Density Quiz

1. \_\_\_\_\_ is a measure of how closely packed together the particles of matter are.

2. True or false: Helium has greater density than air.

3. True or false: Density is a chemical property of matter.

**4. If two objects have the same density, they must have the same**

a) mass.

b) volume.

c) weight.

d) none of the above

**5. What formula is used to calculate density?**

**6. If a 60-g object has a volume of 30 cm3, what is its density?**

a) 2 g/cm3

b) 0.5 cm3/g

c) 1800 g ∙ cm3

d) none of the above

7. If you know the density and volume of a substance, how could you find its mass?

**8. Liquid water has a density of about 998 kg/m3. Ice has a density of about 916 kg/m3. Which will have a greater volume: 500 kg of liquid water or 500 kg ice?**

**9. Use the information in question 8 to explain why ice cubes float in water.**

**10. Pure carbon can exist as graphite or diamond. A piece of graphite with a mass of 6.9 g has a volume of 3 cm3**. **A piece of diamond with a mass of 1.7 g has volume of 0.5 cm3. How does the density of graphite compare with the density of diamond?**