Name/Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Density**

* All matter has \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* What is mass?
* What is volume?
* What is density?
* Name three factors that determine the density of a substance.

1.

2.

3.

* Which state of matter is the most dense?
* Which state of matter is the least dense?
* When a piece of matter is broken off or compressed together, the ratio of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_ stays the same.
* The density of the matter remains the same no matter how \_\_\_\_\_\_\_\_\_\_\_ or how \_\_\_\_\_\_\_\_\_\_\_\_ the sample.
* Density =
* Unit of measurement
  + Solids =
  + Liquids =
* Density Triangle
* If you need to find the MASS, cover up the M

Mass = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ x \_\_\_\_\_\_\_\_\_\_\_\_\_\_

* If you need to find the VOLUME, cover up the V

Volume = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ ÷ \_\_\_\_\_\_\_\_\_\_\_\_\_\_

* This also works for finding DENSITY! Cover up the D

Density = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ ÷ \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Let’s try a few problems. Fill in the triangle to solve the problem, and then write the solution with its unit of measurement.**

* **Calculate the density of an object that has a mass of 24 grams and a volume of 127mL.**
* **Calculate the density of an object that has a mass of 54 kg and a volume of 32 Liters.**
* **Calculate the density of an object that has a mass of 10 g and a volume of 5 mL.**

* What is the density of water?
* Any solid with a density \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ than 1g/cm3 will sink.
* Any solid with a density less than 1g/cm3 will \_\_\_\_\_\_\_\_\_\_\_\_\_.
* Draw the diagram of an object in water

More dense than water Less dense than water Equal density to water