Density Worksheet 1

Directions: Answer the questions and solve the problems. Show your work for each problem and circle your answer. Do not forget to include your units on your answer!

Formula	How to find <u>DENSITY</u>:
density = $\dfrac{\text{mass}}{\text{volume}}$	1. Measure the VOLUME and MASS of the sample. 2. Calculate the sample's DENSITY with the formula.

The density of water is 1g/ml

Problems:
1. A block of aluminum has a volume of 15.0 mL and a mass of 40.5 g. What is its density?

$$\text{density} = \frac{\text{mass}}{\text{volume}} = \frac{40.5 \text{ g}}{15.0 \text{ mL}} = 40.5 \text{ g} \div 15.0 \text{ mL} = \underline{2.70 \text{ g/mL}}$$

2. Mercury metal is poured into a graduated cylinder that holds exactly 22.5 mL. The mercury used to fill the cylinder is 306.0 g. What is the density of mercury?

3. Calculate the density of sulfuric acid if 35.4 mL of the acid is 65.14 g.

4. A rectangular block of copper metal weighs 1896 g. The dimensions of the block are 8.4 cm by 5.5 cm by 4.6 cm. From this data, what is the density of copper? (Hint: Find the volume of the block.)

5. A block of lead has dimensions of 4.50 cm by 5.20 cm by 6.00 cm. The block weighs 1587 g. From this information, calculate the density of lead.