

- 1 A stone sinks in water.

What is a possible value for the density of the stone?

- A**  $8 \times 10^2 \text{ kg m}^{-3}$   
**B**  $2 \times 10^3 \text{ kg m}^{-3}$   
**C**  $8 \times 10^3 \text{ Nm}^{-3}$   
**D**  $2 \times 10^4 \text{ Nm}^{-3}$

- 2 Gm, Tm,  $\mu\text{m}$  and pm are all units of length.

Which unit is the largest and which unit is the smallest?

	largest unit	smallest unit
<b>A</b>	Gm	$\mu\text{m}$
<b>B</b>	Gm	pm
<b>C</b>	Tm	$\mu\text{m}$
<b>D</b>	Tm	pm

- 3 Two measurements for a solid sphere are shown.

$$\text{mass} = (32.5 \pm 0.1)\text{g}$$

$$\text{diameter} = (1.87 \pm 0.04)\text{cm}$$

These values are used to determine the density of the sphere.

What is the percentage uncertainty in the density?

- A** 2.4%                      **B** 4.6%                      **C** 6.1%                      **D** 6.7%