NAME: _____

PERIOD: _____ DATE: _____

Stoichiometry and Molar Volume Worksheet

1) For the reaction $Cl_2 + 2KBr \rightarrow 2KCl + Br_2$, how many grams of potassium chloride can be produced from 150 g of potassium bromide?

2) For the reaction $2Na + 2H_2O \rightarrow 2NaOH + H_2$, how many grams of hydrogen are produced by 40 g of water?

3) For the reaction $2Na + Cl_2 \rightarrow 2NaCl$, how many grams of sodium chloride can be produced from 250 g of chlorine gas?

4) For the reaction $SO_3 + H_2O \rightarrow H_2SO_4$, how many grams of sulfuric acid can be produced from 100.0 g of sulfur trioxide?

5) For the reaction $2Zn + O_2 \rightarrow 2ZnO$, how many grams of zinc oxide can be produced from 50 g of zinc?

6) Chlorine is produced by the reaction $2HCl_{(g)} \rightarrow H_{2(g)} + Cl_{2(g)}$. How many grams of HCl must be used to produce 7.5 L of chlorine gas?

7) Iron (III) oxide, Fe_2O_3, is produced by the reaction $4Fe + 3O_2 \rightarrow 2Fe_2O_3$. How many grams of Fe_2O_3 can be produced from 12.5 L of O_2?

8) When carbon burns, carbon dioxide is produced in the reaction $C + O_2 \rightarrow CO_2$. If 5 liters of CO_2 are produced, how many grams of carbon were used?

9) The combustion of ethane follows the reaction $2C_2H_6 + 7O_2 \rightarrow 4CO_2 + 6H_2O$. If 156.8 liters of oxygen are used, what mass of ethane is burned?

10) When 1.35 liters of ethane are burned, what is the number of moles burned?

3 6.03×10^{-2} 24 122.5 2 94 4.1×10^{2} 62.2 59.5 60.00