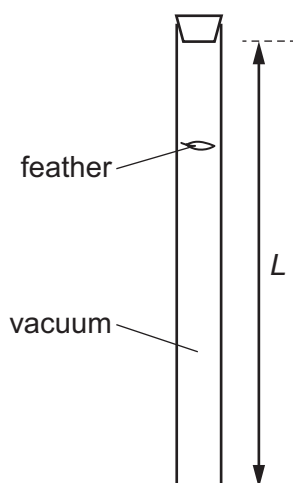


- 5 The diagram shows a laboratory experiment in which a feather falls from rest in a long evacuated vertical tube of length L .

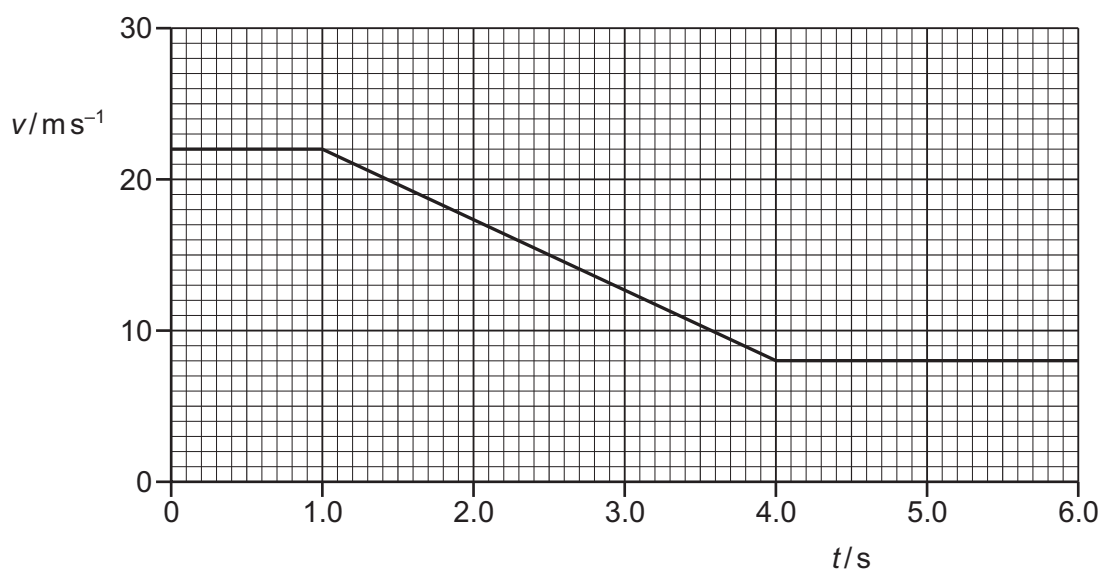


The feather takes time T to fall from the top to the bottom of the tube.

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

- A** $0.13L$ **B** $0.25L$ **C** $0.38L$ **D** $0.50L$

- 6 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 $t = 1.0$ s to $t = 4.0$ s.

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

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