

2 What describes a set of data with a high precision?

- A data measured using equipment with small scale divisions
- B data that is close to the accepted value
- C data with each value having a low uncertainty
- D data with repeats that are close to each other

3 A stone is released from rest and falls vertically to the ground.

The time taken to fall to the ground and the distance travelled are measured. The measurements are used to determine the acceleration of free fall.

The percentage uncertainty in the measured time is 0.05%. The percentage uncertainty in the measured distance fallen is 0.6%.

What is the percentage uncertainty in the calculated value of the acceleration of free fall?

- A 0.5%
- B 0.7%
- C 1.1%
- D 1.3%

3 The diameter of a ball is measured as (5.26 ± 0.02) cm.

What is the absolute uncertainty in the volume of the ball?

- A 0.29 cm^3
- B 0.87 cm^3
- C 1.1 cm^3
- D 7.0 cm^3

2 What is the effect of a systematic error on the measurement of a physical quantity?

- A It limits the precision of the measured value.
- B It limits the range of values obtained in repeated measurements.
- C It results in repeated measurements having different values from each other.
- D It results in the measured value being different from the correct value.