6 A student wishes to determine the density ρ of lead. She measures the mass and diameter of a small sphere of lead:

$$\text{mass} = (0.506 \pm 0.005)\,\text{g}$$

$$\text{diameter} = (2.20 \pm 0.02)\,\text{mm}.$$

What is the best estimate of the percentage uncertainty in her value of ρ?

A   1.9%   **B**   2.0%   **C**   2.8%   **D**   3.7%