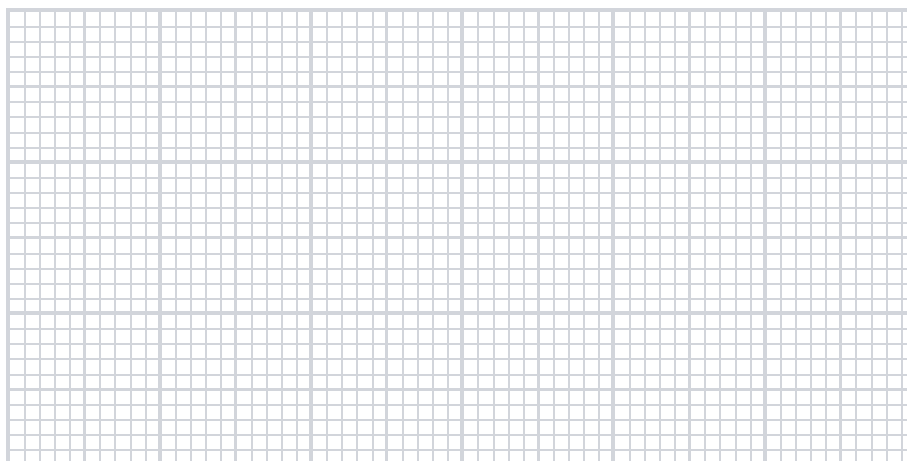


4. A long, straight track is used for testing vehicle brakes.  
 A stationary vehicle is placed on the track and accelerated uniformly for 12.5 s to a speed of 26.5 m/s.  
 This speed is maintained for 3.5 s before the brakes are applied.  
 The vehicle stops after braking at a steady rate for 4.5 s.

(a) Use the grid to draw a speed-time graph for this motion.

(3)



(b) Calculate the minimum length of track required to carry out this test.

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(3)

(Total 6 marks)

Q4

**TOTAL FOR PAPER: 30 MARKS**

**END**