Density – Review Questions Name: _____

The Density checkpoint is on _____ - complete this sheet and review it in preparation for it.

$$1)\ \text{Volume} = \frac{\text{Mass}}{\text{Density}}$$

$$2)\ \text{Mass} = \text{Density} \cdot \text{Volume}$$

$$3)\ \text{Density} = \frac{\text{Mass}}{\text{Volume}}$$

1. Volume
    a. Define it in your own words:

    b. How is it measured? (what equipment and what units are used)

2. Mass
    a. Define it in your own words

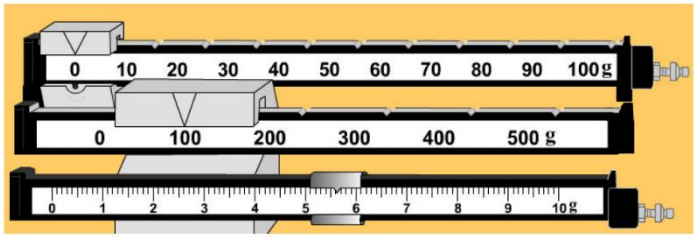
    b. How is it measured? (what equipment and what units are used)

3. Density
    a. Define it in your own words:

    b. How do you calculate it? (what information do you need to calculate it?)

For #4 and 5 include the formula uses, show your work, circle your answer (with unit) and include a full sentence answer).

4. A cube measuring 2cm x 3cm x 1cm is placed on a triple balance beam scale, and the scale reads:



    a) Assuming the scale is measuring mass in **grams,** determine the density of the cube.

b) Would this cube float or sink in water? (Density of water = 1.00 g/ml) _____

5. A block is put in a graduated cylinder filled with 75mL of water, and the water level rises to 100mL. If the block has a density of 10 g/mL, what is its mass of the block?

6. If you heat up a substance will the density increase or decrease? Why? (relate this to the kinetic molecular theory – in other words talk about the particles and how they behave when heated up and how this affects density).

7. If you cool down a substance will the density increase or decrease? Why? (relate this to the kinetic molecular theory – in other words talk about the particles and how they behave when cooled down and how this affects density).

8. If two different substances have the same mass but one is bigger than the other – which one is denser? Why? (draw a picture to help you in your explanation)

9. If two different substances have the same volume but one is heavier than the other- which on is denser? Why? (draw a picture to help you in your explanation)