Density Worksheet

Name_____

Class Hour_____

1. Define mass?

2. Define volume?

3. Define density and show the formula for calculating density.

4. Why does changing the shape of an object have no effect on the density of that object?

5. 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?

6. What is the density of water? Remember for water 1g=1ml=1cm^3

7. Why does an air bubble rise to the surface of a glass of water?

8. Calculate the densities of the following objects. **Remember to place units after each number.**

Object A   length = 6cm   width = 3cm   height = 1cm   mass = 36g

  volume = _____   density = _____

Object B   length = 10cm   width = 5cm   height = 2cm   mass = 300g

  volume = _____   density = _____

Object C   Use the water displacement method to determine the density of object C (silly putty).
  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 = _____

9. Which of the following materials will float on water (density 1 g/ml)?

air =   .001 g/cm^3

corn oil =   .93 g/cm^3

glycerine =   1.26 g/cm^3

corn syrup = 1.38 g/cm^3

wood =   .85 g/cm^3

steel =   7.81 g/cm^3

rubber =   1.34 g/cm^3

ice =   .92 g/cm^3

water =   1.00 g/cm^3

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