

# Density and Volume

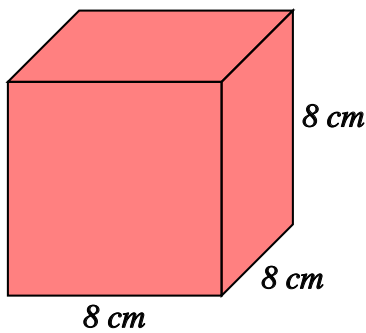
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1) The mass of  $6 \text{ m}^3$  of zinc is 42840 kg. Find the density of zinc in  $\text{kg/m}^3$ . [1]

2) The density of gold is  $19.3 \text{ g/cm}^3$ . Find the mass of  $9 \text{ cm}^3$  of gold in grams. [1]

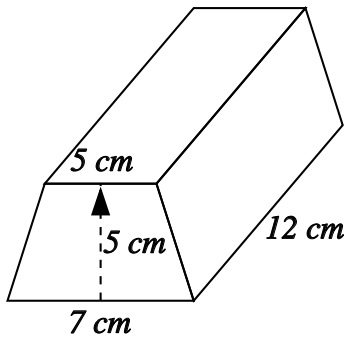
3) The density of mercury is  $13.53 \text{ g/cm}^3$ . Find the volume of 108.24 grams of mercury in cubic centimetres.

4) Find the density of the wooden cube below, given that it has a mass of 307.2 grams. [1]



5) The dimensions of a gold bar are shown below.

[1]



Gold has a density of  $19.3\text{ g/cm}^3$ .

- Find the mass of the gold bar in grams.
- Find the value of the gold bar (to the nearest pound) if gold is sold at  $\pounds 26.6$  per gram.

## Solutions for the assessment Density and Volume

1) Density =  $7140 \text{ kg/m}^3$  (or  $7.14 \text{ g/cm}^3$ )

2) Mass =  $173.7 \text{ g}$

3) Volume =  $8 \text{ cm}^3$

4) Density =  $0.6 \text{ g/cm}^3$

5) a) Mass =  $6948 \text{ g}$ , b) Value =  $\text{£ } 184817$