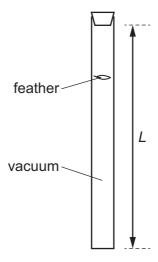
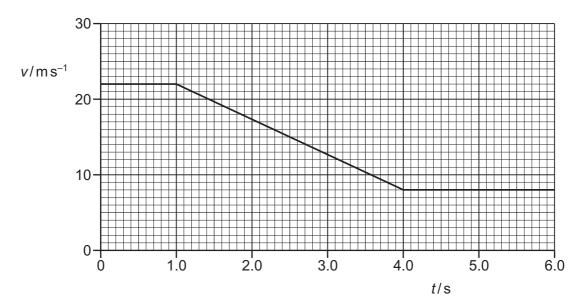
5 The diagram shows a laboratory experiment in which a feather falls from rest in a long evacuated vertical tube of length *L*.



The feather takes time T to fall from the top to the bottom of the tube.

How far does the feather fall from the top of the tube in time 0.50T?

- **A** 0.13*L*
- **B** 0.25*L*
- **C** 0.38*L*
- **D** 0.50*L*
- A car travels along a straight horizontal road. The graph shows the variation of the velocity v of the car with time t for 6.0 s of its journey.



The brakes of the car are applied from $t = 1.0 \,\mathrm{s}$ to $t = 4.0 \,\mathrm{s}$.

How far does the car travel while the brakes are applied?

- **A** 21 m
- **B** 45 m
- **C** 67 m
- **D** 83 m