Stoichiometry Worksheet C Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Na2SiO3 + 8HF 🡪 H2SiF6 + 2NaF + 3H2O**
2. How many moles of HF are needed to react with 0.600 mol of Na2SiO3?
3. How many grams of NaF form when 0.800 mol of HF reacts with excess Na2SiO3?
4. How many grams of Na2SiO3 can react with 0.900 g of HF?
5. **C6H12O6 🡪 2C2H5OH + 2CO2**
6. How many moles of CO2 are produced when 0.200 mol of C6H12O6 reacts in this fashion?
7. How many grams of C6H12O6 are need to form 8.50 g of C2H5OH?
8. How many grams of CO2 form when 8.50 g of C2H5OH are produced?
9. **Fe2O3 + 3CO 🡪 2 Fe + 3CO2**
10. Calculate the number of grams of CO that can react with 250 g of Fe2O3.
11. Calculate the number of grams of CO2 formed when 250 grams of Fe2O3 reacts.
12. **2NaOH + CO2 🡪 Na2CO3 + H2O**
13. How many moles of Na2CO3 can be produced when 1.00 mole CO2 reacts?
14. How many moles of Na2CO3 can be produced when 1.85 mol NaOH reacts?
15. **C6H6 +Br2 🡪 C6H5Br + HBr**
16. What is the theoretical yield of C6H5Br in this reaction when 30.0 g of C6H6 reacts?
17. If the actual yield of C6H5Br was 56.7 g, what is the percent yield?

**BONUS CHALLENGE QUESTION!!!** (Combining almost every topic from this Unit)

**CaCl2 + K2CO3 🡪**

1. **Classify the reaction type**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. **Predict the products** (write them in above)
3. **Balance the reaction** (write the balanced equation above)
4. **Answer the question**: If you have 32 grams CaCl2, how many grams of Potassium Chloride do you expect to produce?
5. If 55 grams of Potassium Chloride are produced when you perform the reaction, what is your **percent yield**?
6. **Translate** your equation above into words