

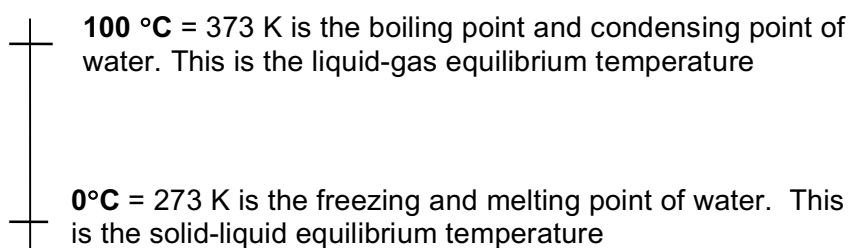
UNIT 1 REVIEW: INTRO TO CHEMISTRY

1. A correct scientific measurement is taken when all digits are read off the equipment + 1 approximation digit added to the end.
2. Convert from one measurement system to another... especially metrics using proportions or
King Henry Doesn't Usually Drink Chocolate Milk
3. Significant Figures identify how many digits were actually measured. The rules:
 - all non-zero digits are significant
 - zeros between non zero digits count
 - zeros at the beginning of a value NEVER COUNT
 - zeros at the end of a value count only if there is a decimal point (no point...no count)

- When adding and subtracting values... record answer according to least precise measurement...lowest measured decimal place.
- When multiplying and dividing values... record answer according to least precise measurement ...to the lowest measured sig figs.

4. Density is a physical property.
 - Density for elements is found on REFERENCE TABLE S.
 - **Density = Mass / Volume** **** formula given on REFERENCE TABLE T.
5. Properties and changes in matter can be physical or chemical.
 - Physical properties and changes can be observed or measured.
 - Chemical properties and changes can be seen through chemical reactions.
6. Calculate percentage of error. Formula on Reference Table T.
7. **Temperature is a measure of the average kinetic energy** of particles in a substance.
Kinetic energy is energy of motion.
Temperature scales:
 - Kelvin (absolute) 0 K = all motion stops = 0 Kinetic Energy
 - Celsius (Centigrade)
 - **K = °C + 273** *** formula given on **REFERENCE TABLE T**
 - For 1 degree increase on the Kelvin scale there is a 1 degree increase on the Celsius scale

8. Fixed points on a thermometer:



9. Matter can be classified according to composition:

- If it is homogeneous...Is it pure?
 - If it is not pure...it is a mixture...**SOLUTION.** Mixtures can vary in composition.
 - If it is pure it is called a **SUBSTANCE.**
 - A pure substance cannot vary in composition...it's composition is **DEFINITE.**
 - A pure substance that can be decomposed is a **COMPOUND.**
 - A pure substance that cannot be broken down is an **ELEMENT.**

***** Be able to draw pictures and identify similarities and differences between elements, compounds and mixtures.**