

Name: _____ Date: _____

CHEMISTRY

Calculating Density

Density is the compactness of matter. Density describes **the quantity of matter (mass) per unit of volume (3-dimensional space)**. Density is calculated as the mass of the matter divided by volume.

$$\rho = \frac{m}{V}$$

The symbol for density is Greek letter rho (ρ). The units for mass are in grams (g) and the units for volume is cubic centimeter (cm^3). It should be noted that 1 cm^3 is equal to 1 ml of volume. $1 \text{ cm}^3 = 1 \text{ ml}$. The units for density are g/cm^3 .

Part 1

Determine the density of the new liquid materials created in the Secret Density Research Laboratory. Type the value (no units) of the density into the boxes in the density column. Report density to the 2nd number after the decimal. Use a zero to the left of the decimal for values less than 1.00. Examples: 2.35, 0.75, 1.90

Material name	Mass (g)	Volume (cm^3)	Density (g/cm^3)
Harrisonite	430	537	
Waltonium	590	454	
Kellese	260	236	
Wheelernone	620	364	
Osborneum	380	633	
Popebrillium	510	340	

Part 2

Pour the six liquids (from part 1) into the same graduated cylinder (to the left). The liquids are immiscible and will separate into distinct layers by density. Correctly drag and drop the liquids and put them in the correct order in the graduated cylinder. Put the colored rectangles (liquids) into the correct empty rectangles in the graduated cylinder (numbered rectangles). Densest liquid will be on the bottom. The least dense liquid will be on the top.

