

- 7** The speed of a car is calculated from measurements of the distance travelled and the time taken.

The distance is measured as 200 m, with an uncertainty of  $\pm 2$  m.

The time is measured as 10.0 s, with an uncertainty of  $\pm 0.2$  s.

What is the percentage uncertainty in the calculated speed?

- A**  $\pm 0.5\%$       **B**  $\pm 1\%$       **C**  $\pm 2\%$       **D**  $\pm 3\%$

- 8** A science museum designs an experiment to show the fall of a feather in a vertical glass vacuum tube.

The time of fall from rest is to be close to 0.5 s.

What length of tube is required?

- A** 1.3 m      **B** 2.5 m      **C** 5.0 m      **D** 10.0 m

**Space for working**