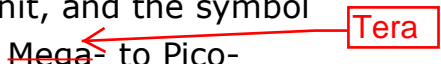


Chapter 1—Introduction

9/27/05 6:28 PM

After this chapter, you should be able to...

- Define what is meant by matter
- List the three states of matter
- Explain the difference between a substance and a mixture
 - Give examples of each...
- Explain the difference between a homogeneous and a heterogeneous mixture
- Explain the difference between an element and a compound
- Know all the element names and symbols given in table 1.1
- Describe the difference between a physical and chemical property
- Explain what is meant by an extensive or an intensive property
- List the seven SI units, the name of each unit, and the symbol
- List the SI prefixes given in table 1.3, from ~~Mega-~~ to Pico-
 - Be able to interconvert measurements expressed using SI prefixes
- Be able to convert between the common units of volume
- Define what is meant by density
 - Given two out of {d, m, V}, calculate the third
- Express numbers using scientific notation
 - Manipulate numbers expressed in scientific notation using your calculator
- Determine the number of significant figures associated with a measurement
 - After performing a calculation, round the final answer to the correct number of significant figures (or decimal places)
- Explain what is meant by the terms: accuracy and precision
- Using the method of dimensional analysis, convert a quantity from one set of units to another

You should also be able to solve every homework problem on your syllabus!

Make sure you can give examples of each definition, or can classify substances accordingly.

Also—the more problems you practice, the better prepared you will be for the exam.

Happy studying!