Name _____ Date _____ Per _____

Density Practice Problems

REMEMBER: D = M/V M = D x V V = M/D
SHOW ALL WORK!

1) Write equation. 2) Plug in numbers. 3) Show work. 4) Circle answer. 5) Label units.

1. What is the density of a piece of wood that has a mass of 24.0 grams and a volume of 28.4 cm^3?

2. A piece of wood that measures 4.0 cm by 5.0 cm by 6.0 cm has a mass of 75.0 grams. What is the density of the wood? Would the piece of wood float in water?

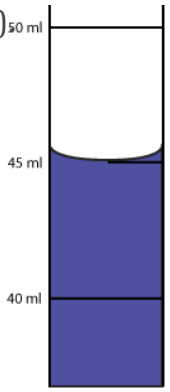
3. A cup of gold colored metal beads was measured to have a mass 493.5 grams. By water displacement, the volume of the beads was calculated to be 50.0 cm^3. Given the following densities, identify the metal.

Gold: 19.3 g/ cm^3
Copper: 8.86 g/ cm^3
Bronze: 9.87 g/ cm^3

4. I threw a power ranger toy in a kiddie pool for Toni to fetch. The mass of the red ranger was 232 grams. The level of the water went up by 165 mL. What is its density?

5. (Hard) After throwing the red ranger in the pool for Toni, the red ranger called upon his zord, increasing his density by 10 times. What is the total mass of the ranger + zord assuming that the volume only trippled during this transformation?

6. The volume of a solution was measured in a graduated cylinder (shown on the right). If the mass of solution is measured to be 62.46 grams, what is the density of the solution?



7. An ice cube measuring 5.70 cm by 5.30 cm by 5.20 cm has a density of 0.917 g/mL. What is the mass?

8. 942 grams of gasoline is spilled into a puddle of water. If the density of gasoline is 0.665 g/mL, what volume of gasoline is spilled?

9. The density of aluminum is 2.70 g/mL. If the mass of a piece of aluminum is 784 grams, what is the volume of the aluminum?

10. The density of a rock is 5.4 g/mL. A 12.75 g sample was placed in the graduated cylinder to obtain it's volume. If the graduated cylinder had 32 mL before the rock was placed inside, what was the Volume after?