Density Practice for Cubes

Volume

1. Volume is a measure of how much \_\_\_\_\_\_\_\_ an object takes up.
2. A cube is a \_\_\_\_\_\_\_\_\_\_\_\_\_ shaped object, so we can use a formula to determine its volume.
3. Volume is a \_\_\_\_\_\_\_\_\_\_\_\_ dimensional measure, so the formula for volume of a cube has \_\_\_\_\_\_\_\_ parts.
4. We can measure the volume of a cube using a \_\_\_\_\_\_\_\_\_\_\_\_ and some math.
5. The formula for the volume of a cube is: \_\_\_\_\_\_\_\_\_\_ \*\_\_\_\_\_\_\_\_\_\_\_\*\_\_\_\_\_\_\_\_\_\_\_\_.
6. All the sides of a cube are \_\_\_\_\_\_\_\_\_\_\_ in length, so knowing the length of \_\_\_\_\_\_\_\_\_\_ side is enough to find the volume.
7. We always measure in metric units. \_\_\_\_\_\_\_\_\_\_ are the base metric unit for length, and usually in this class we will use \_\_\_\_\_\_\_\_\_\_\_\_\_\_ when dealing with density.
8. To measure the volume of a cube, we take a \_\_\_\_\_\_\_\_\_ and measure one side. Line the end of the cube up with the 0 cm mark, and read the length on the opposite edge of the cube.
9. When we find the volume of a cube, we multiply not only the numbers for length, width, and height, but the units too. Because of that, the unit for volume is simply \_\_\_\_\_\_ \* \_\_\_\_\_ \*\_\_\_\_\_ , or \_\_\_\_\_\_\_.

Mass

1. Mass is a measure of how much \_\_\_\_\_\_\_\_\_\_\_\_ is in an object.
2. The mass of an object is measured using a \_\_\_\_\_\_\_\_\_\_\_\_\_.
3. \_\_\_\_\_\_\_\_\_ are the base metric unit for mass, and we will use them in this class when we calculate density.

Density

1. Density is a calculation of how \_\_\_\_\_\_\_\_\_\_\_\_\_\_ the molecules in a substance are.
2. Density is calculated by determining the amount of mass per unit of \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. Density is a property of matter, just like color, melting point, freezing point, or conductivity. This means that the density of 100kgs of gold and 1 mg of gold will be exactly \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. Draw a picture of the molecules in a very dense object:
5. Draw a picture of the molecules in a less dense object:
6. Density cannot be measured, only calculated. We measure the \_\_\_\_\_\_\_\_\_ and volume of a cube, and we then use those measurements to calculate density.
7. The formula for density is:
8. If you put the word “per” in for the division sign, how would you write the formula for density in English?
9. Density is a measure of units of mass per unit of volume, so common units for density are \_\_\_\_\_\_ per \_\_\_\_\_\_, or g/cm3, or g/mL. Any metric unit of mass per any metric unit of volume can be used for density.
10. Determine the density for the cube below based on the measurements given. Follow all steps to show your work.
11. What formulas will you need to use to solve for density?
12. What measurements do you need to take? Take them and write them here.

\_\_\_\_\_\_\_\_\_= \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_=\_\_\_\_\_\_\_\_\_\_

1. What is the volume of the cube?
   1. Write the formula:
   2. Put in your numbers:
   3. Solve:
2. Calculate density
   1. Write the formula:
   2. Put in your numbers:
   3. Solve:
3. Why is it important to keep your work organized? Give at least two reasons.