

## SECTION A

Examiner  
only**Task A1 (15 minutes)**

Your task is to determine a value for the density of a glass marble.

- (a) Determine the mean **radius**,  $r$ , of the marbles. [2]

.....

.....

.....

.....

.....

- (b) Calculate the **percentage** uncertainty in your answer. [2]

.....

.....

.....

.....

.....

- (c) Calculate the mean volume of a marble along with its **percentage** uncertainty. [2]

.....

.....

.....

.....

.....

- (d) Use the information on the mean mass of a marble to calculate the density of the glass from which the marbles are made. State your results along with its **absolute** uncertainty. [2]

.....

.....

.....

.....

1323  
01A005