

- 6 What will reduce the systematic errors when taking a measurement?
- A adjusting the needle on a voltmeter so that it reads zero when there is no potential difference across it
 - B measuring the diameter of a wire at different points and taking the average
 - C reducing the parallax effects by using a marker and a mirror when measuring the amplitude of oscillation of a pendulum
 - D timing 20 oscillations, rather than a single oscillation, when finding the period of a pendulum
- 7 In an experiment to determine the acceleration of free fall g , the time t taken for a ball to fall through distance s was measured. The uncertainty in the measurement of s is estimated to be 2%. The uncertainty in the measurement of t is estimated to be 3%.

The value of g is determined using the equation

$$g = \frac{2s}{t^2}.$$

What is the uncertainty in the calculated value of g ?

- A 1% B 5% C 8% D 11%

Space for working