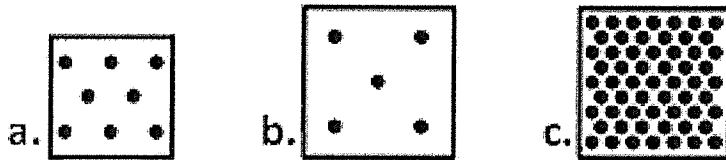


Name \_\_\_\_\_

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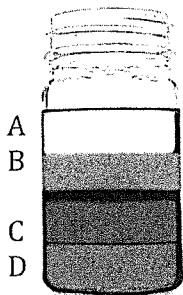
## Density Review



1. Which box has the least volume? Why?
2. Which box has the least mass? Why?
3. Which box has the least density? Why?
4. What happens to the density of an object if you increase the mass while keeping the volume the same?
5. A nugget of gold has a mass of 28 grams and a volume of  $1.45 \text{ cm}^3$ . What is the **density** of gold? Show work.
6. Two blocks have the same mass, but one has a larger volume than the other. Which block has the larger density and why?
7. An object has a density of  $0.6 \text{ g/cm}^3$  and a volume of  $1.2 \text{ cm}^3$ . What is the **mass** of the object? Will the object sink or float?
8. Did the volume of the canister change in the Dunkin' for Density Lab when you changed the mass to make the canister a sinker, floater, or neutrally buoyant? Explain.

Name \_\_\_\_\_  
Period \_\_\_\_\_

9. If the volume of a canister is  $40 \text{ cm}^3$  and it is neutrally buoyant in water, what is the mass of the canister?
10. If you have a lead ball whose mass is  $454 \text{ g}$ , what is its volume? (The density of lead is  $11.35 \text{ g/cm}^3$ .)  
Show your work.
11. In the picture at the left what do you know about the density of layer A?



12. Given the following densities for the liquids in the jar, assign them to the correct layer (A, B, C, or D)

$1.4 \text{ g/mL} =$   
 $0.9 \text{ g/mL} =$   
 $1.0 \text{ g/mL} =$   
 $0.78 \text{ g/mL} =$

13. Which layer is water?
14. It's a hot day and you go on a picnic to the lake. To prevent your soft drinks from getting too hot they are placed in the lake's cool water. Much to the surprise of all diet drinks float and the non-diet sink. Use density to explain why this occurred.