

Density Problems...Part I

1. What is the density of carbon dioxide gas if 0.196 g occupies a volume of 100 mL?
2. A block of wood with a volume of 27 cm^3 has a mass of 27 g. What is the density of this block?
3. An irregularly shaped stone was lowered into a graduated cylinder to determine the volume. The height of the water rose by 5.0 mL. If the mass of the stone was 25 g, what was its density?
4. A 10.0 cm^3 sample of copper has a mass of 89.6 g. What is the density of copper?
5. Silver has a density of 10.5 g/cm^3 and gold has a density of 19.3 g/cm^3 . Which would have a greater mass if both samples have a volume of 5 cm^3 ? (Hint: you need to calculate twice)
6. A 3.9-g sample of benzene and a 4.4-g each have a volume of 5.0 mL. Which liquid is denser? (Hint: you need to calculate twice)
7. A sample of iron has dimensions of 2 cm x 3 cm x 2 cm. If the mass of this rectangular-shaped object is 94 g, what is the density of iron?