



Section A

Answer **all** the questions in this section.

- 1** A car starts from rest and moves in a straight line. Its velocity is plotted against time for the first 30 s of its journey. This is shown in Fig. 1.1.

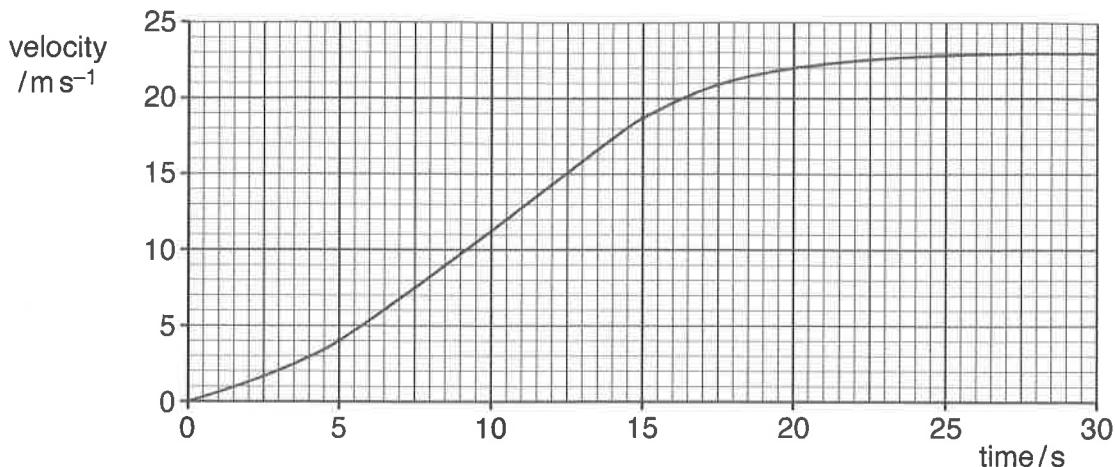


Fig. 1.1

Using data from the graph determine

- (a) (i)** the maximum velocity of the car,

$$\text{velocity} = \dots \text{ms}^{-1} [1]$$

- (ii)** the maximum acceleration of the car,

$$\text{acceleration} = \dots \text{ms}^{-2} [2]$$

- (iii)** the distance the car travels during the 30 s.

$$\text{distance} = \dots \text{m} [4]$$



- (b) On Fig. 1.2, sketch the distance-time graph for the first 30 s of the car's journey shown in Fig. 1.1.

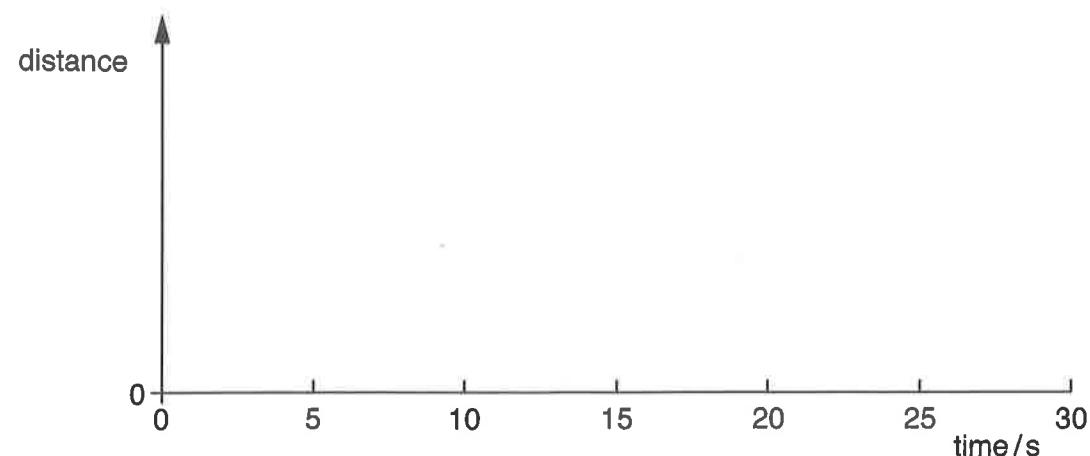


Fig. 1.2

[2]

