CHEMISTRY PS 2-2 DENSITY

NAME_____PERIOD_____

1. An aluminum cylinder has a **density of 2.98 g/cc.** If its **mass is 194.98 g** and its **height is 12.87 cm**, solve for its diameter.

2. If **98.54 grams** of a substance occupies **135.6 mL**, what is its density ?

3. A beaker will hold **615 mL of water when full.** If you place **550 mL** of water into the beaker and then add a metal cylinder with a **diameter of 2.66 cm** and a height of **13.06 cm**, will any water overflow ?

4. Solve for the density of a object whose **mass in air is 129 g** and whose **mass in water is 92 grams.**

5. A metal ball has a **density of 9.11 g/cc** and a mass of **0.499 kg.** If it is placed into a graduate that already **contains 23.9 mL of water**, what will be the final reading on the graduate?

6. An object with a **mass in air of 4.5 grams** has a **mass in water of 2.7 grams.** Solve for the density of the object.

7. A perfect cube has a **density of 3.4 g/mL** and a mass of **89 grams**. Solve for the length of one of the sides of the cube.

8. A tiny metal electrode has a mass of **2.6×10^{-5} grams** and a volume of **$3.02 \times^{-6}$ mL**. Calculate the density of the electrode.

9. A cylinder with a **diameter of 2.7 cm** and a **mass of 45 grams** has a **density of** $1.34\ g/cm^3$. What is the height of the cylinder?