Name_____

Calculating Density

Density = Mass divided by Volume D = M/V
Mass = Density times Volume M = D x V
Volume = Mass divided by Density V = M/D
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Density Worksheet

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=1cm3

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

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

   a. **Object A** length = 6cm width = 3cm height = 1cm mass = 36g
      volume = _____ density = _____

   b. **Object B** length = 10cm width = 5cm height = 2cm mass = 300g
      volume = _____ density = _____

   c. **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