

Name: _____ Per _____

Density

Practice Sheet #5

1. Calculate the densities of the following substances:

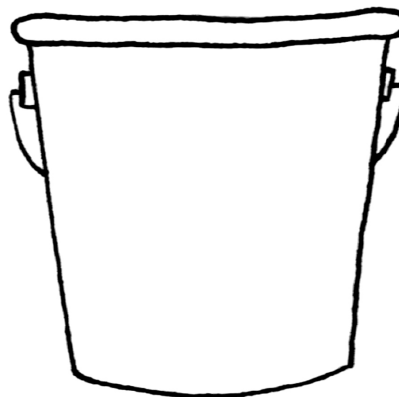
	Mass	Volume	Show Calculation	Density (with units!)
Salt water	56.1 g	55 mL		
Mercury, Hg	162 g	12 mL		
Toluene (an industrial solvent)	107.75 g	125 mL		
Crude Oil	66 g	75 mL		
Ice	22.9 g	25 mL		

2. A substance has a volume of 365 mL and a mass of 321 g. **Calculate the density and identify which substance it is from the above list.**

Density: _____

Identity: _____

3. Draw a picture of a bucket with sea water, mercury, crude oil and toluene in it and make sure to label each of the four layers:

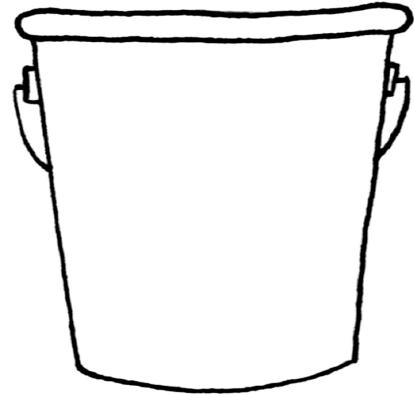


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4. **Use density to explain** why you should crawl along the floor when your house is on fire and filling with smoke. Use **ONLY** density to explain.

5. Fresh water has a density of 1.00 g/mL. **Draw a diagram showing how the three forms of water would layer (see chart on front):**

6. If the North Polar ice cap were to melt, where would the melted fresh water end up in the ocean? Briefly explain.



7. It is estimated that **205,800,000 gallons** of crude oil gushed into the Gulf of Mexico in the spring and summer of 2010.

a. Change this number into scientific notation: _____

b. Convert this to Liters.
1 gallon = 3.785 liters

c. If an Olympic pool holds 2.5×10^6 L of water, how many "pools" of oil spilled in the Gulf?

d. Using the density of crude oil (see front page), and $d=m/v$, determine the MASS of the crude oil spilled in kg.