Review Sheet: Unit 1 **Name**_____

1. Distinguish between observations and conclusions.

   Give an example of an observation: _____
   Give an example of a conclusion: _____
2. What are qualitative observations?

   Give an example: _____

   What are quantitative observations?

   Give an example: _____
3. Scientists use the scientific method to help them answer questions. The first step is to make _____ that lead to a _____. Next, you form a _____ to answer your questions. Then you test the hypothesis by performing an _____. Finally, you make a _____ based on the results of the experiment. A good hypothesis must explain the _____, be able to be _____, and predict an _____. A good experiment has one _____ variable which is changed by the scientist and one _____ variable which changes as a result of the experiment. All other variables must be _____.
4. Define each of the following.
   mass:

   volume:

   length:

   temperature:

5. In the lab, measurements are made with various instruments. The _____ is used to measure mass, the _____ stick is used to measure length, and the graduated cylinder is used to measure _____. Our graduated cylinders are marked off in cm^3 which is the same as a _____. To measure temperature, you would use a _____.

6. We have learned that numbers without units are meaningless. The unit for volume in the metric system is the _____. The unit for mass in the metric system is the _____. The unit for length in the metric system is the _____. The unit for temperature in the metric system is the _____.
7. A wooden block has a length of 4.0 cm, a width of 2.0 cm, and a height of 1.0 cm. What is the volume of this block?

   Suppose this block is dropped into 23.0 mL of water. What will be the new volume reading?

   A beaker has a mass of 52.0 g. After water is added to the beaker, the new mass is 76.0 g. What is the mass of the water?

8. Write in scientific notation or decimal notation, whichever is appropriate.

   1.6×10^5 _____ 5000 _____

   0.0056 _____ 9.7×10^{-2} _____
9. Make the following metric conversions.

   33.5 cs = _____ s

   4.5×10^{-3} ML = _____ dL

   3500 mm = _____ km

   6.7×10^5 μg = _____ g