

Name: _____ Date: _____ Period: _____

Chemistry Worksheet: Limiting Reactant Worksheet

1. Consider the following reaction: $2 \text{Al} + 6 \text{HBr} \rightarrow 2 \text{AlBr}_3 + 3 \text{H}_2$

a. When 3.22 moles of Al reacts with 4.96 moles of HBr, what is the limiting reactant?

b. how many moles of H_2 are formed?

c. For the reactant in excess, how many moles are left over at the end of the reaction?

2. Consider the following reaction: $3 \text{Si} + 2 \text{N}_2 \rightarrow \text{Si}_3\text{N}_4$

a. When 21.44 moles of Si reacts with 17.62 moles of N_2 , what is the limiting reactant?

b. how many moles of Si_3N_4 are formed?

c. For the reactant in excess, how many moles are left over at the end of the reaction?

3. Consider the following reaction: $2 \text{CuCl}_2 + 4 \text{KI} \rightarrow 2 \text{CuI} + 4 \text{KCl} + \text{I}_2$

a. When 0.56 moles of CuCl_2 reacts with 0.64 moles of KI, what is the limiting reactant?

b. how many moles of I_2 are formed?

c. For the reactant in excess, how many moles are left over at the end of the reaction?

4. Consider the following reaction: $4 \text{FeS}_2 + 11 \text{O}_2 \rightarrow 2 \text{Fe}_2\text{O}_3 + 8 \text{SO}_2$

a. When 26.62 moles of FeS_2 reacts with 5.44 moles of O_2 , what is the limiting reactant?

b. how many moles of SO_2 are formed?

c. For the reactant in excess, how many moles are left over at the end of the reaction?