Name: _____ Date: _____

Density problems
Solve the following problems. Read the information carefully.
Show all your calculations. Don't forget to write the units.

1. A block of aluminum occupies a volume of 150 cm^3 and weighs 40.5 g. What is its density?

2. The density of ethyl alcohol is 0.789 g/cm^3. What is the weight of the ethyl alcohol that exactly fills a 200 cm^3 beaker?

3. A block of lead has dimensions of 4.5 cm by 5.2 cm by 6 cm. The block weighs 1.58 kg. Calculate the density of lead.

4. 28.5 g of iron are added to a measuring cylinder containing 45.5 cm^3 of water. The water level rises to the 49.1 cm^3 mark. Calculate the density of iron.

5. A silver cube has a volume of 238 cm^3 and weighs 2.5 kg. What is the density of silver? If the cube had been made of gold, which has a density of 19.3 g/cm^3, how much heavier or lighter would it be?

Mark: **/10**

Name: _____ Date: _____

Density problems
Solve the following problems. Read the information carefully.
Show all your calculations. Don't forget to write the units.

1. Mercury metal is poured into a measuring cylinder that holds exactly 22.5 cm^3. The mercury used to fill the cylinder weighs 306 g. Calculate the density of mercury.

2. The density of benzene is 0.876 g/cm^3. What is the mass of 250 cm^3 of benzene?

3. A rectangular block of copper metal weighs 1.89 kg. The dimensions of the block are 8.4 cm by 5.5 cm by 4.6 cm. What is the density of copper?

4. A beaker that weighs 345.8 g is filled with 225 cm^3 of carbon tetrachloride. The weight of the beaker and carbon tetrachloride is found to be 703.55 g. Calculate the density of carbon tetrachloride.

5. A golden cube has a volume of 238 cm^3 and weighs 4.6 kg. What is the density of silver? If the cube had been made of silver, which has a density of 10.5 g/cm^3, how much heavier or lighter would it be?

Mark: **/10**