**The Mole HW #3**

(Show all work)

1. Pair : 2 :: mole : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Given 2.25 moles of C5H12 , list the number of moles of atoms of each element in this compound.
3. Given 8.07 moles of Ba3(PO4)2 , list the number of moles of atoms of each element in this compound.
4. Calculate the formula mass of SrCl2.
5. Calculate the molar mass of Sr(OH)2.
6. How many formula units are in 3.15 moles of Sr(OH)2?
7. How many moles do 3.9 x 1014 molecules of carbon monoxide (CO) make?
8. How many moles are in 10.95g of palladium?
9. How many grams are in 1.0 moles of potassium?
10. How many moles are in 162.35g of NaCl? (molar mass of NaCl is 58.44 g/mol)
11. How many atoms are in 10.00 g of NiCl2? (molar mass of NiCl2 is 80.00 g/mol)
12. How many grams do 9.051 x 1023 formula units of CoCl3 make? (molar mass of CoCl3 is 165.28 g/mol)
13. What is the percent composition of MgO?
14. What is the percent composition of Ba3(PO4)2?
15. What is the empirical formula of a compound that is 17.00% potassium and 83.00% oxygen?
16. What is the empirical formula of a compound that is 22.10% Al, 25.40% P and 52.48% O?
17. What is the empirical formula of a compound that is 46.75% silicon and 53.25% oxygen?
18. What is the molecular formula of a compound that has an empirical formula of C2H5 and has a molar mass of 58.14 g/mole?
19. What is the molecular formula of a compound that is 40.00% C, 6.73% H, 53.27% O and has a molar mass of 180.18g/mol?
20. What is the molecular formula of a compound that is 74.83% C and 25.17% H and has a molar mass of 16.05g/mol?