

Density Worksheet 2

Name _____

Complete the following questions.

1. Define mass?
2. Define volume?
3. Define density and show the formula for calculating density.
4. Aluminum is used to make airplanes. Cast iron is used to make weightlifting equipment. Explain why the densities of these metals make them useful for these purposes?
5. What is the density of water? Remember for water $1\text{g}=1\text{ml}=1\text{cm}^3$
6. Why does an air bubble rise to the surface of a glass of water?

7. Calculate the densities of the following objects.

Remember to *SHOW WORK* and place units after each number.

Object A length = 6.2cm width = 3.4cm height = 1.2cm mass = 36.7g

volume = _____

density = _____

Object B length = 10.8cm width = 5.4cm height = 2.2cm mass = 300.8g

volume = _____

density = _____

Object C Determine the density of object C (silly putty) using the information below

Initial water level in graduated cylinder = 25ml

Final water level after placing silly putty into graduated cylinder = 29ml

Mass of silly putty = 8g

volume = _____

density = _____

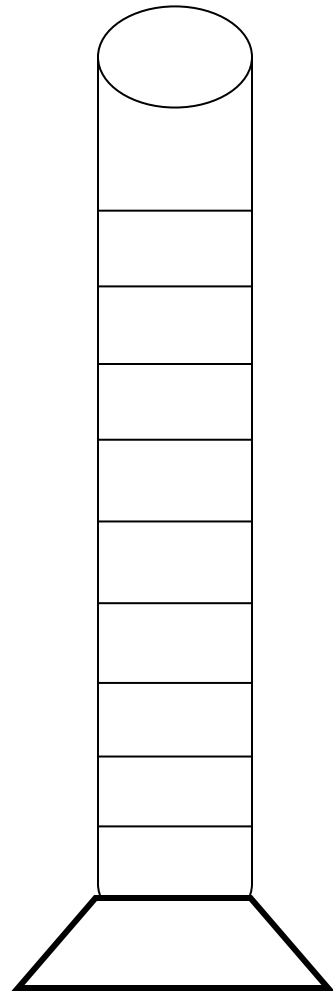
What is this method called? _____

8. Place a "X" on the line if the object listed will float in water (density 1 g/ml)?

- A. air = .001 g/cm³ _____
- B. corn oil = .93 g/cm³ _____
- C. glycerin = 1.26 g/cm³ _____
- D. corn syrup = 1.38 g/cm³ _____
- E. wood = .85 g/cm³ _____
- F. steel = 7.81 g/cm³ _____
- G. rubber = 1.34 g/cm³ _____
- H. ice = .92 g/cm³ _____
- I. water = 1.00 g/cm³ _____

9. Assuming the materials don't mix, show how the materials would "stack up" in a graduated cylinder.

Use the letters from above and the cylinder sketch to the right to record your answer.



10. Does ice float or sink in water?
Support your answer using the concept of density?