

Density of Common Objects

The table below shows the densities of common objects. **Remember that an objects' density can be used to identify an object, because each substance has a unique density.** Use the table to answer the questions below.

<u>Substance</u>	<u>Density (g/cm³)</u>
Helium	0.000178
Air	0.0013
Gasoline	0.7
Ether	0.74
Wood (Oak)	0.85
Water (Ice)	0.92
Olive Oil	0.92
Water (Liquid)	1.0
Sea Water	1.03
Magnesium	1.7
Aluminum	2.7
Steel	7.8
Silver	10.5
Lead	11.3
Mercury	13.5
Uranium	18.7
Gold	19.3

1. Which 7 substances will float on liquid water?

- a.
- b.
- c.
- d.
- e.
- f.
- g.

How do you know?

2. Would you use water to put out a gasoline fire?

Why or why not? Explain thoroughly!

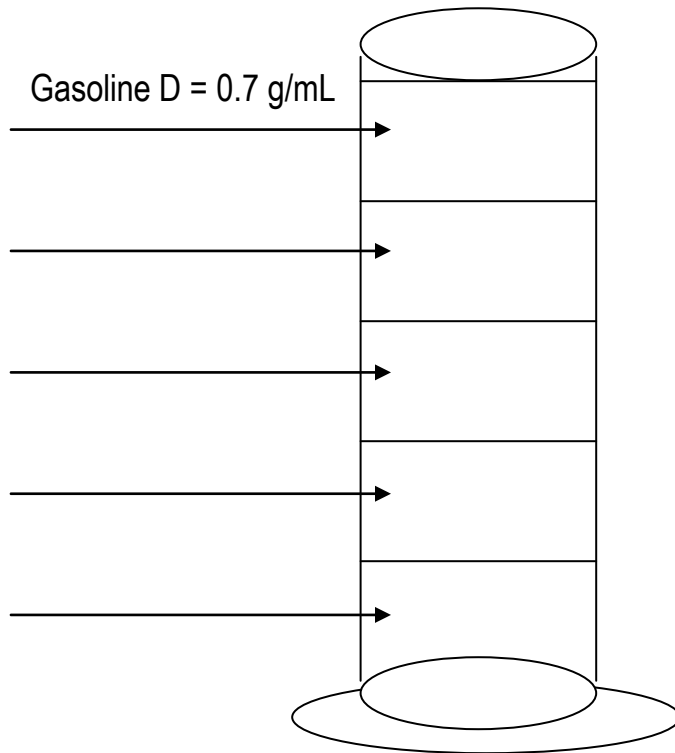
3. Will Lead sink or float in Mercury?

4. Will Gold sink or float in Mercury?

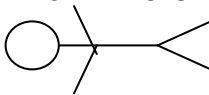
5. Is it possible for a solid substance to float on a liquid substance?

Explain using information from the data table.

6. The following liquids are placed into a large graduated cylinder: Mercury, Sea Water, Olive Oil, Ether and Gasoline. Using the data table on the front page, label the graduated cylinder to show where the liquids would be based on their densities. Gasoline has been done for you. (Label the arrow.)



7. A plastic army man is placed in the graduated cylinder. It has a density of 0.72 g/cm^3 . Draw the army man where he would float in the graduated cylinder.



8. A rock is placed in the graduated cylinder. It has a density of 0.98 g/cm^3 . Draw the rock where it would float in the graduated cylinder.



9. A Gold ring is placed in the graduated cylinder. Draw the ring where it would float in the graduated cylinder. (HINT: Find the density of gold on the data table on the front.)



10. A Silver belt buckle is placed in the graduated cylinder. Draw the buckle where it would float in the graduated cylinder. (HINT: Find the density of gold on the data table on the front.)

