Worksheet 8

1. Name the following compounds: a) $Cu(NO_3)_2$, b) H_3ClO_3, c) N_2O, d) C_4H_7OH, e) $KMnO_4$, f) HF

2. Write a formula for each compound.

   a. boron tribromide b. copper (I) phosphate c. lead (I) chromate d. hydrobromic acid

   e. potassium hydroxide f. phosphorous trichloride g. sodium nitrate e. cesium bromide

3. Calculate the formula mass for each compound.

   a. NO_2 b. CBr_4 c. $C_6H_{12}O_6$ d. $Ca(NO_3)_2$ e. C_4H_{10} f. $KClO_3$

4. Balance the following equations:

   a. _____ $CO\ (g)$ + _____$O_2\ (g) \rightarrow$ _____$CO_2\ (g)$

   b. _____ $C_2H_4\ (g)$ + _____$O_2\ (g) \rightarrow$ _____$CO_2\ (g)$ + $H_2O\ (g)$

   c. _____ $Mg_3N_2\ (s)$ + _____$H_2SO_4\ (aq) \rightarrow$ _____$MgSO_4\ (aq)$ + $(NH_4)_2SO_4\ (g)$

   d. _____ $N_2O_5\ (g)$ + _____$H_2O\ (l) \rightarrow$ _____$HNO_3\ (aq)$

5. Determine the formula weight of **a.** N_2O_5, **b.** $(NH_2)_2CO$, and **c.** $Mg(OH)_2$.

6. Calculate the percentage mass of oxygen in the following compounds: **a.** SO_3, and **b.** CH_3COOCH_3.

7. The elemental mass percent of composition of ascorbic acid is 40.92 % C, 4.58 % H, and 54.5 % O. Determine the empirical formula of ascorbic acid.