

WKS
Mole-Mole Calculations

NAME _____
Period _____ **Date** _____

Use what you have learned about mole ratios and mole-mole calculations to solve the following problems:

- 1) Given the balanced equation, $6 \text{ AgI} + \text{Fe}_2(\text{CO}_3)_3 \rightarrow 2 \text{ FeI}_3 + 3 \text{ Ag}_2\text{CO}_3$:
 - a. How many moles of AgI would be required to form 10. moles of FeI_3 ?

 - b. For the same reaction, how many moles of Ag_2CO_3 would be formed from the reaction of 4.0 moles of $\text{Fe}_2(\text{CO}_3)_3$ with enough AgI?

- 2) Given the chemical equation, $___ \text{ H}_2\text{SO}_4 + ___ \text{ B}(\text{OH})_3 \rightarrow ___ \text{ B}_2(\text{SO}_4)_3 + ___ \text{ H}_2\text{O}$
 - a. Balance the equation
 - b. How many moles of $\text{B}(\text{OH})_3$ would be required to completely react with 4.65 moles of H_2SO_4 ?

 - c. For the same reaction, how many moles of H_2SO_4 would be needed, given enough $\text{B}(\text{OH})_3$, to produce 11.8 moles of $\text{B}_2(\text{SO}_4)_3$?

- 3) When propane (C_3H_8) gas burns in oxygen gas, it forms carbon dioxide gas and water vapor
 - a. Write and balance the equation

 - b. How many moles of water would be formed in the reaction where 3.19 mol of carbon dioxide are formed?

 - c. For the same reaction, how many moles of carbon dioxide would be produced by the reaction of 23.4 moles of oxygen, with sufficient propane?