

1 A small parcel is released from a helicopter which is ascending steadily at  $2.5 \text{ m s}^{-1}$ .

(a) Neglecting air resistance, determine the speed of the parcel after 2.0 s.

$$\text{speed} = \dots \text{ m s}^{-1} [2]$$

(b) Sketch, on the same axes in Fig. 1.1, two graphs to show the variation with time of the velocities of the helicopter (label H) and the parcel (label P) during the first 2.0 s. [2]



**Fig. 1.1**

- (c) Using the sketched graphs, or otherwise, determine the distance between the helicopter and the parcel after 2.0 s.

distance = ..... m [2]

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