

- 5 A micrometer is used to measure the diameters of two cylinders.

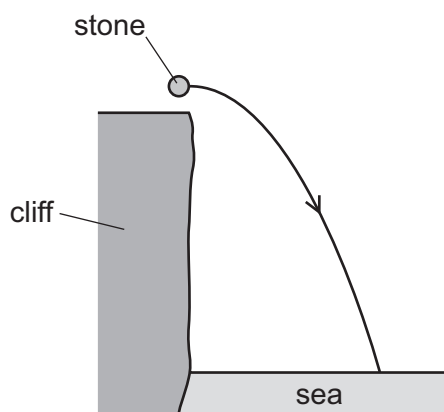
diameter of first cylinder =  $(12.78 \pm 0.02)$  mm

diameter of second cylinder =  $(16.24 \pm 0.03)$  mm

The difference in the diameters is calculated.

What is the uncertainty in this difference?

- A** 0.01 mm      **B** 0.02 mm      **C** 0.03 mm      **D** 0.05 mm
- 6 A stone is thrown horizontally from the top of a cliff and falls into the sea below. Air resistance is negligible. The path of the stone is shown.



In which direction does the resultant force on the stone act during its fall?

- A** horizontally to the right  
**B** parallel to its velocity  
**C** perpendicular to its velocity  
**D** vertically downwards
- 7 A car moves with uniform acceleration along a straight road. Oil leaks from the car at the rate of one drop every two seconds. The diagram shows the distances between three successive oil drops on the road.



What is the acceleration of the car?

- A**  $0.75 \text{ ms}^{-2}$       **B**  $1.5 \text{ ms}^{-2}$       **C**  $3.0 \text{ ms}^{-2}$       **D**  $6.0 \text{ ms}^{-2}$