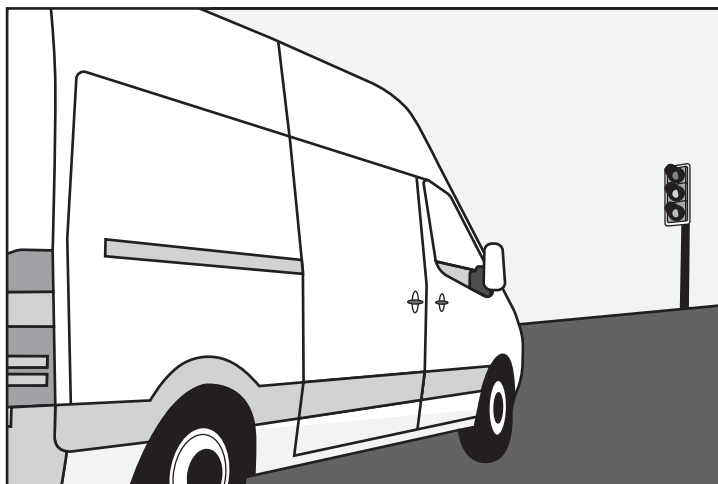


Total marks — 130
Attempt ALL questions

1. A van is travelling along a straight, level road at a constant speed of 13.4 m s^{-1} as it approaches a set of traffic lights. The driver sees the lights change to red and applies the brakes.

The van has a constant acceleration of -2.85 m s^{-2} before coming to rest at the traffic lights.



- (a) Calculate the distance travelled by the van during braking.

3

Space for working and answer



1. (continued)

- (b) Calculate the time taken for the van to come to rest during braking.

3

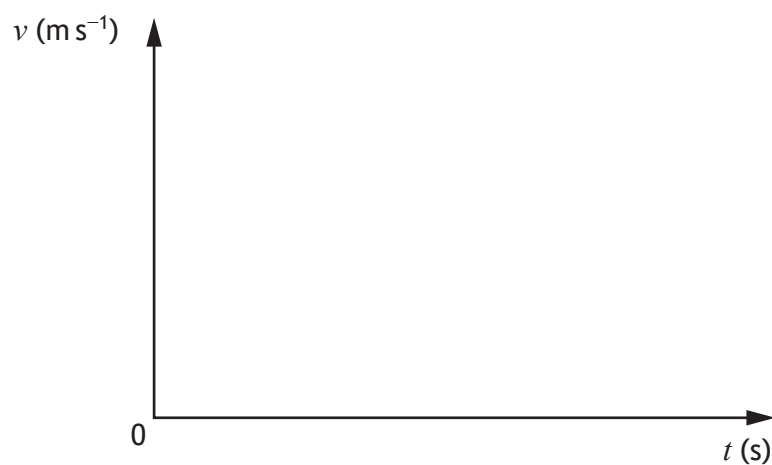
Space for working and answer

- (c) Complete the sketch graph of velocity against time for the van's motion during braking.

2

Numerical values are required on both axes.

(An additional graph, if required, can be found on *page 43*.)



[Turn over

