

1. Define "density."
2. Are gases more or less dense than liquids or solids at room temperature?
3. How does temperature affect the density of a material?
4. A certain liquid sample has a volume of 14.7 mL and a mass of 22.8 grams. What is the density?
5. A material with a density of 2.7 grams/mL occupies 35.6 mL. How many grams of the material are there?
6. A certain material has a density of 19.3 g/mL. What is the material?
7. A hot air balloon holds 62,000 cubic meters of helium, a noble gas with a density of 0.1785 kilograms per cubic meter. How many kilograms of helium does the balloon contain?
8. Yesterday the local health club had 56 patrons which produced 2,200 BTU's of heat while cutting those carbs. The interior of the health club is 50 feet X 40 feet X 20 feet. To the nearest thousandth, how many BTU's per cubic foot did they produce?