Chemistry Worksheet: Density #1

1. A sample of oxygen (O_2) gas has a mass of 32.65 g and a volume of 24.924 L. What is the density of the O_2 gas?

2. The density of iron (Fe) is 7.86 g/cm^3. You are given an unknown metal that has a mass of 214.6 g. What would the volume of the sample be if it were iron?

3. What mass of sucrose (density = 1.58 g/cm^3) is needed to have a volume of 15.2 cm^3?

4. What is the density of 19.2 g of oak that has a volume of 25.7 cm^3?

5. The density of alcohol is 0.91 g/mL. What volume would 312 g of alcohol occupy?

6. Rearrange the following equation to solve for S and also for T.

$$\frac{JK}{L} = \frac{RS}{TU}$$

7. What will happen if you put an object that has a density of 1.1 g/mL into a beaker of water?

8. If you measured the density for a block of wood and then cut the wood in half and measured the density of one of the halves, would you get different values for density? Why or why not?