

CH 221 Chapter One Study Guide

- Define physical properties and chemical properties and be able to give examples of each.
- Recognize the different states of matter (solids, liquids and gases) and give characteristics of each.
- Understand the basic concepts of the Kinetic Molecular Theory of Matter.
- Appreciate the difference between matter represented at the macroscopic level and at the particulate (“microscopic”) level.
- Convert temperatures between Celsius, Kelvin and, if necessary Fahrenheit scales.
- Realize that the Kelvin scale does not use the degree symbol (°).
- Know how to find density, mass or volume if two of the three quantities are known.
- Know the differences between atoms and elements as well as molecules and compounds.
- Be able to recognize chemical compounds and identify the number and identity of atoms in the compound.
- Be able to recognize (memorize?) at least the first 20 elements in the periodic table.
- Understand the difference between qualitative and quantitative measurements.
- Comprehend SI units and the prefixes that modify the sizes of metric units.
- Know how to use dimensional analysis in calculations, conversions, etc.
- Know the differences between accuracy and precision.
- Be able to report a value correctly using the appropriate number of significant figures.
- Use the concept of percent in chemistry.
- Be able to solve and understand the assigned problems in problem set #1.