Speed, Distance & Time
Difficulty: Easy

Question Paper 2

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 2

Time allowed: **39 minutes**

Score: **/30**

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%

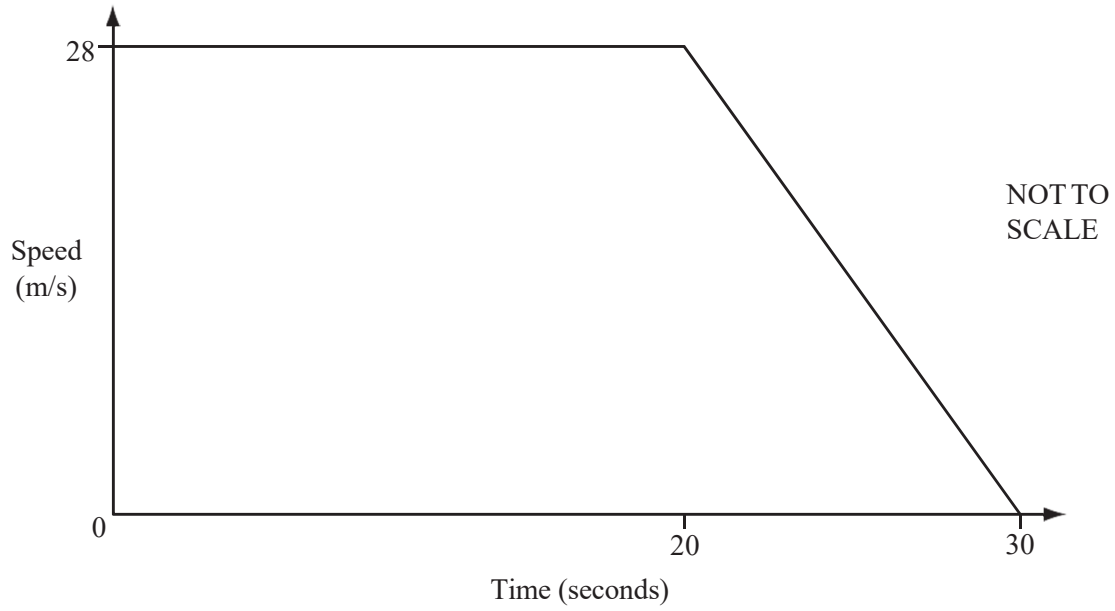
A train takes 65 minutes to travel 52 km.

Calculate the average speed of the train in kilometres per hour. [2]

(a) Convert 144km/h into metres per second. [2]

(b) A train of length 120 m is travelling at 144km/h.
It passes under a bridge of width 20 m.

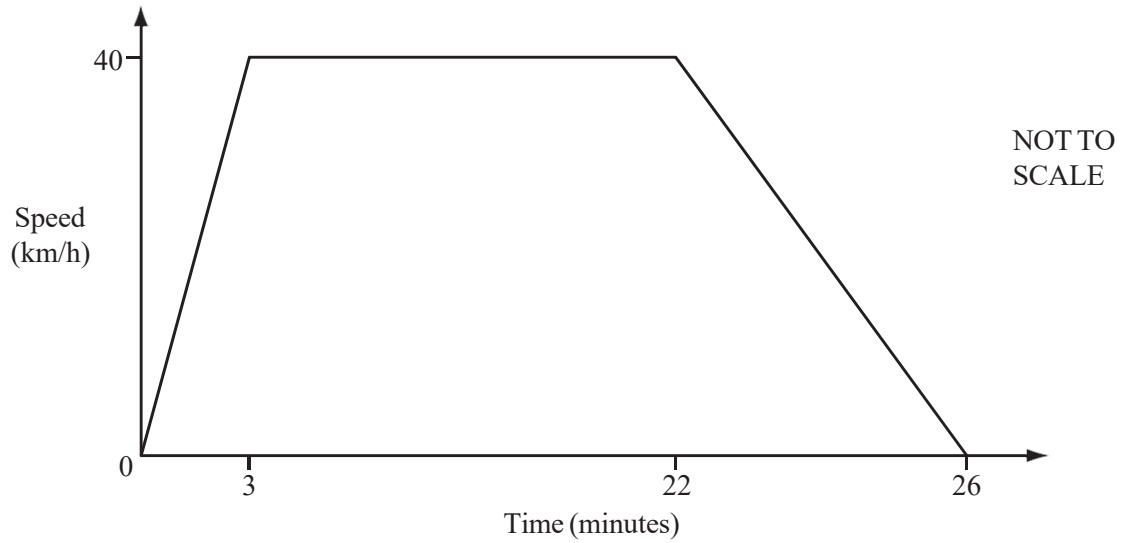
Find the time taken for the whole train to pass under the bridge.
Give your answer in seconds. [2]



The diagram shows the speed-time graph of a car.
It travels at 28 m/s for 20 seconds and then decelerates until it stops after a further 10 seconds.

(a) Calculate the deceleration of the car. [1]

(b) Calculate the distance travelled during the 30 seconds. [3]

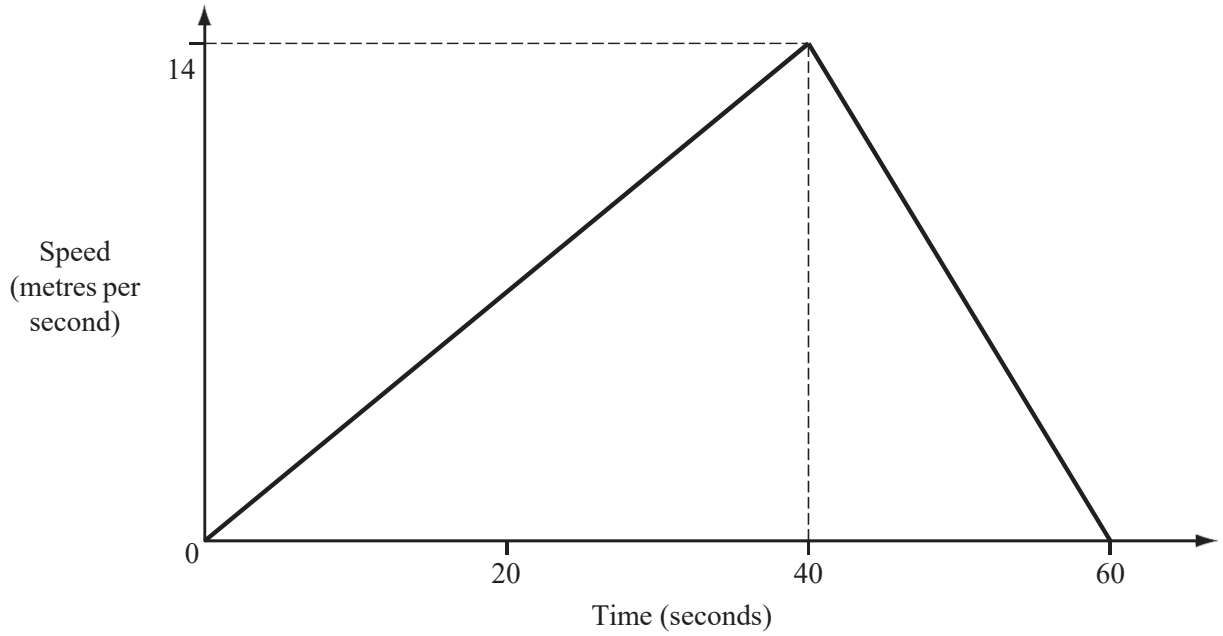


The diagram shows the speed-time graph of a train journey between two stations.

The train accelerates for 3 minutes, travels at a constant maximum speed of 40 km/h, then takes 4 minutes to slow to a stop.

Calculate the distance in kilometres between the two stations. [4]

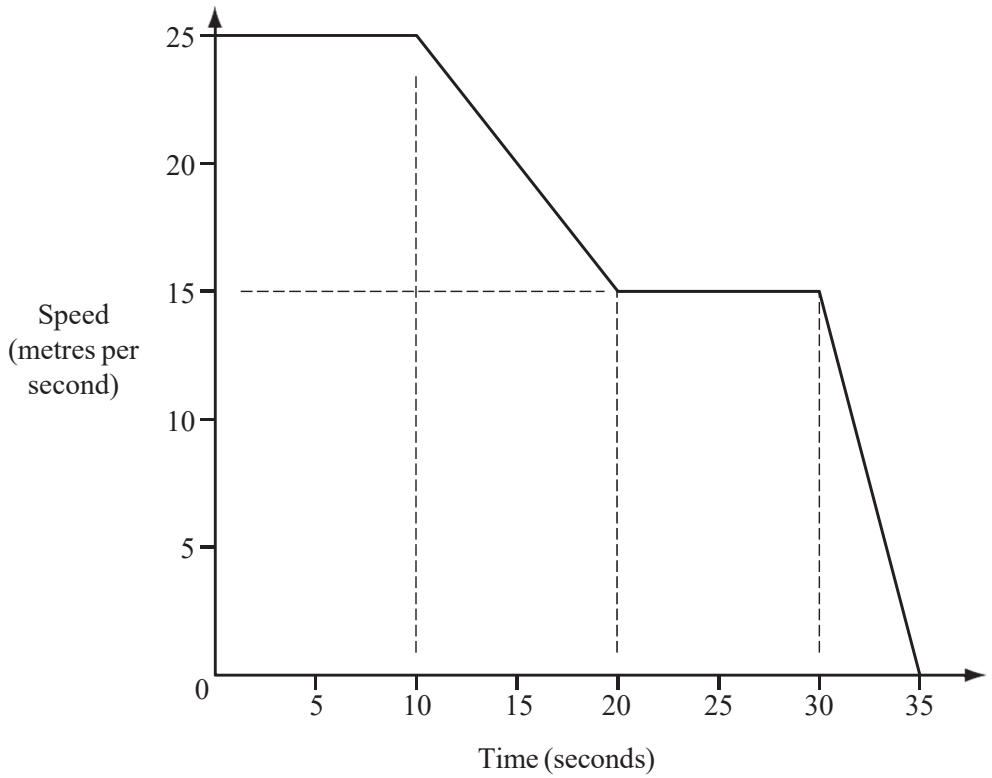
Question 4



The diagram shows the speed-time graph of a bus journey between two bus stops.
Hamid runs at a constant speed of 4 m/s along the bus route.
He passes the bus as it leaves the first bus stop.
The bus arrives at the second bus stop after 60 seconds.

How many metres from the bus is Hamid at this time?

[3]



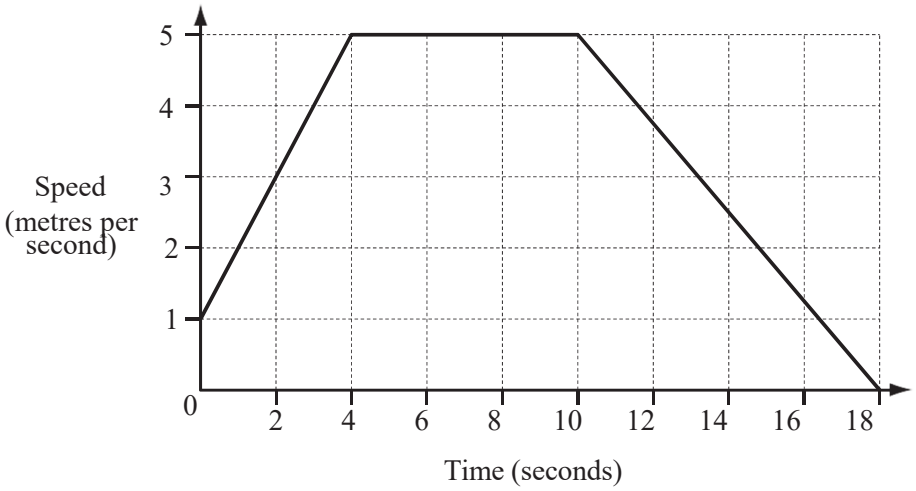
The diagram shows the speed-time graph for the last 35 seconds of a car journey.

(a) Find the deceleration of the car as it came to a stop.

[1]

(b) Calculate the total distance travelled by the car in the 35 seconds.

[3]



The diagram shows the speed-time graph for the last 18 seconds of Roman's cycle journey.

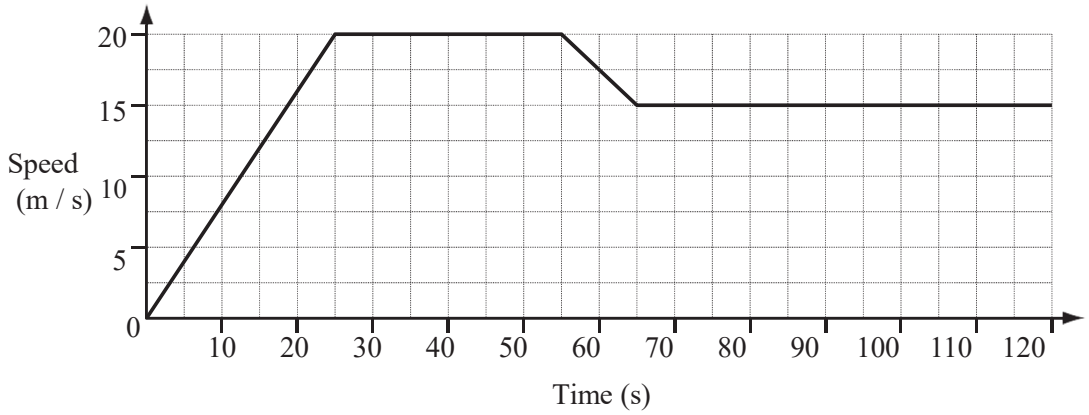
(a) Calculate the deceleration.

[1]

(b) Calculate the total distance Roman travels during the 18 seconds.

[3]

Question 7



The diagram shows the speed-time graph for the first 120 seconds of a car journey.

(a) Calculate the acceleration of the car during the first 25 seconds.

[1]

(b) Calculate the distance travelled by the car in the first 120 seconds.

[4]