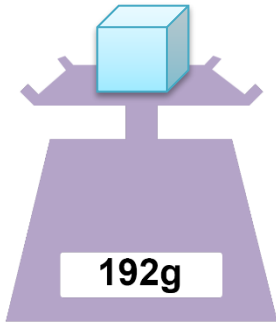
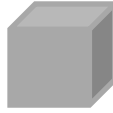


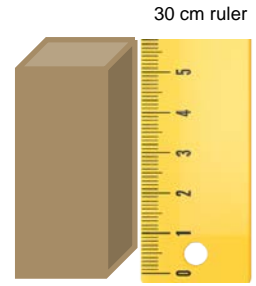
1. A student is trying to find the densities of the three different materials below.



Glass



Lead



Wood

(a) (i) Complete the table below with the missing values. Use the images above to help. [3 marks]

Material	Height (m)	Width (m)	Depth (m)	Volume (m ³)	Mass (kg)
Glass	0.04	0.04	0.04	6.4×10^{-5}	
Lead	0.02	0.02	0.02	8.0×10^{-6}	0.09
Wood		0.01	0.01		1.85×10^{-3}

(a) (ii) Work out the densities of the materials. [5 marks]

Glass

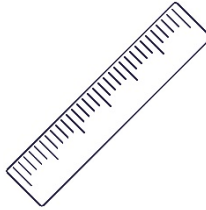
Lead

Wood

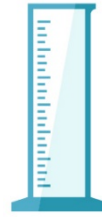
(b) (i) Which instrument, A, B C or D could be used to determine the volume of an irregular shaped solid? **[1 mark]**



A



B



C



D

(b) (ii) How you would use it to find the volume? **[3 marks]**

1ai [3 marks]

Material	Height (m)	Width (m)	Depth (m)	Volume (m ³)	Mass (kg)
Glass	0.04	0.04	0.04	6.4×10^{-5}	0.192 ✓
Lead	0.02	0.02	0.02	8.0×10^{-6}	0.09
Wood	0.05 ✓	0.01	0.01	5.0×10^{-6} ✓	1.85×10^{-3}

1aii [5 marks]

density = mass ÷ volume ✓

apply equation to each material ✓

Glass 3000 kg/m³ ✓

Lead 11250 kg/m³ ✓

Wood 370 kg/m³ ✓

1bi [1 mark]

C ✓

1bii [3 marks]

Either

Place irregular shaped object in Eureka beaker full of water with a spout ✓ collect over spill of water in the measuring cylinder ✓ the volume of water collected will be the volume of the object ✓

Or

Part fill the measuring cylinder with water and record the volume ✓ add the irregular shaped object and record the new value of the volume of water ✓ the difference between these two values is the volume of the object ✓