THIRD SPACE LEARNING

GCSE Exam Questions

Mass, Density, Volume | Ratio & Proportion

GCSE Exam Questions: Mass, Density, Volume

1) A block of wood has a mass of 900 g and a volume of 600 cm^3.

What is the density of the block of wood?

_____ g/cm^3

(2 marks)

2) A block of copper has a mass of 14.7 kg.

The density of copper is 8.6 g/cm^3.

Work out the volume of the copper block.

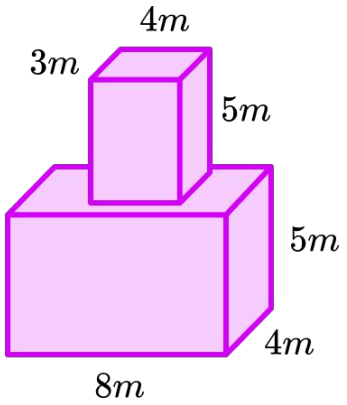
Give your answer correct to 3 significant figures.

_____ cm^3

(3 marks)

GCSE Exam Questions: Mass, Density, Volume

3) A sculpture is formed from one cuboid on top of another cuboid.



NOT to scale

The upper cuboid measures 3m by 4m by 5m.

The lower cuboid measures 8m by 4m by 5m.

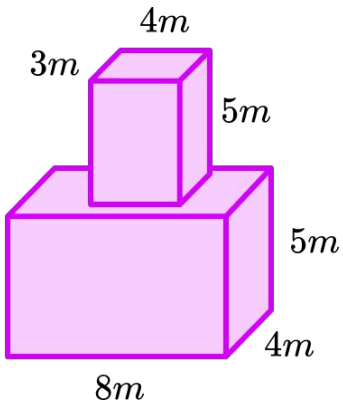
The sculpture is made from stone.

The stone has a density of 2.3 g/cm^3.

Calculate the total mass of the sculpture in tonnes.

(5 marks)

GCSE Exam Questions: Mass, Density, Volume Answers

	Question	Answer	Marks
1)	A block of wood has a mass of 900 g and a volume of 600 cm^3. What is the density of the block of wood?	900 ÷ 600 = 1.5 g/cm^3	**(1)** **(1)**
2)	A block of copper has a mass of 14.7 kg. The density of copper is 8.6 g/cm^3. Work out the volume of the copper block. Give your answer correct to 3 significant figures.	14.7 kg = 14 700 g 14 700 ÷ 8.6 = 1709.3 . . . 1710 cm^3	**(1)** **(1)** **(1)**
3)	A sculpture is formed from one cuboid on top of another cuboid.  The upper cuboid measures 3 m by 4 m by 5 m. The lower cuboid measures 8 m by 4 m by 5 m. The sculpture is made from stone. The stone has a density of 2300 kg/m^3. Calculate the total mass of the sculpture in tonnes.	V = 3 x 4 x 5 = 60 m^3 **or** V = 8 x 4 x 5 = 160 m^3 *Total volume* = 220 m^3 M = 220 x 2300 = 506 000 kg = 506 *tonnes*	 **(1)** **(1)** **(1)** **(1)** **(1)**

Where to go next?

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