

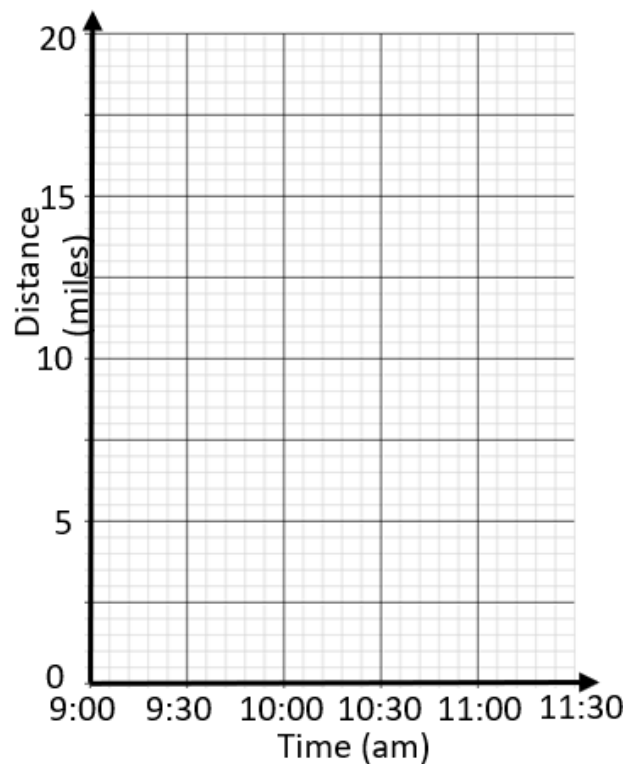


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## Distance-Time Graphs

Graph 1

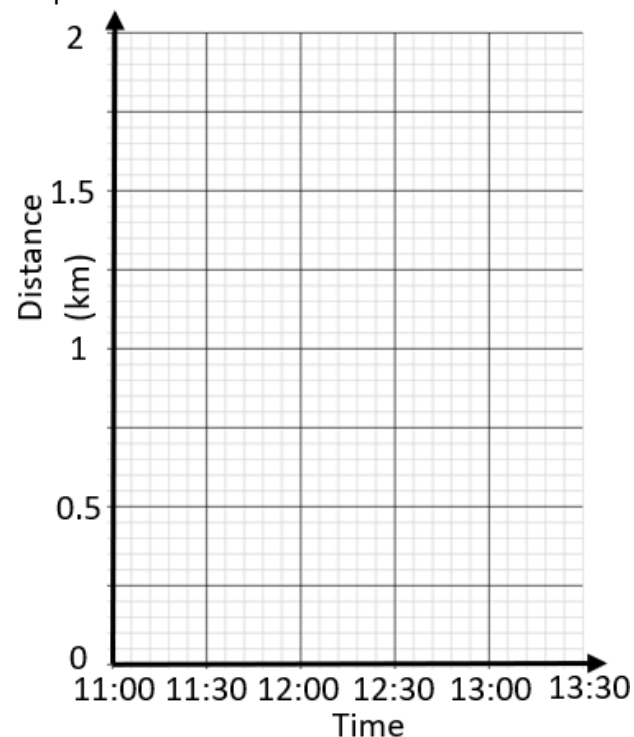


Question 1

Henry does out for his weekly food shop. The shop is 15 mile away. He sets off from home at 9:00am. He drives to the shop at an average speed of 30mph. When he arrives in the shop he stays for an hour. On the way home there is a lot of traffic and he travels at an average speed of 22.5 mph.

- Complete the Distance – Time Graph to express this information.

Graph 2



Question 2

Gemma is going to the park to meet her friend. The park is located 1.7km from her house. She sets off for the park at 11:00am and travels at a average pace of 3km/h. Gemma stays at the park until 13:00 and arrives home at 13:30.

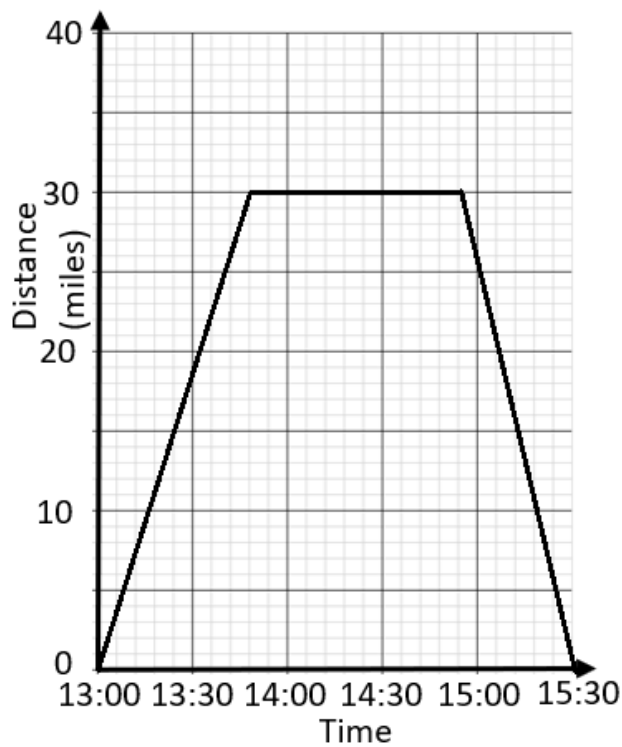
- Complete the Distance – Time Graph to express this information.
- Calculate Gemma's average speed on the journey home.



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Graph 3

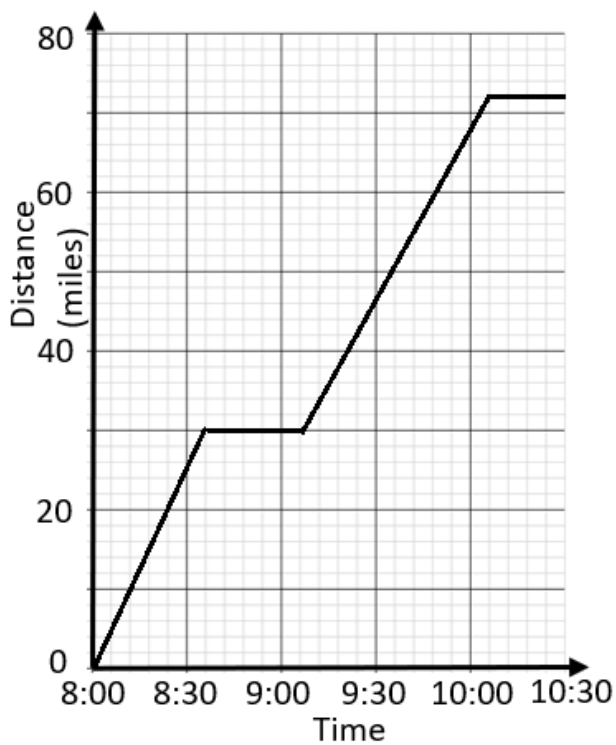


Question 3

Amelia drives to visit her Auntie at her house. This information is shown in graph 3.

- Calculate the time Amelia spends at her Aunties house.
- Calculate her average speed on the way to her aunties house.

Graph 4



Question 4

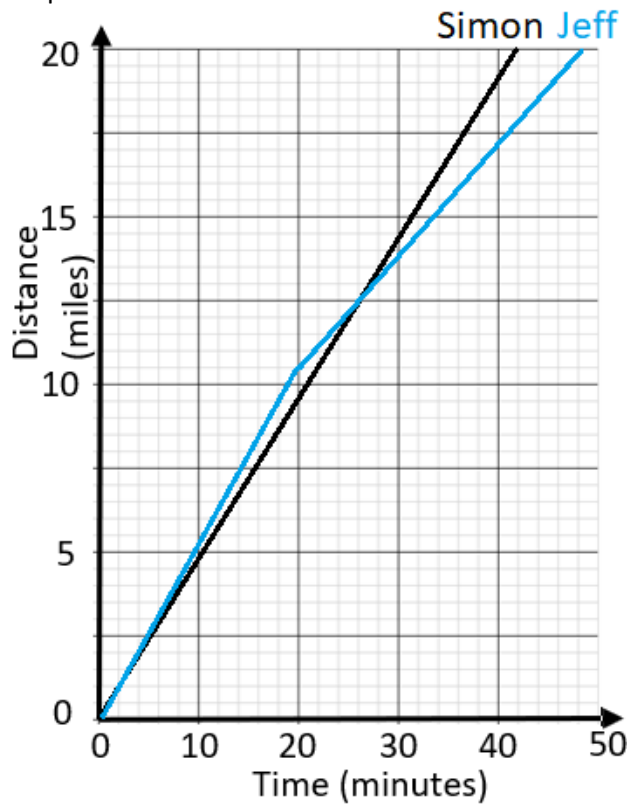
John has got a meeting to attend. First he drives to his office to pick up some of his documents. After picking up his documents he drives to his meeting and arrive just after 10:00.

- What is the total distance John travelled?
- Calculate the distance between the meeting location and the office.
- Calculate John's average speed when he travelled from the office to the meeting.
- How long did john spend at the office?



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Graph 5

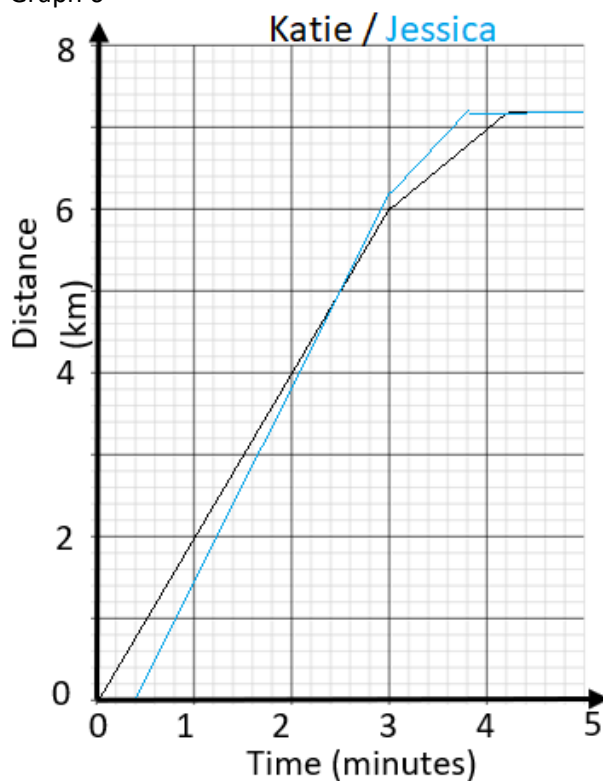


Question 5

Simon and Jeff both enter a time trial cycling race. Both their time trial races have been expressed on the distance-time graph.

- a. Describe Jeff's time trial
- b. Who was the faster time trialist out of Jeff and Simon?
- c. What was the time difference between the two contestants?
- d. Calculate Simon's average pace throughout the race.

Graph 6



Question 6

Katie and Jessica go go karting. They complete a lap on a race track. Katie sets off before Jessica.

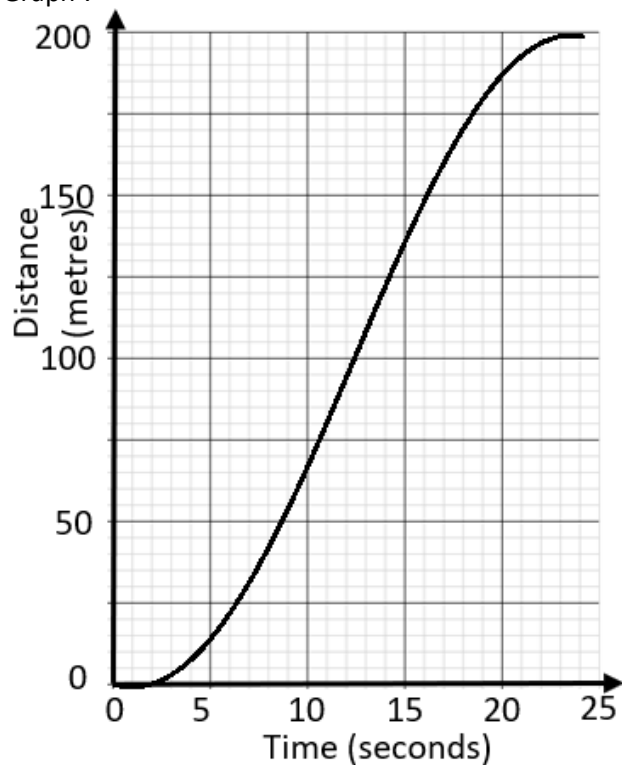
- a. After approximately how many minutes does Jessica overtake Katie (give your answer to 1 decimal place)
- b. How far is one lap of the track?
- c. The last part of the track has a lot of sharp corners. What does the distance – time graph show about the driver's speed before they stop at the end of the lap?



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Graph 7

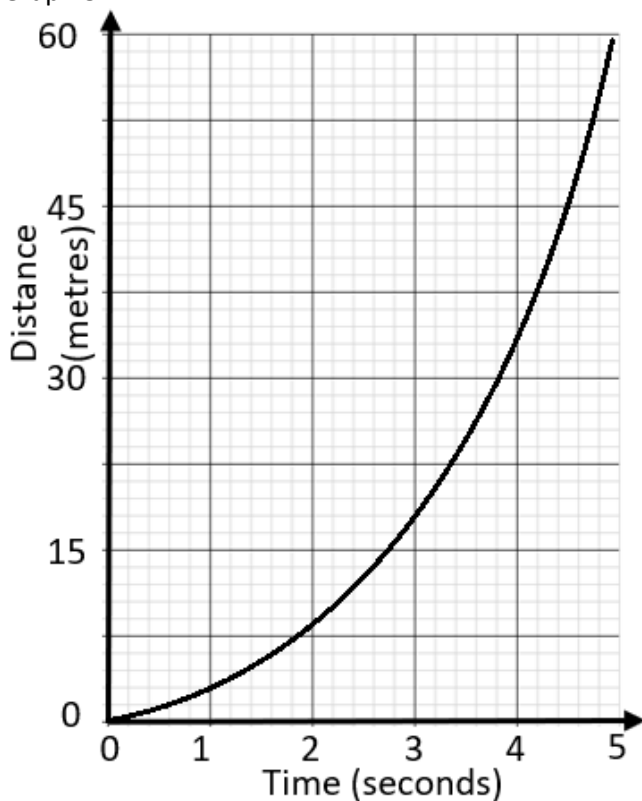


Question 7

The Distance – Time Graph shows the movement of a wild cat.

- a. Calculate the average speed of the wild cat between 5 and 20 seconds.
- b. Calculate the maximum speed of the wild cat.

Graph 8



Question 8

The distance – time graph shows the acceleration of a motor car.

- a. Calculate the average speed to the car over the first 3 seconds.
- b. Calculate the speed of the car after 4 seconds.