Density

All answers to calculations should be to 2 significant figures.

1. State the definition of density

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2. Write the equation which links mass, volume and density.

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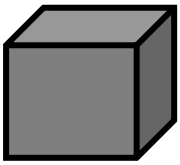
3. Using the equation above fill in the table below.

Density (kg/m^3)	Mass (kg)	Volume (m^3)
4.0	2.0	
	5.0	0.1
3.6		2.5
	5.2	6.2

4.



Write a method to explain how to calculate the density of a regular shaped object such as the one on the left.

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Write a method to explain how to calculate the density of an irregular shaped object such as the stone on the left.

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6. Scientists are working on a new material which has low density, but excellent strength. The material has a density of 0.3kg/m^3 and a mass of 600g. Calculate the volume of material present.

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7. Gold has a density of 19300kg/m^3, a bar of gold has a volume of 0.012m^3. Calculate the mass of the bar of gold.

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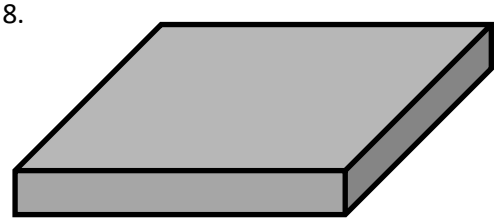

Concrete has a density of 2300kg/m^3. A concrete slab has a mass of 1500g and dimensions of 25cm x 30cm. Calculate the thickness of the slab.

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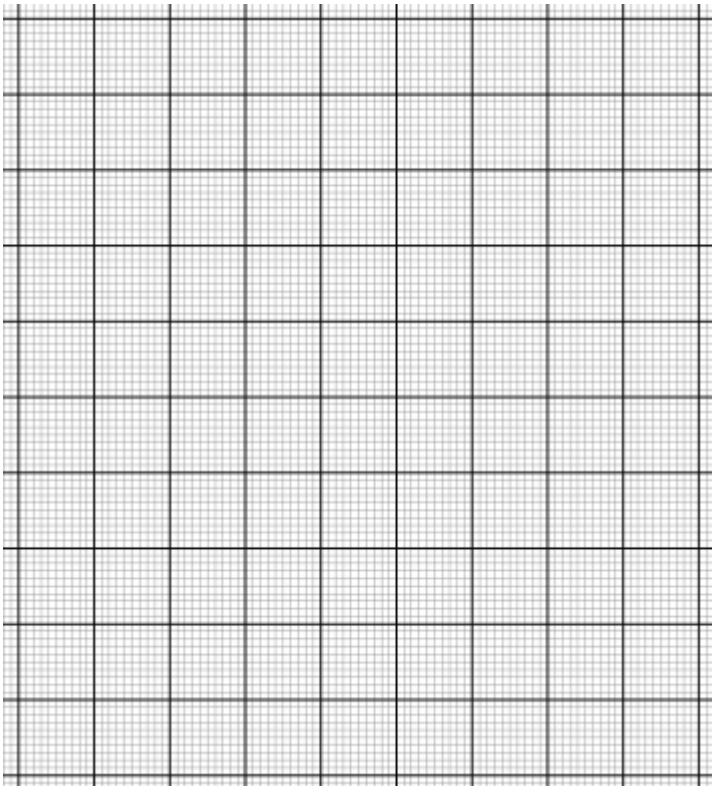
9. The Teacher asked Rehma to carry out an experiment recording the mass and volume of different coins in data table.

Mass (Kg)	Volume (m^3)
0.05	0.062
0.07	0.083
0.10	0.12
0.11	0.13

9a. Using the graph paper on the right, plot a graph. Put mass on the Y axis and volume on the X axis.

Once you have plotted your points, draw a line of best fit.



9b. Calculate the average density of the coins using the graph on the right

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