

Motion

Question Paper

Course	CIE IGCSE Physics
Section	1. Motion, Forces & Energy
Topic	Motion
Difficulty	Hard

Time Allowed 10

Score /5

Percentage /100

Question 1**Extended tier only**

A cannonball is dropped from a three story building.

Which row of the table correctly describes both the speed and the acceleration of the cannonball as it falls?

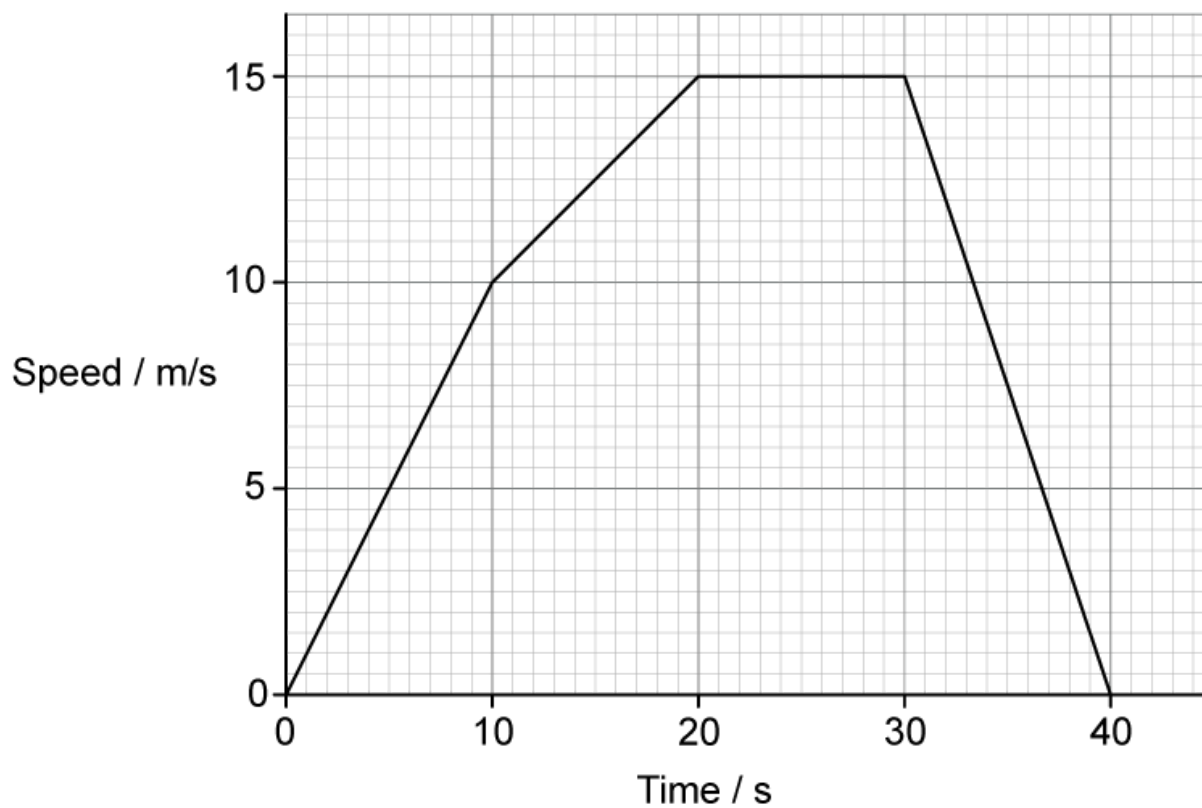
You can ignore air resistance for this question.

	Speed	Acceleration
A	constant	constant
B	increasing	constant
C	increasing	increasing
D	constant	increasing

[1 mark]

Question 2

The graph shows the motion of a motorbike.



What is the distance travelled by the motorbike while it is moving at a constant speed?

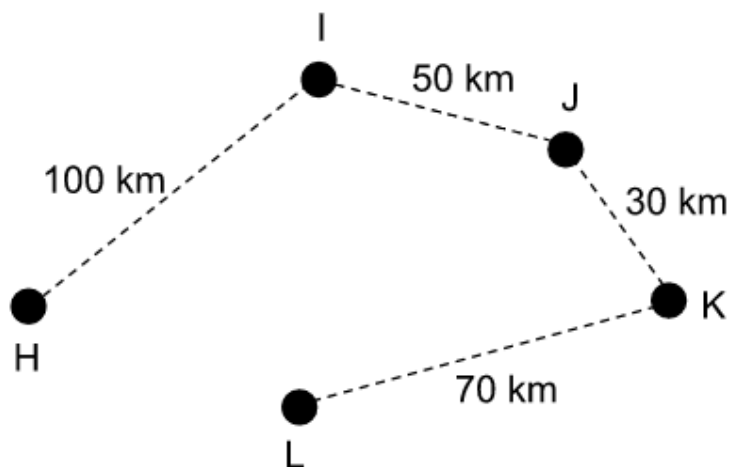
- A. 150 m
- B. 50 m
- C. 300 m
- D. 750 m

[1 mark]

Question 3

A helicopter flies the route shown below.

It stops at point I for 30 minutes to pick up some cargo.



The total time the helicopter takes between taking off from **H** and landing at **L** is 4.0 hours.

Calculate the average speed of the helicopter **when it is flying**.

- A. 55.6 km/h
- B. 250 km/h
- C. 62.5 km/h
- D. 71.4 km/h

[1 mark]

Question 4

A man claps in a forest. There is nobody around to hear the sound.

However, there is a very flat cliff face some distance away, and the man hears an echo from the clap 0.84 s later.

The speed of sound in air is 343 m/s.

How far away was the man from the cliff?

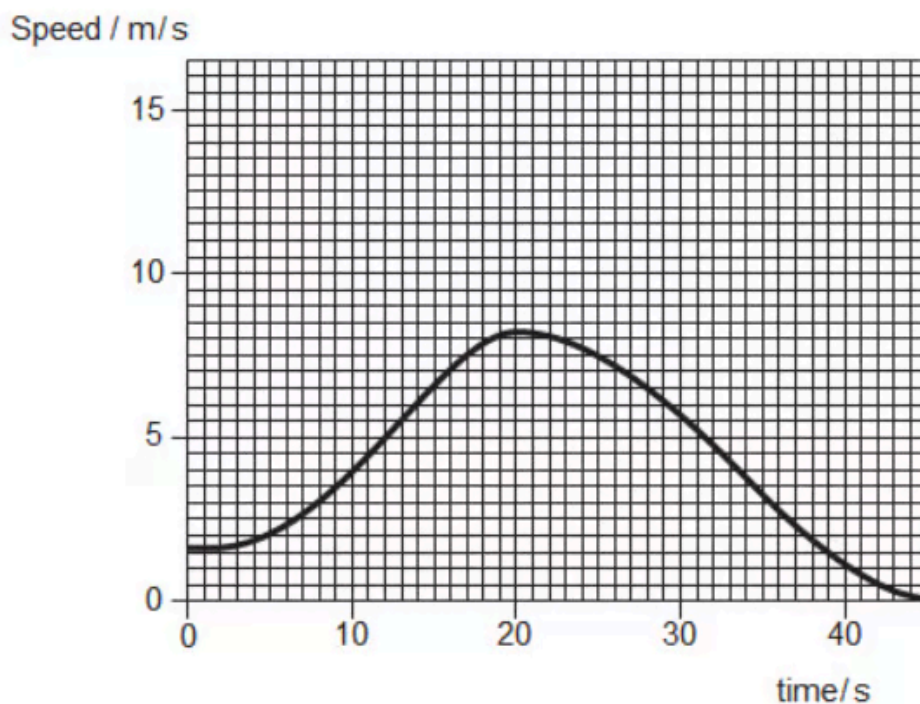
- A. 408 m
- B. 288 m
- C. 144 m
- D. 204 m

[1 mark]

Question 5

Extended tier only

The graph shows the speed-time graph of a cyclist moving in a straight line.



What is the acceleration of the cyclist at a time of 20 seconds?

- A. 0.5 m/s^2
- B. -0.5 m/s^2
- C. 0 m/s^2
- D. 11.5 m/s^2

[1 mark]