AS Level in Physics A

H156/02 Depth in physics

Question Set 7

1. Fig. 1 shows how the velocity *v* of a car varies with time *t* as the car approaches a road junction.

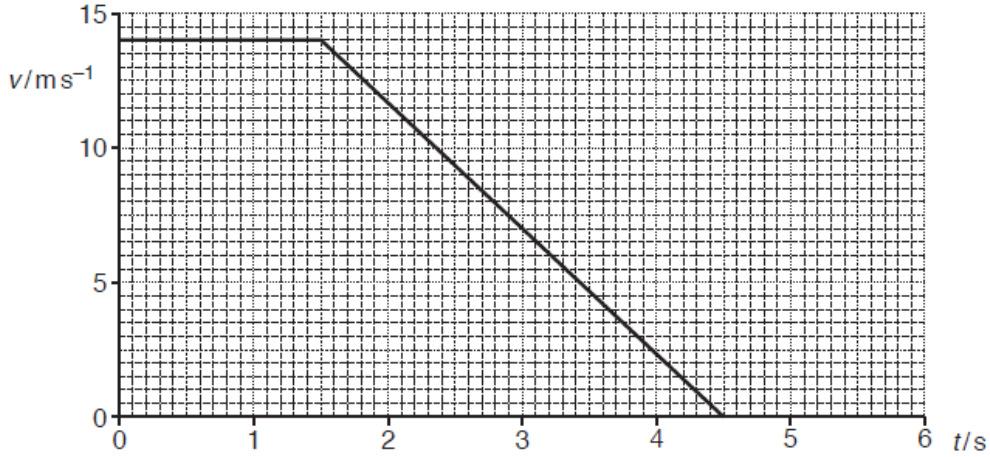

Fig. 1

(a) Explain what feature of the graph shows the deceleration of the car and that the deceleration is constant after 1.5 s.

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[2]

(b) The driver of the car applies the brakes at a distance of 20 m from the 'stop line' at the junction.

Calculate the distance *s* of the car relative to the stop line when the car comes to a stop.

s = ... m

[3]

Total Marks for Question Set 7: 5