Chemistry **Name _____**
Chapter 10 – Practice I **Date _____**

Use your notes, practice examples & your seat partner to complete this practice worksheet. Remember to show all work!

I. Molar Mass – ***calculate the molar mass of the following compounds.***

1. sugar, $C_{12}H_{22}O_{11}$
2. gold
3. $K_3[Fe(CN)_6]$
4. caffeine, $C_8H_{10}N_4O_2$

II. Mole Conversions – ***use the mole conversions to solve for the given quantities.***

5. How many molecules are there in 6.8 moles of carbon monoxide gas?
6. How many atoms are in 20.0 g Ca?
7. 0.002 grams of bromine gas will be how many liters?
8. How many grams of $Al(OH)_3$ are in 6.75×10^{23} formula units?
9. How many moles of O_2 gas are in 75 L at STP?

III. Percent Composition – ***calculate the % of each element in the following compounds.***

10. PbS, lead (II) sulfide
11. C_6H_5OH, phenol
    (an organic compound used in some cleaners)
12. $Al_2(CO_3)_3$

IV. Empirical Formulas – ***use the given percentages of each element to calculate the empirical formula of the following compounds.***

13. Determine the empirical formula of a compound containing 94.1% O, and 5.9% H

14. Determine the empirical formula of nicotine containing 74.0% C, 8.65 % H and 17.35 % N