

Speed, Distance & Time

Difficulty: Easy

Question Paper 3

Level	IGCSE
Subject	Maths (0580/0980)
Exam Board	CIE
Topic	Algebra and graphs
Sub-Topic	Speed, Distance & Time
Paper	Paper 2
Difficulty	Easy
Booklet	Question Paper 3

Time allowed: 34 minutes

Score: /26

Percentage: /100

Grade Boundaries:

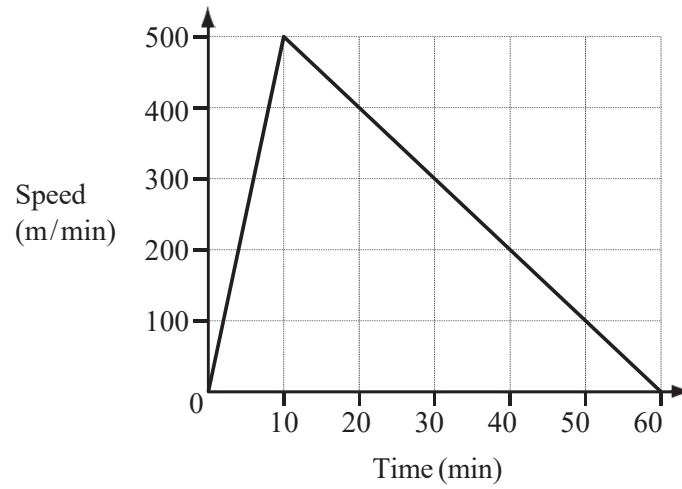
CIE IGCSE Maths (0580)

A*	A	B	C	D	E
>88%	76%	63%	51%	40%	30%

CIE IGCSE Maths (0980)

9	8	7	6	5	4	3
>94%	85%	77%	67%	57%	47%	35%

Question 1



The diagram shows the speed-time graph for a boat journey.

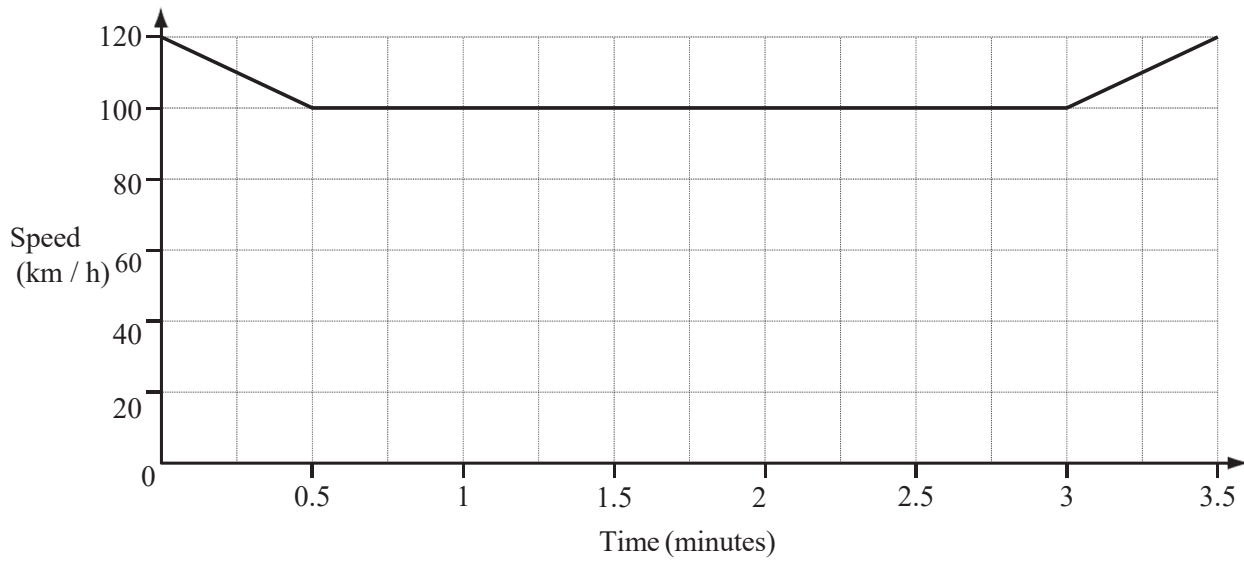
- (a) Work out the acceleration of the boat in metres /minute².

[1]

- (b) Calculate the total distance travelled by the boat.
Give your answer in **kilometres**.

[2]

Question 2

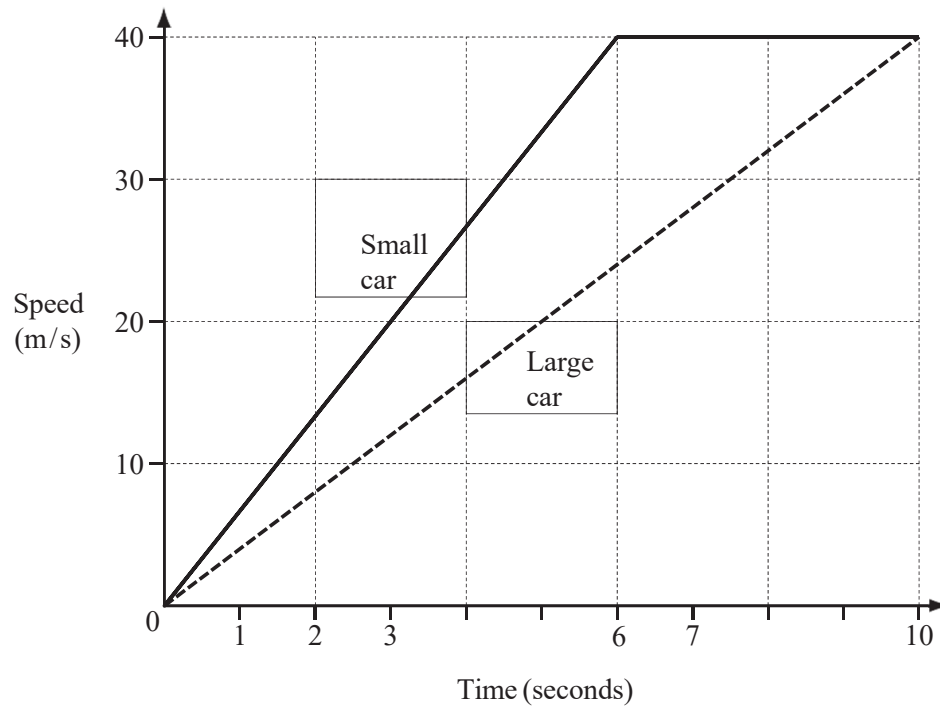


The diagram shows the speed-time graph for part of a car journey.
The speed of the car is shown in kilometres/hour.

Calculate the distance travelled by the car during the 3.5 minutes shown in the diagram.
Give your answer in kilometres.

[4]

Question 3

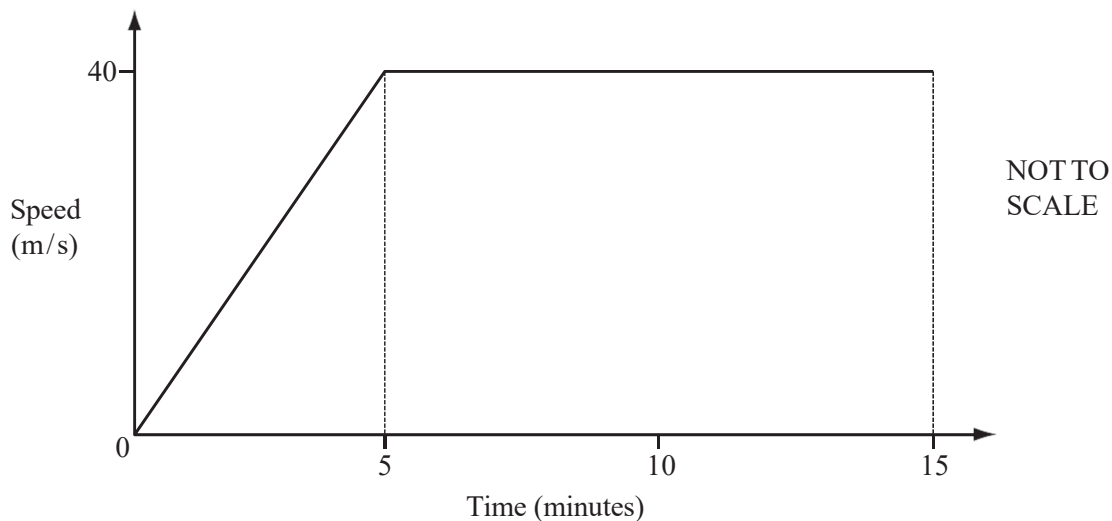


A small car accelerates from 0 m/s to 40 m/s in 6 seconds and then travels at this constant speed.
A large car accelerates from 0 m/s to 40 m/s in 10 seconds.

Calculate how much further the small car travels in the first 10 seconds.

[4]

Question 4



The diagram shows the speed-time graph for the first 15 **minutes** of a train journey. The train accelerates for 5 minutes and then continues at a constant speed of 40 metres/**second**.

- (a) Calculate the acceleration of the train during the first 5 minutes.
Give your answer in m/s^2 .

[2]

- (b) Calculate the average speed for the first 15 minutes of the train journey.
Give your answer in m/s .

[3]

Question 5

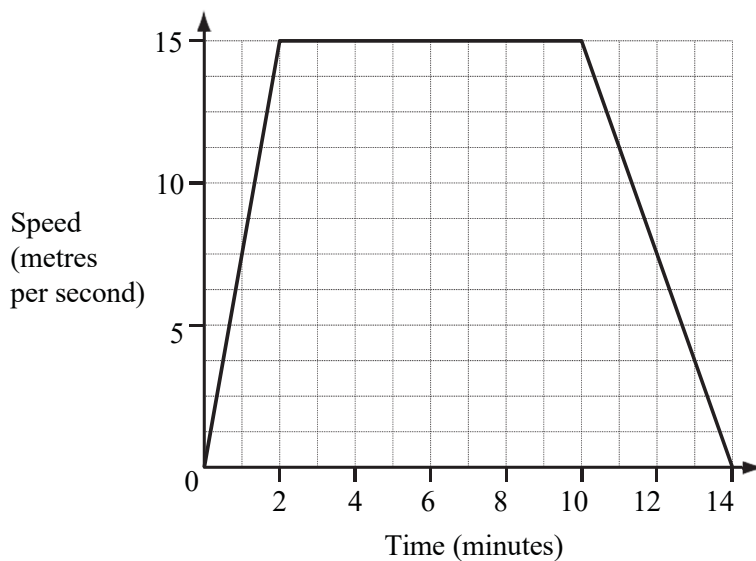
A train leaves Barcelona at 21 28 and takes 10 hours and 33 minutes to reach Paris.

(a) Calculate the time the next day when the train arrives in Paris. [1]

(b) The distance from Barcelona to Paris is 827 km.

Calculate the average speed of the train in kilometres per hour. [3]

Question 6



The diagram shows the speed-time graph of a train journey between two stations.
The train accelerates for two minutes, travels at a constant maximum speed, then slows to a stop.

(a) Write down the number of seconds that the train travels at its constant maximum speed. [1]

(b) Calculate the distance between the two stations in metres. [3]

(c) Find the acceleration of the train in the first two minutes.
Give your answer in m/s^2 . [2]