Science 8 Density Name:\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_

Show all steps for the following calculations. Round decimal answers to two decimal places.

1. Find the volume of the following block. Show your calculations

4cm

3cm

5cm

1. The mass of 3cm3 of substance 1 is 24.8g. The mass of 5cm3 of substance two is 37g. Which substance has a greater density?
2. Describe the unit used to measure the mass and volume of various solid and liquid substances.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Large Solid | Small Solid | High quantity of liquid | Small amount of liquid |
| Mass |  |  |  |  |
| Volume |  |  |  |  |
| Density |  |  |  |  |

1. In your own words, explain what the term density means.

6. In most cases, why is a solid denser than a liquid.

7. Provide an example of a substance where the liquid is denser than the solid.

8. Draw the triangle for the density equation

1. The density of copper is 8.92g/cm3 . Calculate the mass of 5cm3 of copper.
2. The density of a liquid is 0.83g/mL. A 500g sample was used to measure the density. Calculate the volume of this sample.
3. Scientists are trying to find the identity of an unknown substance. They have a 4cm3 sample. The mass of this sample is 10.8g. Use the table on page 262 to identify the substance.