

- 5** 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 calculated value of ρ ?

- A** 1.7% **B** 1.9% **C** 2.8% **D** 3.7%