GCSE Maths: Distance-time graphs (Foundation): worksheet

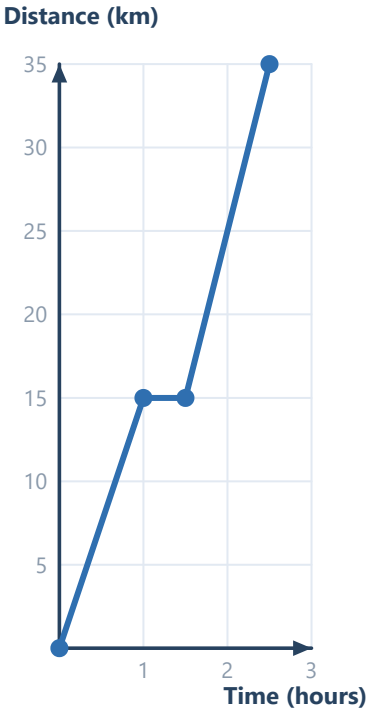
GCSE Maths - Quadratic and Other Graphs - Foundation - Lesson 13.7

Name: _____ Date: _____ Score: _____

12 questions. Write your answers in the spaces. Answers and step-by-step help are free at **websink.site/gcse/maths/ch13-quadratic-other-graphs/foundation/distance-time-graphs/**

Exercise 13G Distance-time graphs Non-calculator

1 The graph shows a cycle ride. Use it to find (a) the distance travelled after 1 hour, (b) the distance after 2 hours, (c) the time when the distance was 35 km, (d) how long the cyclist stopped.



(a) after 1 hour

Answer: .....

(b) after 2 hours

Answer: .....

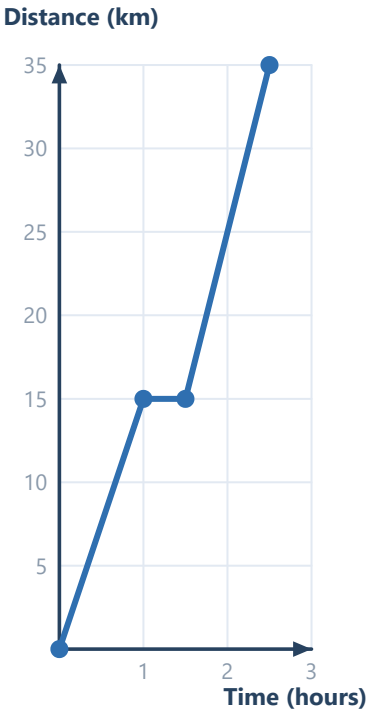
(c) the time when the distance was 35 km

Answer: .....

(d) how long she stopped

Answer: .....

2 Use the cycle ride graph to work out (a) the speed during the first hour, (b) the speed during the last hour, (c) the average speed for the whole ride.



(a) the speed in the first hour

Answer:

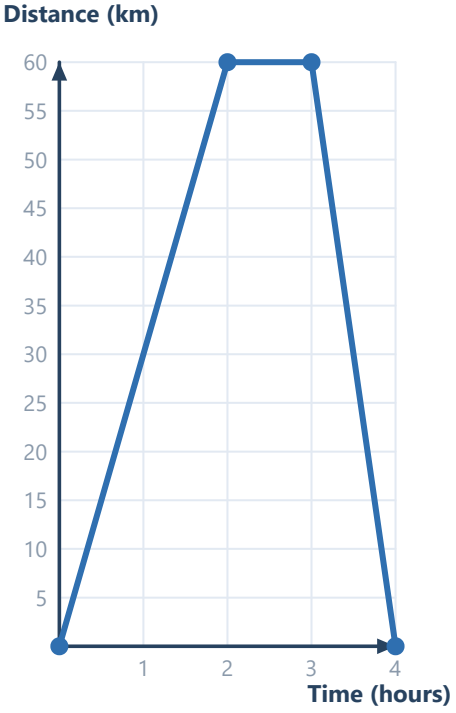
(b) the speed in the last hour

Answer:

(c) the average speed for the whole ride

Answer:

3 A car makes a journey to a shop and back. Use the graph to find (a) the greatest distance from the start, (b) how long the car stopped at the shop, (c) the speed on the way there, (d) the speed on the way back, (e) the average speed for the whole journey.



(a) the greatest distance

Answer:

(b) how long the car stopped

Answer:

(c) the speed on the way there

Answer:

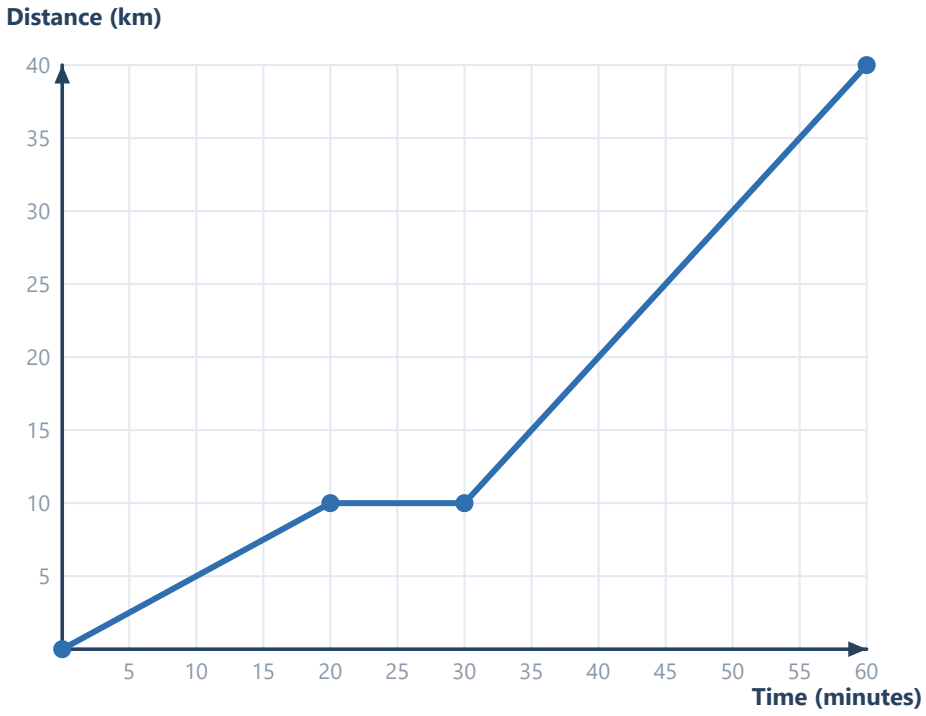
(d) the speed on the way back

Answer:

(e) the average speed

Answer:

4 **The graph shows a bus journey. Distance is in kilometres and time is in minutes. Find (a) the speed during the first 20 minutes in km/h, (b) how long the bus stopped, (c) the speed in the last 30 minutes in km/h.**



(a) speed in the first 20 minutes

Answer:

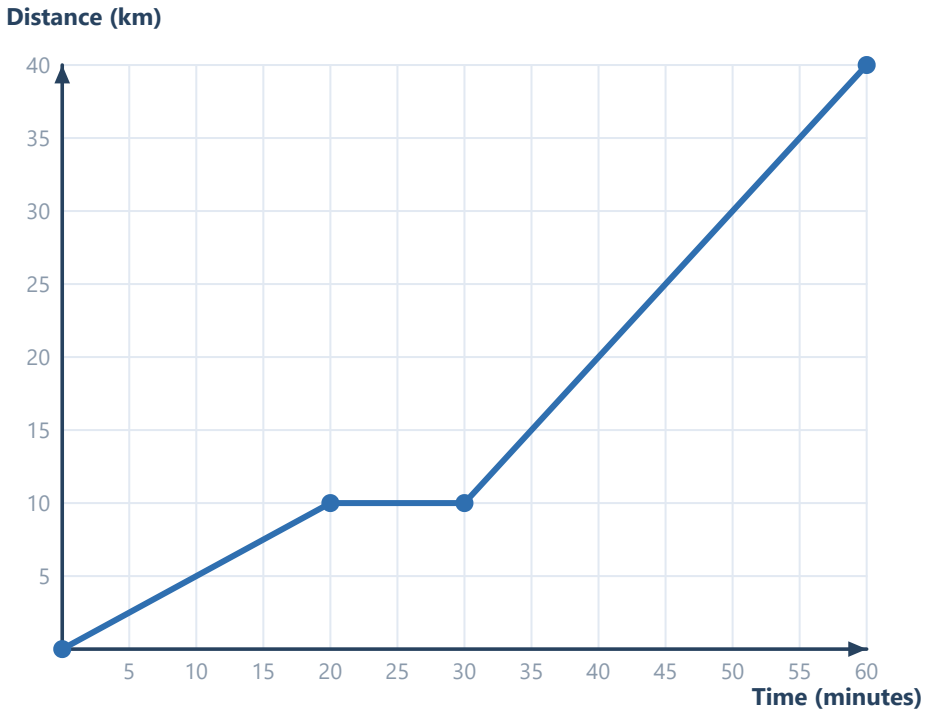
(b) how long the bus stopped

Answer:

(c) speed in the last 30 minutes

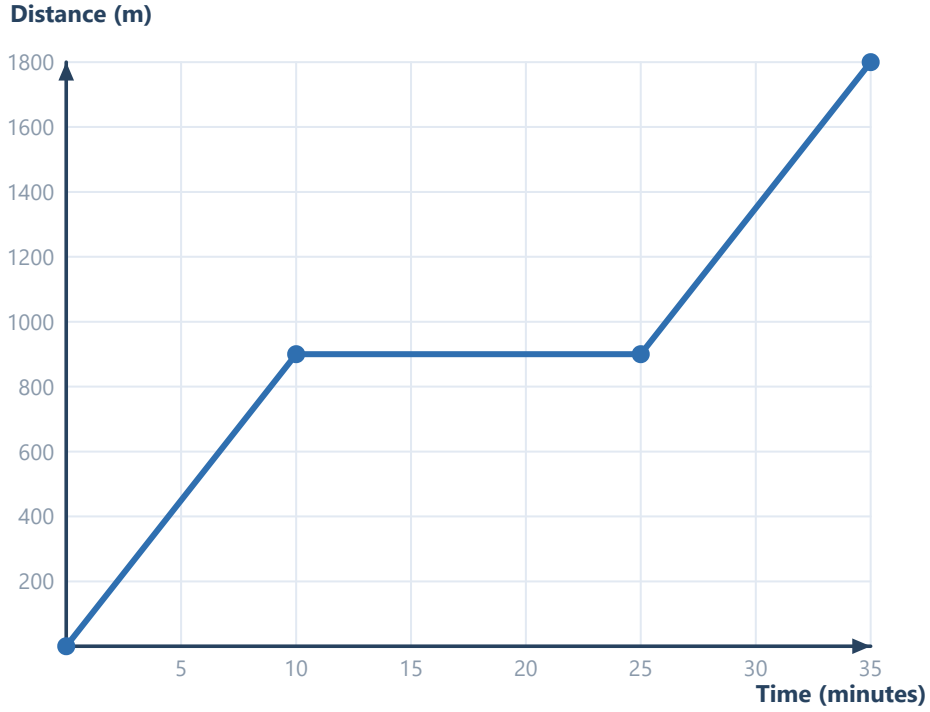
Answer:

5 **Work out the average speed of the bus in the previous question for the whole 60 minutes. Give your answer in km/h.**



Answer:

6 Jo walks to school. The graph shows distance in metres and time in minutes. Find Jo's speed (a) in metres per minute during the first 10 minutes, (b) in km/h during the first 10 minutes.



(a) in metres per minute

Answer:

(b) in km/h

Answer:

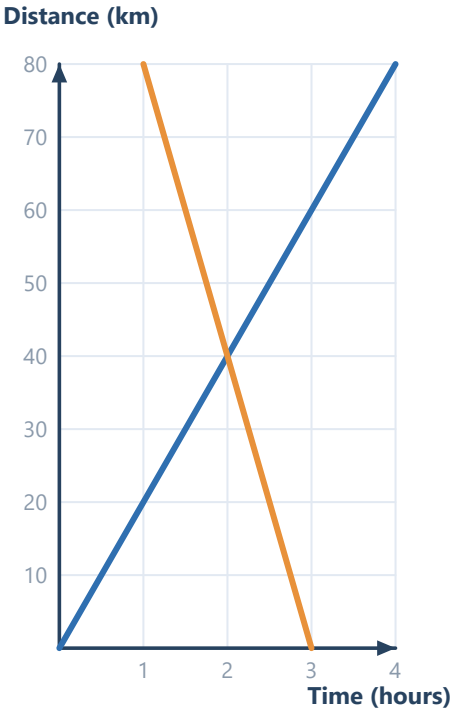
7 Mia leaves home and cycles 12 km in 1 hour. She rests for half an hour, then cycles home in 1.5 hours. Draw a distance-time graph of her journey. Use a horizontal axis from 0 to 3 hours and a vertical axis from 0 to 12 km.

Answer:

8 Sam drives 90 km in 1.5 hours, stops for 30 minutes, then drives a further 60 km in 1 hour. Draw a distance-time graph and work out his average speed for the whole journey.

Answer:

9 Priya cycles from A to B (80 km) at a steady speed. Quinn leaves B one hour later and travels towards A. Use the graph to find (a) when they meet, (b) how far from A they meet, (c) who travels faster, and how you can tell.



(a) when they meet

Answer:

(b) how far from A

Answer:

(c) who is faster

Answer:

10 Tom says: "A horizontal line on a distance-time graph means the person is travelling at a constant speed." Explain his mistake.

Answer:

11 On a journey graph the line slopes down from (2, 60) to (3, 0). Ali says the car is slowing down. Explain why he is wrong.

Answer:

12 In a 200 m race Amy runs at a steady 8 m/s from the start. Ben starts 4 seconds later and runs at a steady 10 m/s. Draw both on a distance-time graph and decide who wins and by how long.

Answer:

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