

Name: _____ per _____

Mole/Mole Conversions

Practice Sheet # 25

1. What is the Law of conservation of mass?
2. If you had 84 grams of reactants to use in a chemical reaction, how many grams of products must be formed? Why?
3. When predicting the products you must first write formulas using subscripts, and then use coefficients to balance the chemical equation. What is the different between subscripts and coefficients?
4. Balance the following reaction and then use the reaction to answer the following questions.
 - a. $\text{___}(\text{NH}_4)_3\text{PO}_4 + \text{___}\text{CaCl}_2 \rightarrow \text{___}\text{Ca}_3(\text{PO}_4)_2 + \text{___}\text{NH}_4\text{Cl}$
 - b. IF you need to form 0.045 moles of calcium phosphate, how many moles of calcium chloride must be reacted?
 - c. If you reacted 0.55 moles of ammonium phosphate, how many moles of calcium chloride must be reacted?
 - d. How many moles of calcium phosphate can be formed from 12.04×10^{23} molecules of ammonium phosphate?

Name: _____ per _____

5. Balance the following reaction and then use the reaction to answer the following questions.



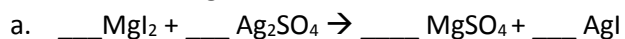
b. How much does 7.5 moles of lithium nitride weigh?

c. How many moles of nitrogen are needed to form 0.563 moles of lithium nitride?

d. How many molecules of nitrogen are needed to form 0.563 moles of lithium nitride?

e. How many moles of molecules of nitrogen are in 0.46 moles of nitrogen?

6. Balance the following reaction and then use the reaction to answer the following questions.



b. How many moles of magnesium sulfate can be produced from 1.5 moles of magnesium iodide?

c. How many moles of AgI can be produced from 1.5 moles of magnesium iodide?

d. How many molecules of magnesium sulfate can be produced from one mole of magnesium iodide?