**Mole-Mole Stoichiometry Worksheet**

1. Given the following equation:

 C4H10 + \_\_\_\_\_ O2 ---> \_\_\_\_\_CO2 + \_\_\_\_ H2O

a. If 2.45 moles of C4H10 burn, how many moles of water will be produced?

2. Given the following equation:

\_\_\_\_\_\_ KClO3 ---> \_\_\_\_\_ KCl + \_\_\_\_\_O2

1. How many moles of O2 can be produced by letting 1.33 moles of KClO3 react?
2. How many moles of KCl can be produced by letting 4.9 moles of KClO3 react?

3. Potassium reacts with Chlorine to form solid potassium chloride.

How many moles of KCl are produced from 2.50 moles of K?

4. Given the following equation:

\_\_\_\_Na2O + \_\_\_\_\_ H2O ---> \_\_\_\_\_ NaOH

How many moles of Na2O are required to produce 1.60 moles of NaOH?

5. Given the following equation: 8 Fe + S8 ---> 8 FeS

How many moles of iron are needed to react with 1.26 moles of sulfur?

6. Given the following equation:

Solid Sodium Chlorate decomposes to form sodium chloride and oxygen

1. If 3.46 moles of NaClO3 decompose will produce how many moles of O2?
2. How many moles of NaCl are produced when 0.34 moles of O2 are produced?

7. Given the following equation:

 Cu + 2 AgNO3 ---> Cu(NO3)2 + 2 Ag

If 0.450 moles of Ag were produced, how many moles of Cu reacted?

8. Molten iron and carbon monoxide are produced in a blast furnace by the reaction of iron(III) oxide and coke (pure carbon). If 25.0 moles of pure Fe2O3 is used, how many moles of iron can be produced? The reaction is: Fe2O3 + 3 C ---> 2 Fe + 3 CO

9. Given the reaction:

\_\_\_\_\_ NH3 (g) + \_\_\_\_ O2 (g) 🡪\_\_\_\_\_ NO (g) + \_\_\_ H2O (l)

When 1.20 mole of ammonia reacts, the total number of moles of products formed is:

a. 1.20 b. 1.50 c. 1.80 d. 3.00 e. 12.0