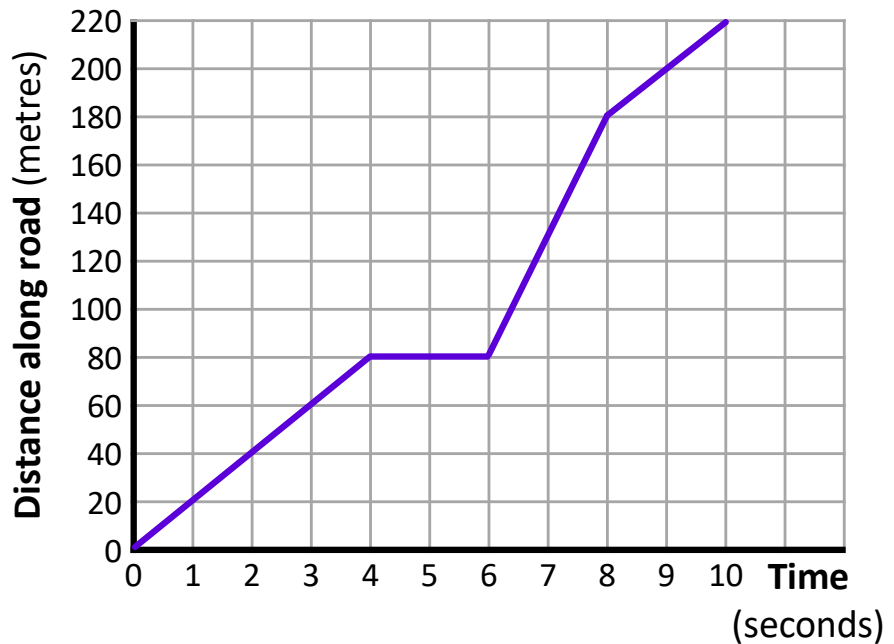**Ex1** The following distance-time graph shows a car's journey.

[a] How far did the car travel in the first 3 seconds?

[b] For how long was the car stationary?

[c] What was the car's greatest speed?

**[d]** What was the car's average speed for the whole journey?

Ex2 The graph shows a cyclist's journey, from home, to the next big city and back.

[a] How long in total was the cyclist stationary during his journey?

[b] How far did the cyclist travel in total?

[c] What was the cyclist's speed on the way home?

[d] What was the cyclist's greatest speed?
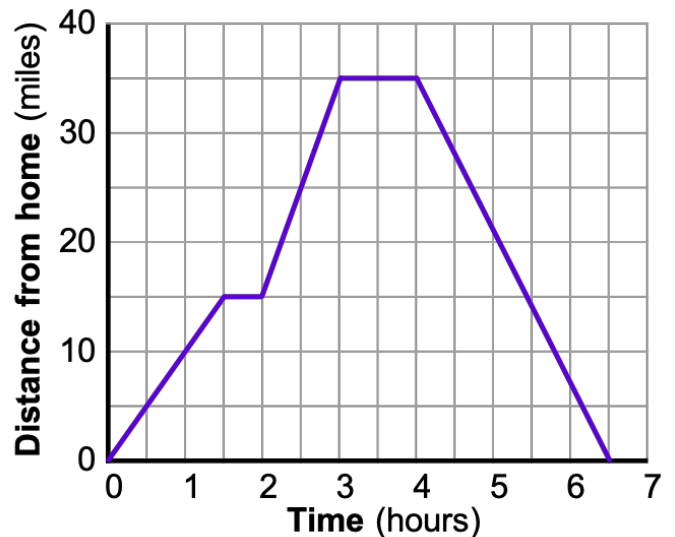
Q1 A train travels from Goldenrod City to Saffron City. The train leaves at 09:15 and stops at Route 32 along the way. The distance-time graph below shows the train's journey.

[a] What is the distance between Goldenrod City and Route 32?

[b] How long did the train stay at Route 32?

[c] What speed did the train travel between Route 32 and Saffron City?

[d] How far did the train travel in total?

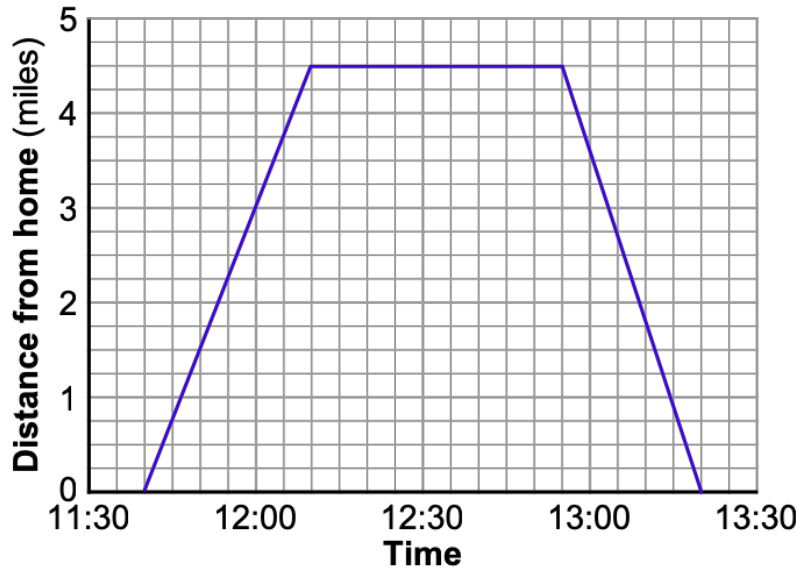**[e]** What was the train's average speed for the entire journey?
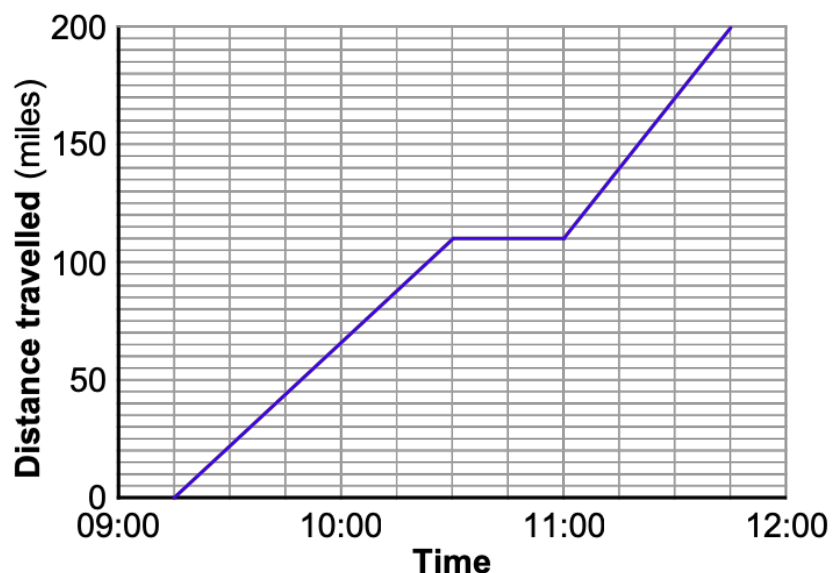
Q2 Callum cycles from his home to the supermarket and back.
The following distance-time graph describes his journey.

[a] How long did it take Callum to get to the supermarket?

[b] How long did Callum spend in the supermarket?

[c] What was Callum's speed on his journey home?

[d] What was the total distance Callum travelled?

[e] How long was Callum away from his home for?
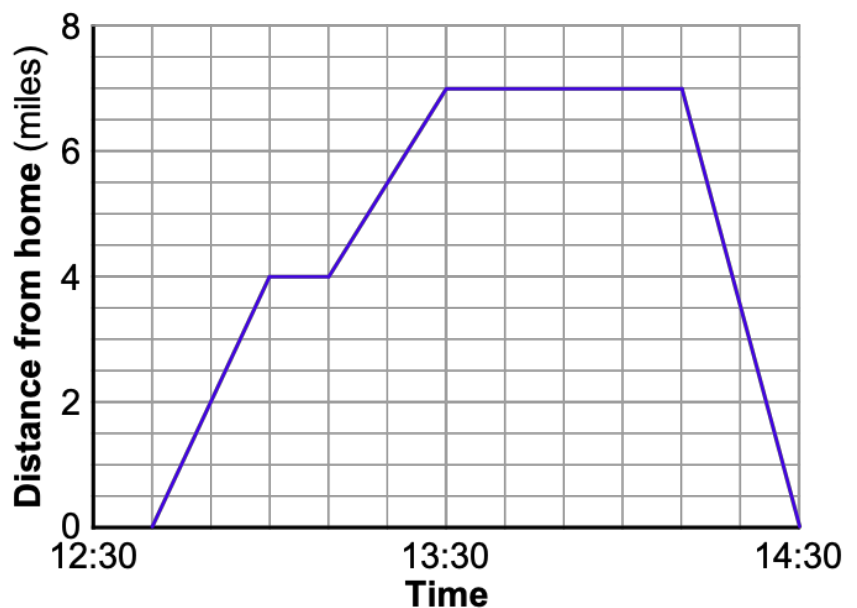

Q3 Paul travels to his parents' house and then returns home.
The distance-time graph shows information about Paul's journey.

[a] What time did Paul start his journey?

Paul stops at a shop along the way.

[b] For how long was Paul at the shop?

**[c]** How far do Paul's parents live from the shop?

[d] Work out the total distance Paul travelled.

[e] Work out Paul's average speed on his journey home.

Q4 A remote control car travels in a straight line.
The following graph describes its distance travelled over time.

[a] What is the total distance travelled by the car?

[b] How far had the car travelled after 8 seconds?

[c] What was the car's overall average speed?

[d] For how long was the car travelling a speed of **3m/s**?

[e] What is the difference between the car's fastest and slowest speeds?

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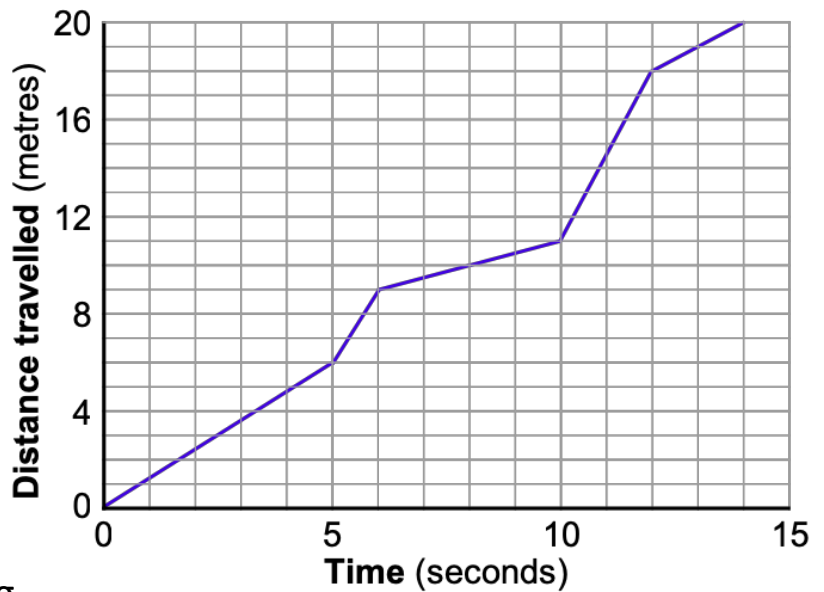
Q5 Five distance-time graphs are shown. Each box below describes one graph.
Write the letter of the correct graph next to its description.

1 Khalid walked home slowly from his friend's house.

2 Natalie walked steadily to the park.

3 Sophie walked to school, stopped to look at her watch, realised she was late and then started running.

4 David walked to his local gym. Stayed there for a workout and then ran home.

5 Michael went out with his friends, realised he had left his wallet at home. He ran home to get it and then ran again to catch up with his friends.
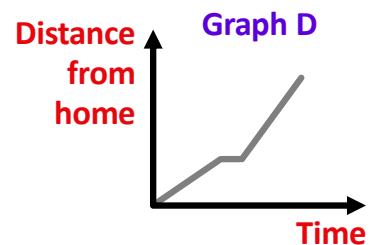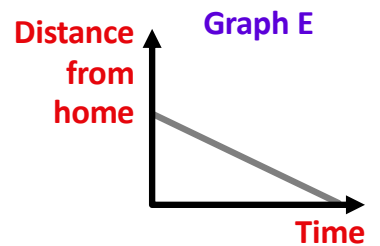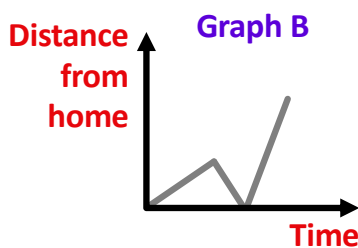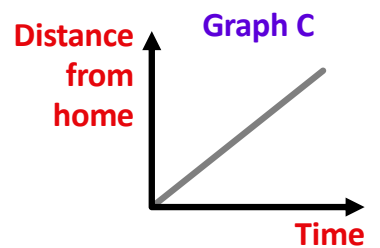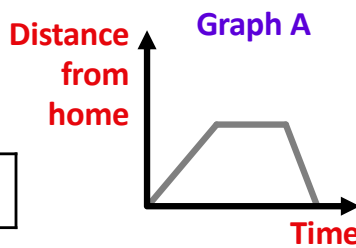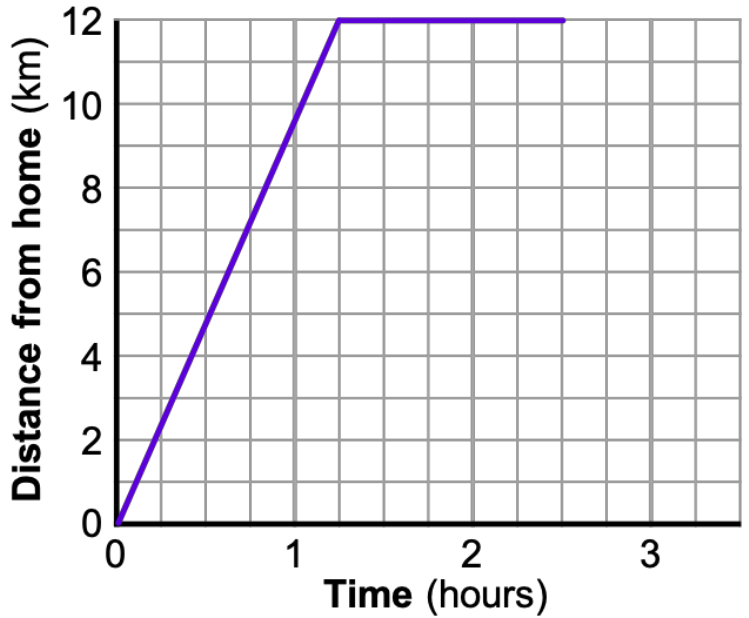
Ex3 The graph shows part of Matthew's journey to the gym and back.

[a] Find Matthew's speed on his way to the gym.

Matthew stayed at the gym for 75 minutes before travelling home at 16 km/h.
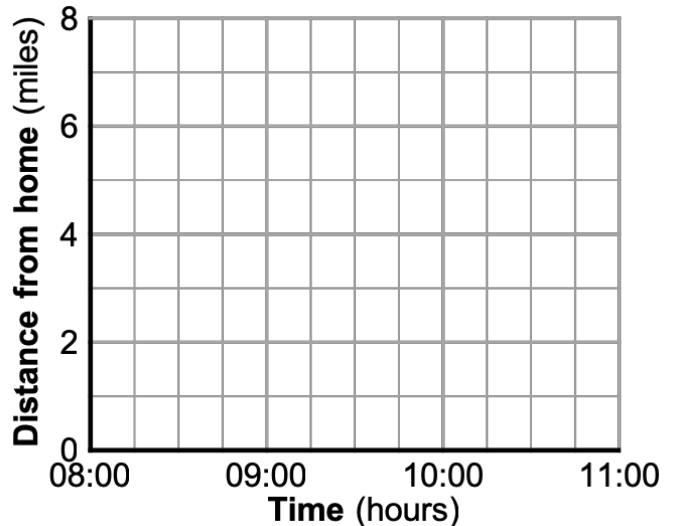
[b] Complete the distance-time graph.

Ex4 Lucy leaves home at 08:00. She walks at a speed of 4mph for 15 minutes before immediately running at 8mph for a further 45 minutes.
She then stops for half an hour. Lucy then sets off home and arrives at 10:45.

[a] How long in total was the cyclist stationary during his journey?

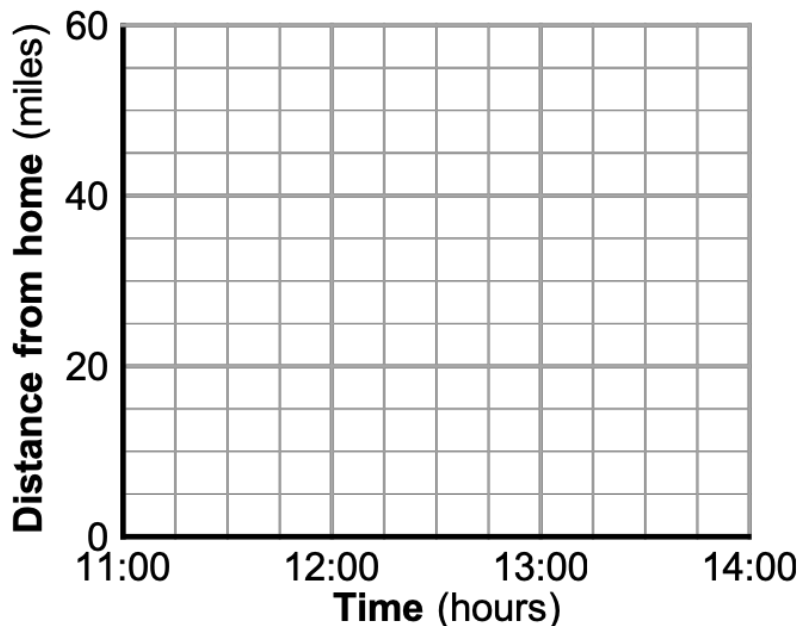**[b]** How far did the cyclist travel in total?

Q6 Steve leaves home at 11:15am. He drives at an average speed of 60mph for 45 minutes. He then stops for 45 minutes.
Steve then sets off home and arrives at 14:00.

[a] Draw the distance-time graph for Steve's journey.

[b] What was Steve's average speed on his way home?

**[c]** How far did Steve travel in total?

Q7 A fishing vessel travels a distance of 6 nautical miles at a speed of 8 knots. It then anchors for one hour, before travelling a further 5 nautical miles, in 45 minutes, to the next fishing ground. It anchors for 30 minutes before sailing 1 hour back to port.
1 knot = 1 nautical mile per hour.

[a] Draw the distance-time graph for the fishing vessel.

[b] What was the vessel's average speed for the entire journey?
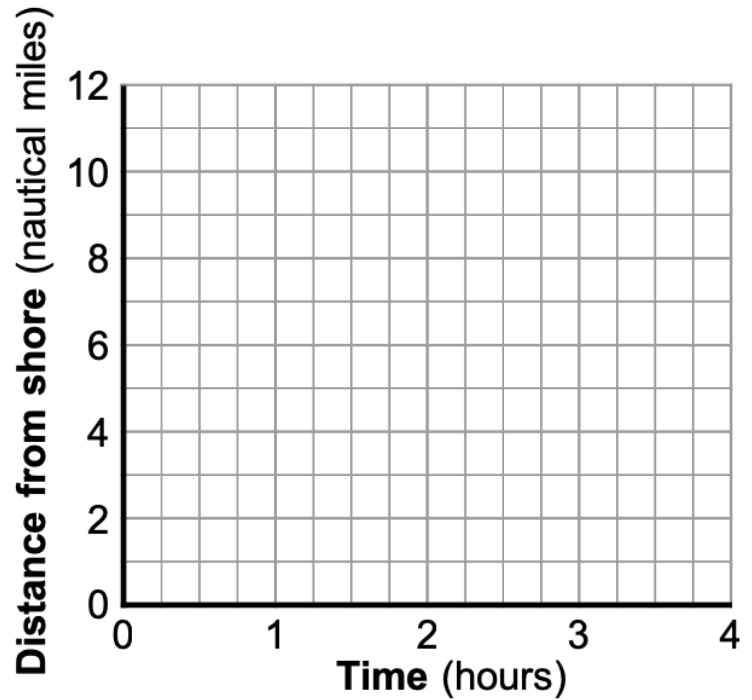
Q8 Alan leaves home at 10:15. He drives at an average speed of 40mph for 2½ hours. He then stops for 45 minutes. Alan then sets off home, travelling at 30mph for 1 hour, before speeding up to 56mph for the rest of the journey.

[a] Draw the distance-time graph for Alan's journey.

[b] What time did Alan arrive home?