

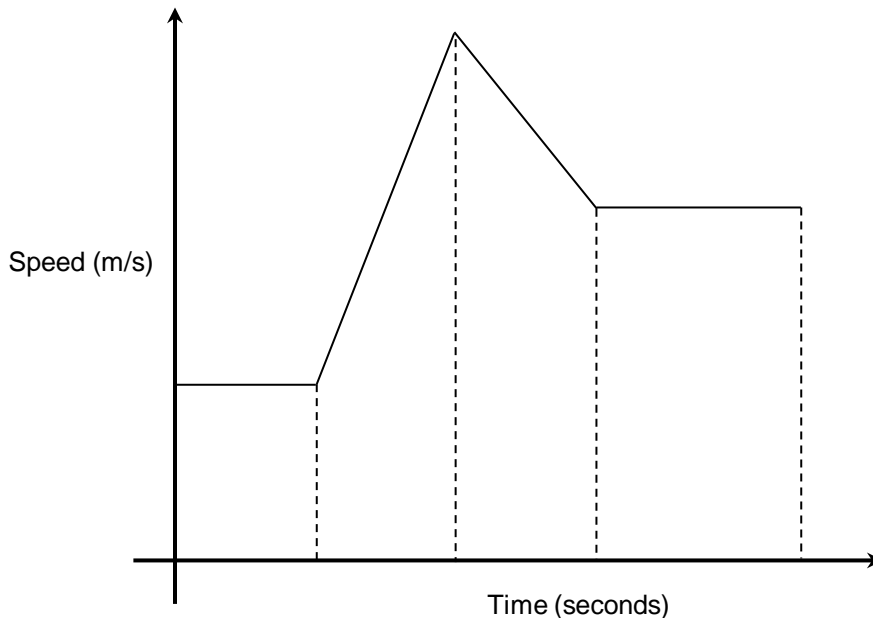
Spicy Question #43



The diagram below shows a sketch of a journey for a vehicle.



Calculator allowed



The vehicle's speed is constant at y m/s for the first x seconds of the journey.
The vehicle accelerates for the next x seconds to a maximum speed of $3y$ m/s.
During the next x seconds the vehicle decelerates to a speed of $2y$ m/s.
The vehicle's speed then remains constant at $2y$ m/s for y more seconds.

The vehicle travels a total distance of 1000 metres and the journey lasts for 42.5 seconds.

Work out how far the vehicle travels in the first x seconds of the journey.

SUBMISSION DEADLINE 21/2/23 - 7PM

Video
Solution



All submissions to be emailed to 1stclassmaths@gmail.com

Full terms and conditions: www.1stclassmaths.com/spicy-questions