for Question 4 is 3 marks)**

**5** Change a speed of 81 kilometres per hour to a speed in metres per second.

..... metres per second

**(Total for Question 5 is 3 marks)**

**6** Change 22 metres per second to a speed in kilometres per hour.
Show your working clearly.

.....km/h

**(Total for Question 6 is 3 marks)**

**7** Change a speed of $x$ kilometres per hour into a speed in metres per second.
Simplify your answer.

.....m/s

**(Total for Question 7 is 3 marks)**

**8** The Shanghai Maglev Train takes 8 minutes to travel a distance of 30.5 kilometres.

Work out the average speed of the train.
Give your answer in kilometres per hour.

kilometres per hour

**(Total for Question 8 is 3 marks)**

**9** Pedro drove from Toulouse to Montpellier in 2 hours 42 minutes.
He drove at an average speed of 90 km/hour.

Janine drove from Toulouse to Montpellier along the same route as Pedro.
The journey took her 3 hours.

Work out Janine's average speed for the journey.

..... km/hour

**(Total for Question 9 is 4 marks)**

**10** A train journey from Paris to Amsterdam took 3 hours 24 minutes.
The total distance the train travelled was 433.5 km.

Work out the average speed of the train.
Give your answer in kilometres per hour.

..... km/h

**(Total for Question 10 is 3 marks)**

**11** A rocket travelled 100 km at an average speed of 28 440 km/h.

Work out how long it took the rocket to travel the 100 km.
Give your answer in seconds, correct to the nearest second.

..... seconds

**(Total for Question 11 is 3 marks)**

**12** Abelie flew by plane from Dubai to Rome.

The flight time was 6 hours 42 minutes.
The average speed of the plane was 650 kilometres per hour.

Work out the distance the plane flew.

.....kilometres

**(Total for Question 12 is 3 marks)**

**13** A plane takes 3 hours 36 minutes to fly from the Cayman Islands to New York.
The plane flies a distance of 2470 km.

Work out the average speed of the plane in km/h.
Give your answer correct to the nearest whole number.

..... km/h

**(Total for Question 13 is 3 marks)**

**14** Peter goes for a walk.
He walks 15 miles in 6 hours.

(a) Work out Peter's average speed.
Give your answer in miles per hour.

..... mph
**(2)**

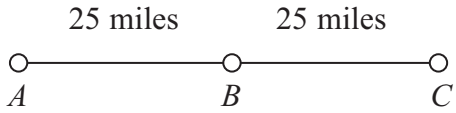
5 miles = 8 km.
Sunita says that Peter walked more than 20 km.

*(b) Is Sunita right?
You must show all your working.

**(2)**

**(Total for Question 14 is 4 marks)**

**15**




*A*, *B* and *C* are 3 service stations on a motorway.

*AB* = 25 miles
*BC* = 25 miles

Aysha drives along the motorway from *A* to *C*.

Aysha drives at an average speed of 50 mph from *A* to *B*.
She drives at an average speed of 60 mph from *B* to *C*.

Work out the difference in the time Aysha takes to drive from *A* to *B* and the time Aysha takes to drive from *B* to *C*.
Give your answer in minutes.

..... minutes

**(Total for Question 15 is 3 marks)**

**16** Milly went on a car journey.
She travelled from Anesey to Breigh to Clando and then to Duckbridge.

For Anesey to Breigh, Milly drove the 245 km in 2.5 hours.
For Breigh to Clando, Milly drove the 220 km at an average speed of 80 km/h
For Clando to Duckbridge, Milly drove at an average speed of 72 km/h in 50 minutes.

Work out Milly's average speed, in km/h, for the journey from Anesey to Duckbridge.
Give your answer correct to one decimal place.

..... km/h

**(Total for Question 16 is 4 marks)**

**17** Axel and Lethna are driving along a motorway.

They see a road sign.
The road sign shows the distance to Junction 8
It also shows the average time drivers will take to get to Junction 8

| **To Junction 8** |
| --- |
| 30 miles<br>26 minutes |

The speed limit on the motorway is 70 mph.

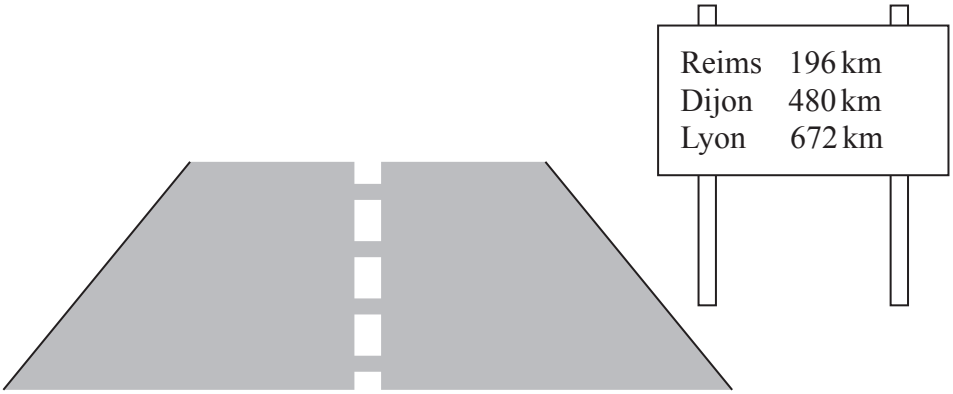
Lethna says,

'We will have to drive faster than the speed limit to go 30 miles in 26 minutes.'

Is Lethna right?
You must show how you got your answer.

**(Total for Question 17 is 3 marks)**

**18** Emily is driving in France.
She sees this sign.




Emily is going to drive to Dijon.
She plans to drive at an average speed of 50 miles per hour.

Work out how long it should take Emily to drive to Dijon.

.....

**(Total for Question 18 is 4 marks)**

**19** The distance from Fulbeck to Ganby is 10 miles.
The distance from Ganby to Horton is 18 miles.


Raksha is going to drive from Fulbeck to Ganby.
Then she will drive from Ganby to Horton.

Raksha leaves Fulbeck at 10 00
She drives from Fulbeck to Ganby at an average speed of 40 mph.

Raksha wants to get to Horton at 10 35

Work out the average speed Raksha must drive at from Ganby to Horton.

..... mph

**(Total for Question 19 is 3 marks)**

**20** Sue is driving home from her friend's house.

Sue drives

10 miles from her friend's house to the motorway
240 miles on the motorway
5 miles from the motorway to her home

Sue

takes 20 minutes to drive from her friend's house to the motorway
drives at an average speed of 60 mph on the motorway
takes 25 minutes to drive from the motorway to her home

Sue stops for a 30 minute rest on her drive home.

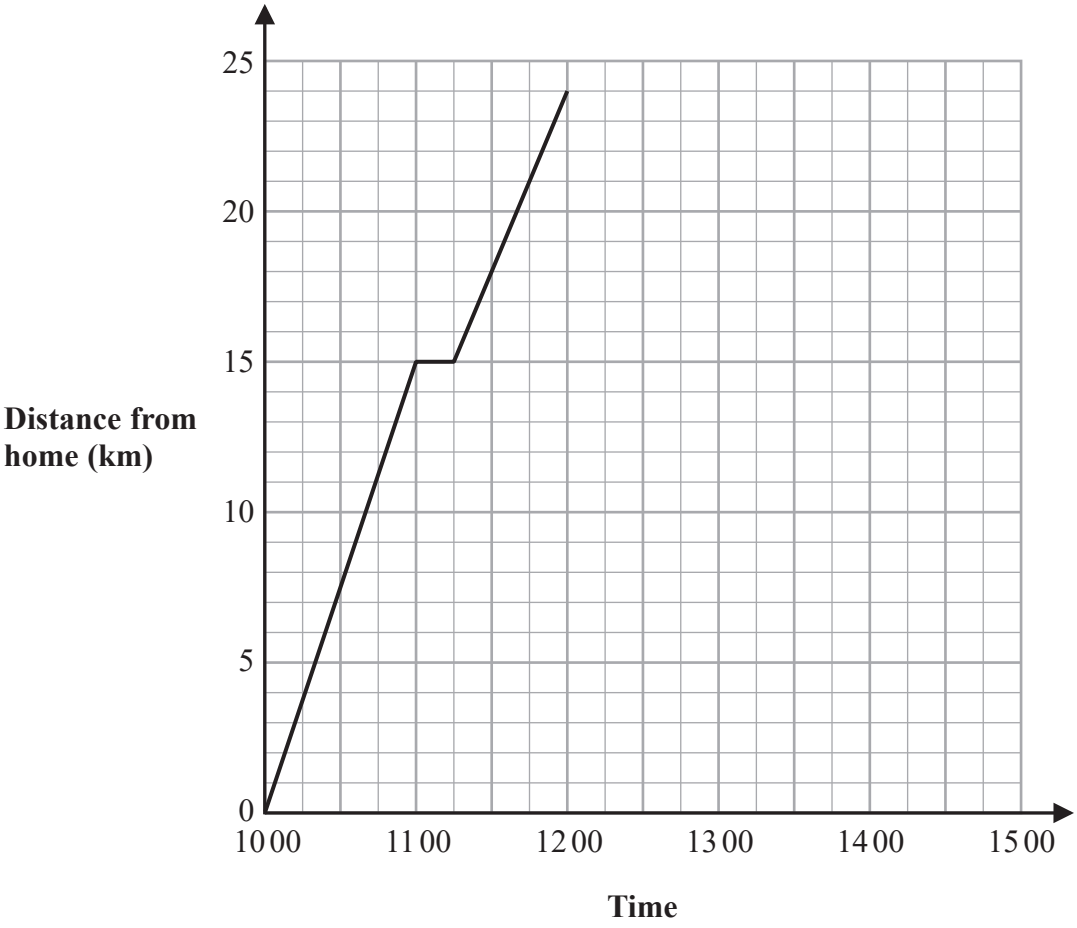
Sue leaves her friend's house at 9.00 am.

What time does Sue get home?
You must show all your working.

.....

**(Total for Question 20 is 3 marks)**

**21** Jalina left her home at 10 00 to cycle to a park.
On her way to the park, she stopped at a friend's house and then continued her journey to the park.
Here is the distance-time graph for her journey to the park.




(a) On her journey to the park, did Jalina cycle at a faster speed before or after she stopped at her friend's house?
Give a reason for your answer.

.....

.....

.....

**(1)**

Jalina stayed at the park for 45 minutes.
She then cycled, without stopping, at a constant speed of 16 km/h from the park back to her home.

(b) Show all this information on the distance-time graph.

**(2)**

(c) Work out Jalina's average cycling speed, in kilometres per hour, for the complete journey to the park and back.
Do **not** include the times when she was not cycling in your calculation.
Give your answer correct to 1 decimal place.

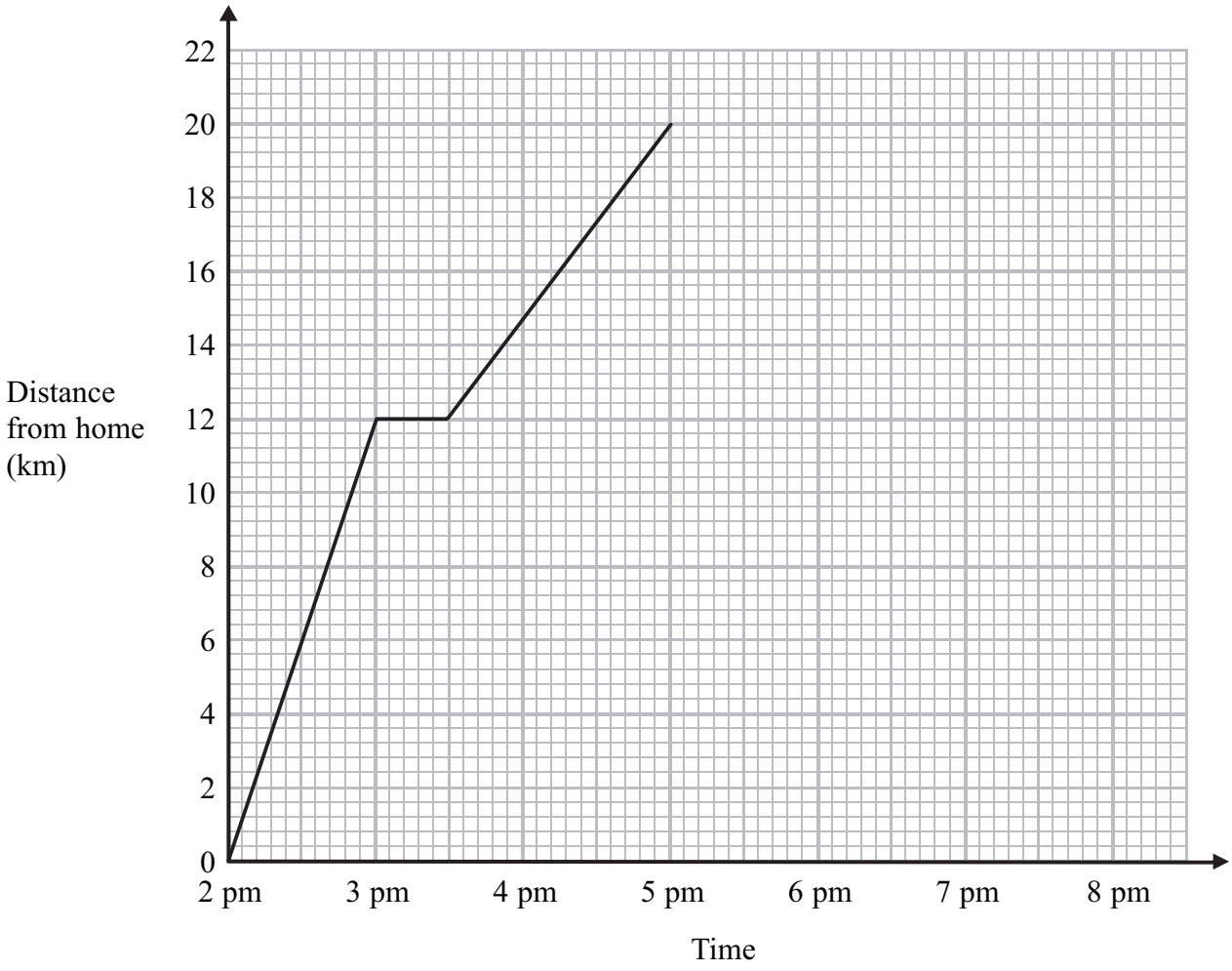
..... km/h

**(3)**

**(Total for Question 21 is 6 marks)**

**22** Simon went for a cycle ride.
He left home at 2 pm.

The travel graph represents part of Simon's cycle ride.




At 3 pm Simon stopped for a rest.

(a) How many minutes did he rest?

..... minutes

**(1)**

(b) How far was Simon from home at 5 pm?

..... km

**(1)**

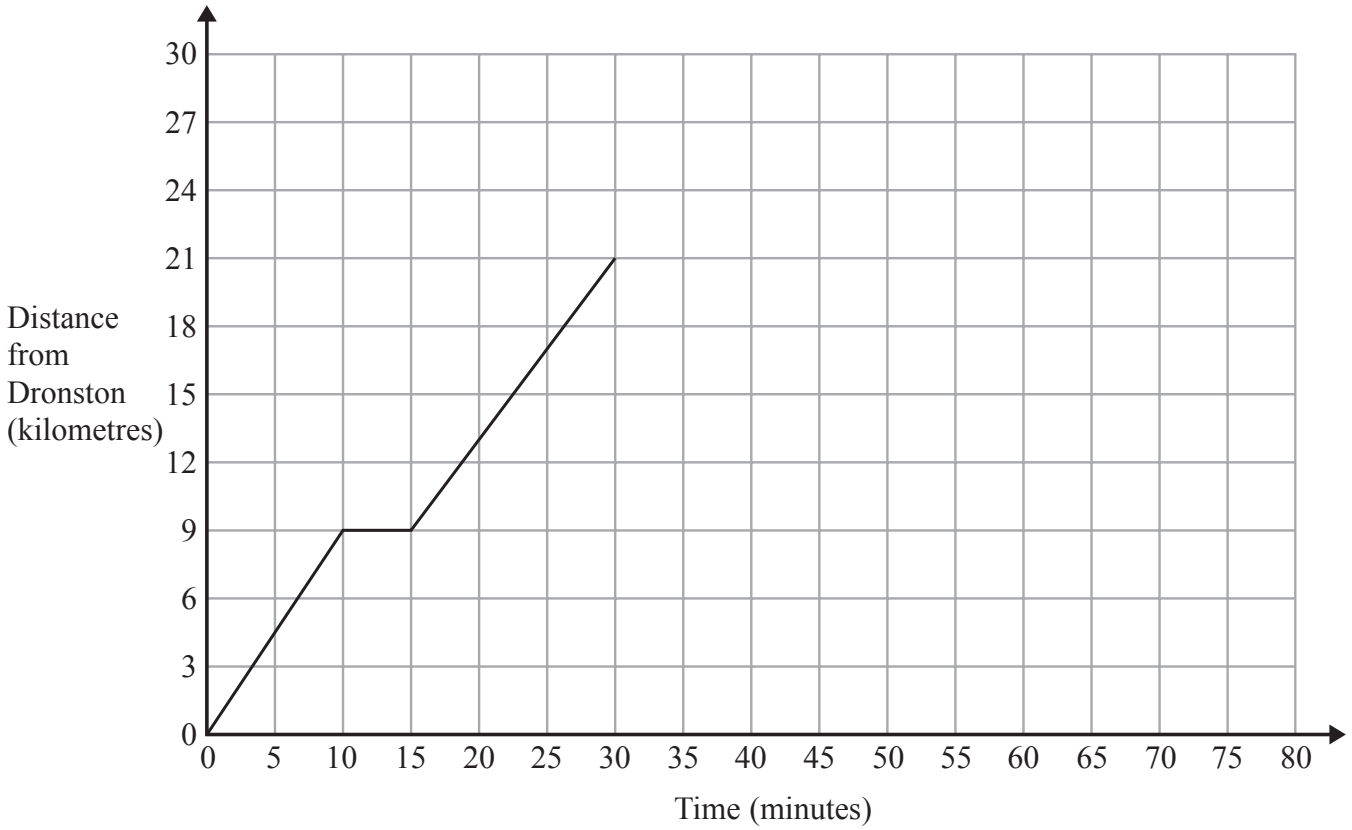
At 5 pm Simon stopped for 30 minutes.
Then he cycled home at a steady speed.
It took him 1 hour 30 minutes to get home.

(c) Complete the travel graph.

**(2)**

**(Total for Question 22 is 4 marks)**

**23** A coach travels from Dronston to Luscoe.
The travel graph for this journey is shown below.




(a) Work out the average speed of the coach, in kilometres per hour, for the first 10 minutes of the journey.

..... km/h

**(2)**

The coach stops in Luscoe for 15 minutes.
The coach then returns to Dronston at a constant speed of 42 km/h.

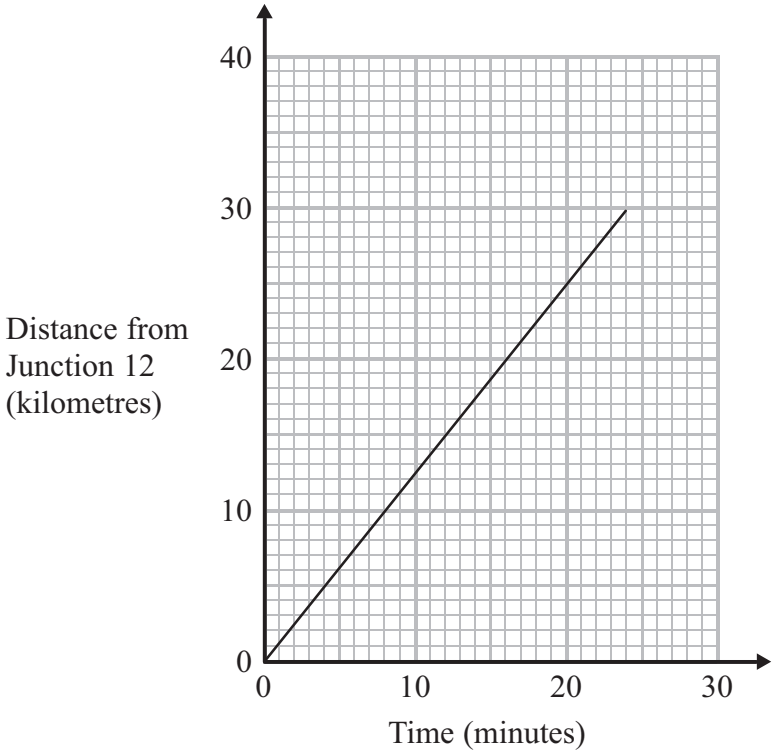
(b) Show this information on the travel graph.

**(3)**

**(Total for Question 23 is 5 marks)**

**24** Debbie drove from Junction 12 to Junction 13 on a motorway.

The travel graph shows Debbie's journey.




Ian also drove from Junction 12 to Junction 13 on the same motorway.
He drove at an average speed of 66 km/hour.

Who had the faster average speed, Debbie or Ian?
You must explain your answer.

**(Total for Question 24 is 4 marks)**