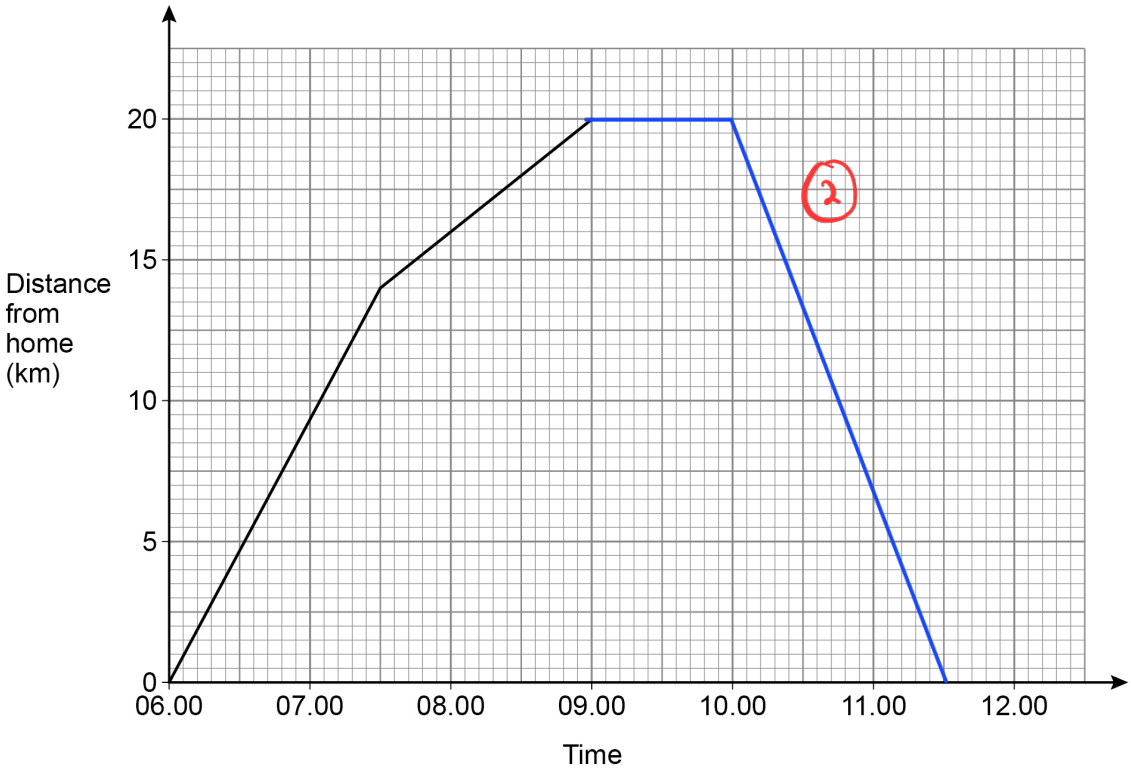
1 Jenny leaves home at 06.00

She runs for 3 hours.

Here is a distance-time graph of her run.



1 (a) How far from home is she after 3 hours?

[1 mark]

Answer 20 (1) km

1 (b) For the next hour she rests.

She then gets a bus home.

She arrives home at 11.30

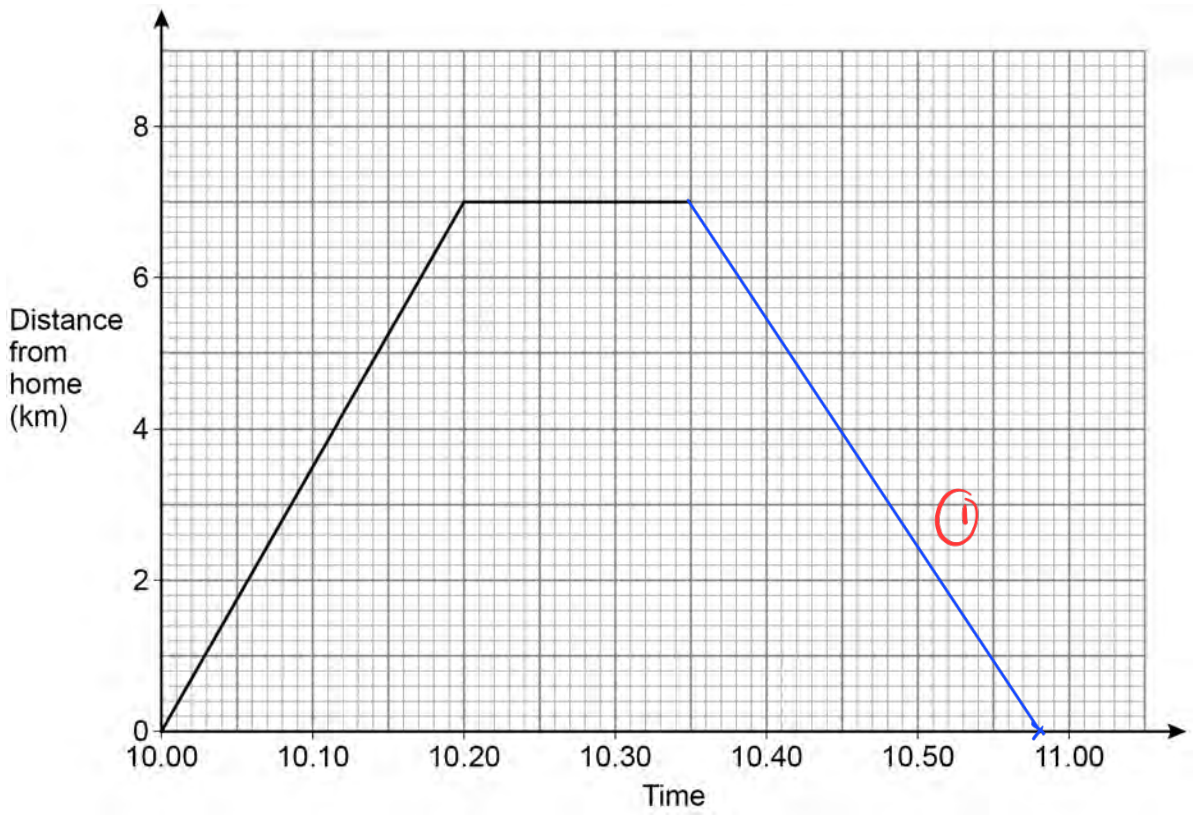
Complete the distance-time graph.

Assume the bus travels at a constant speed.

[2 marks]

2 Scarlett leaves home at 10.00 to cycle to the supermarket.

Here is part of a distance-time graph of her trip to the supermarket.



2 (a) She arrives at the supermarket at 10.20

How far is the supermarket from her home?

[1 mark]

Answer 7 (1) km

2 (b) She leaves the supermarket at 10.35

How long does she stay at the supermarket?

[1 mark]

Answer 15 (1) minutes

2 (c) Scarlett cycles home at a constant speed using the same route.

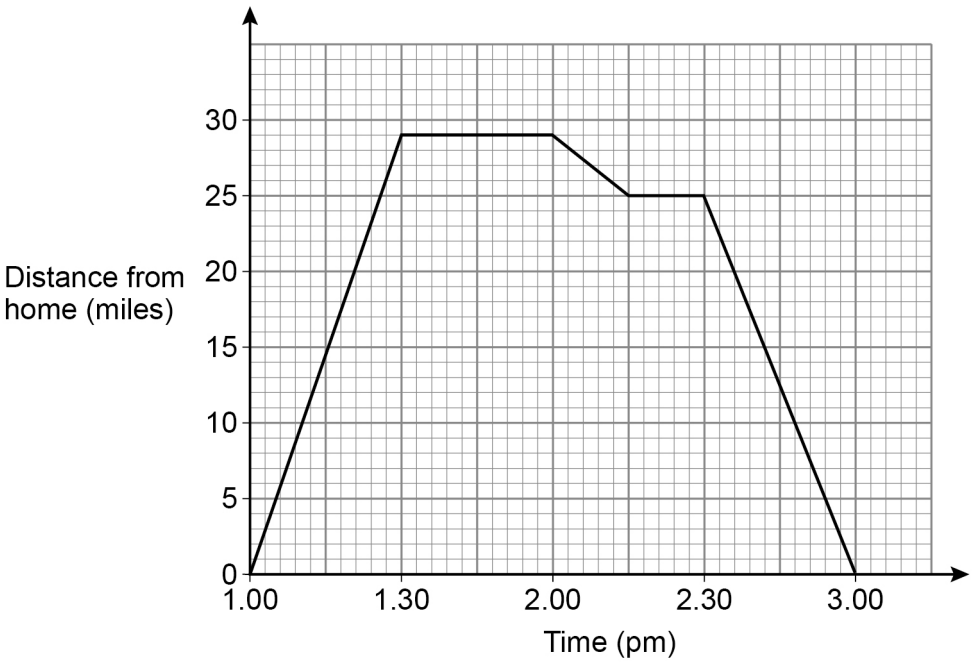
It takes her 3 minutes longer than her journey to the supermarket.

Complete the distance-time graph.

[2 marks]

10.35 + 0.23 = 10.58 (1)

3 Here is the distance-time graph for a car between 1 pm and 3 pm



3 (a) Work out the **total** time that the car is **not** moving between 1 pm and 3 pm

State the units of your answer.

[2 marks]

1.30 pm to 2.00 pm and 2.15 pm to 2.30 pm

30 mins and 15 mins (1)

= 45 mins (1)

Answer 45 minutes

3 (b) Work out the **total** distance the car travels between 1 pm and 3 pm

[2 marks]

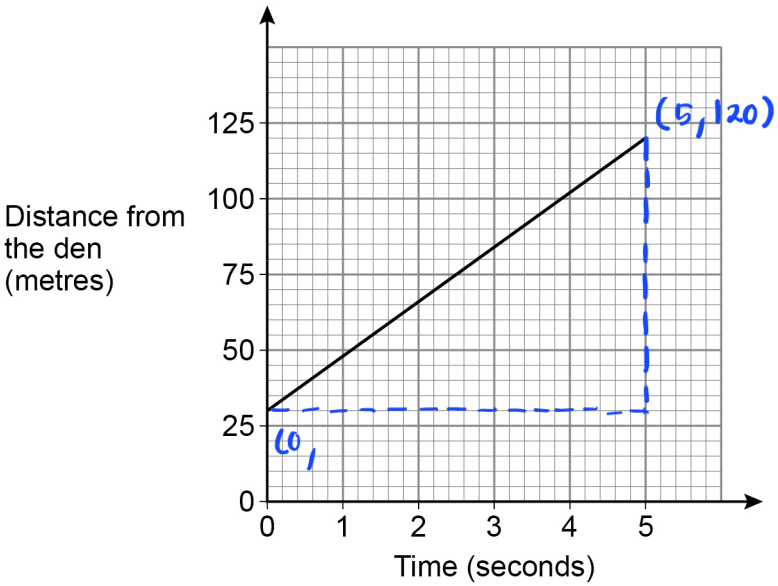
29 + 4 + 25 = 58

(1) (1)

Answer 58 miles

4 A lion is sprinting in a straight line away from its den.

The graph shows the lion's distance from the den.



Work out the speed of the lion in metres per second.

[3 marks]

Speed = distance / time

= (120 − 30) / 5 ✓0

= 90 / 5 ✓0

= 18 ms^{-1} ✓0

Answer 18 m/s