

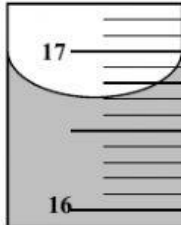
Name:

Date:

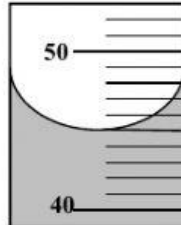
Period:

Homework: Calculating Density

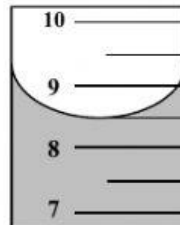
Read the volumes on the graduated cylinders below:



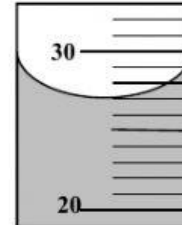
A volume of _____ mL



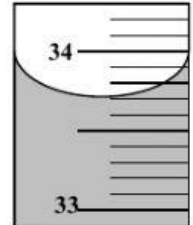
A volume of _____ mL



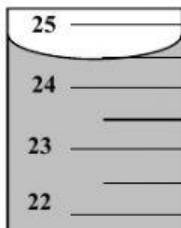
A volume of _____ mL



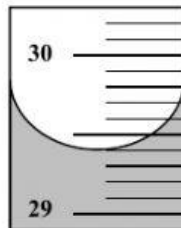
A volume of _____ mL



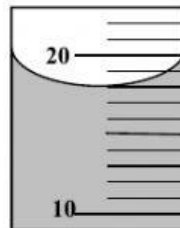
A volume of _____ mL



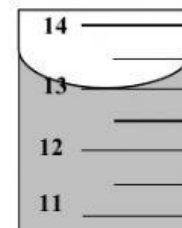
A volume of _____ mL



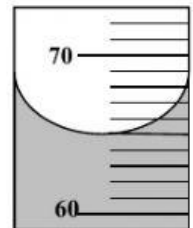
A volume of _____ mL



A volume of _____ mL

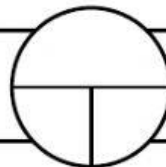


A volume of _____ mL



A volume of _____ mL

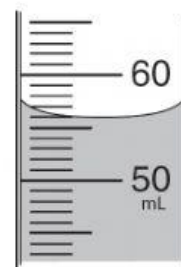
Density
Equation: $D = \text{Mass} / \text{Volume}$



The units of density are
_____ g/mL _____ or _____ g/cm³ _____.

1. What is the density of a liquid at 25°C that has a mass of 4.5 grams and a volume of 12.0 milliliters? **(Show your work to receive credit.)**
2. A student is doing a lab over the rock cycle and he has been given a rock sample to analyze. He is told that the density of the rock is 4.5 g/cm³ and determines that the volume of the rock is 8 cm³. Based on this information, calculate the mass of the rock sample. **(Show your work to receive credit.)**
3. What is the density of marble that has a mass of 4.3 g and a volume of 2.7 cm³? **(Show your work to receive credit.)**

4. What is the mass of liquid at 30°C that has a density of 2.3 g/mL and the volume shown in the graduated cylinder? **(Show your work to receive credit.)**

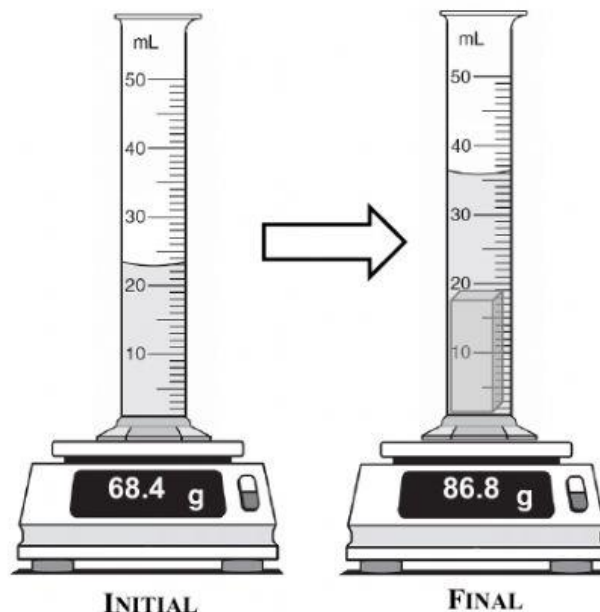


5. A student uses a rubber stopper to close off the end of a test tube. What is the density of this rubber stopper if it has a mass of 3.4 g and a volume of 6.1 cm³? **(Show your work to receive credit.)**

Density Experiment with a Magnetic Steel Alloy

Mass of weighing bottle (g):	<u>22.35</u>
Mass of weighing bottle + alloy (g):	<u>161.02</u>
Mass of alloy (g):	_____
Volume of water in graduated cylinder (mL):	<u>40.3</u>
Volume of water in graduated cylinder after alloy submerged (mL):	<u>60.4</u>
Volume of alloy (mL):	_____
Density of alloy (g/mL):	_____

1. Use the information already in the data table above to fill in the missing blanks.



2. The figure shows the lab setup used to determine the density of a solid object before and after the object was submerged. According to the figure, what is the density of the object?

DENSITY = _____