

# Density

1. What is the formula for calculating density?
2. The unit for density of a solid is \_\_\_\_\_, and the unit for density of a liquid is \_\_\_\_\_.
3. A sample of copper with a mass of 55.6 g occupies a volume of 5.00 mL. What is the density of copper?
4. A sample of iron occupies a volume of 10. cm<sup>3</sup>. If the density of iron is 7.86 g/cm<sup>3</sup>, what is the mass of the sample?
5. Iron has a density of 7.86 g/cm<sup>3</sup>. A sample of iron having a mass of 393 g will occupy a volume of \_\_\_\_\_.
6. The density of gold is 19.3 g/cm<sup>3</sup>. A bar of gold measures 6 cm × 4 cm × 2 cm. What is the mass of the gold bar?
7. 500 g of sugar occupies a volume of 0.315 L. What is the density of sugar?
8. The density of an object is 1.63 g/mL. The object, when placed in a graduated cylinder, causes the water level to rise from 500. mL to 750. mL. What is the mass in grams of the object?
9. The density of solid pure copper is 8.94 g/mL. What volume does 5 kg of copper occupy?
10. What is the mass of a 15-cm cube of iron? The density of iron is 7.87 g/cm<sup>3</sup>.
11. Two liquids, A and B, have densities of 0.75 g/mL and 1.14 g/mL respectively. When both liquids are poured into the same container, one liquid floats on top of the other. Which liquid is on top?
12. What is the density of a piece of wood that has a mass of 25.0 grams and a volume of 29.4 cm<sup>3</sup>?

