

## SECTION A

**Task A1 (15 minutes)**

In this task you are going to determine the mean density of a golf ball. **Repeat readings are not required for this task.**

- (a) Measure the mass of the ball and calculate its percentage uncertainty. [2]

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- (b) By taking a suitable measurement determine the volume of the golf ball. Ignore the effect of the dimples.  
[You do not need to determine the percentage uncertainty.] [3]

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- (c) (i) Determine the mean density of the golf ball and its percentage uncertainty assuming the percentage uncertainty in the volume to be 0.5%. [2]

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- (ii) Explain how the dimples in the golf ball affect the value of the density calculated in part (c)(i). [1]

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