Name: ­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Density Lab

Purpose: To determine the density of a cube and to determine the density of a sphere.

**Procedure:** Part 1

1. Using a scale, measure the mass of the cube.
2. Using a ruler, measure the length, width, and height of the cube.
3. Calculate the volume of the cube.
4. Calculate the density of the cube.

Part 2

1. Using a scale, measure the mass of a marble. You will need to use a weighing boat to keep the marble from rolling off the scale. Do not forget to put the empty weighing boat on the scale and then hitting the “Zero” button on the scale before weighing the mass of the marble.
2. Fill a graduated cylinder about half way and record the volume.
3. Carefully add the marble to the graduated cylinder and measure the new volume.
4. Calculate the volume of the marble.
5. Calculate the density of the marble.

**Pre-Lab Questions:**

1. Go look at the scale. What decimal place will the last digit be?
2. Go look at the ruler (metric side). What decimal place will your estimate be?
3. Go look at a graduated cylinder. What decimal place will your estimate be?

**Data:**

Create a data table for the cube and the marble. Make sure you record your data to the correct digit.

**Data processing:**

Show the set ups and answers for calculating the volumes and densities for each object. You must use units and sig figs.

**Post lab questions:**

1. Why did you have to use different methods for determining the volume
2. Density is a very specific properties that can be used to Identify an unknown substance.

 Go on the internet and try to figure out exactly what the cube and the marble are made of by searching the densities.

1. Why did we take the mass of the marble before figuring out the volume?

**Conclusion:**