Topic:Ch 9

**QUESTIONS**

**TEXTBOOK**

***Page(s)* ANSWERS**

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| What is a mole ratio? | Pg 300 | A mole ratio is the conversion factor that relates the amount in moles of any two substances in a chemical reaction. |
| What does a reaction stoichiometry involve? | Pg 301 | This involves the mass relationship between reactants and products in a chemical reaction. |
| Is a balanced chemical equation is necessary to solve stoichiometric problems? | Pg 301 | Yes. |
| What limits the amount of product yield?  . | Pg 302 | The limiting factor is the amount of reactant. |
| Problem type 1- Given and unknown quantities are amounts in mole | Pg 299 | Use known amount to find unknown amount |
| Problem type 2 given is an amount in moles and unknown is a mass expressed in grams | Pg 299 | Find unknown amount from known amount and convert |
| Problem type 3 given is a mass in grams, amount is in moles | Pg 300 | Convert grams to moles, then find unknown |
| Problem type 4 given is amount in grams, unknown is in grams | Pg 300 | Convert grams to moles, find unknown and convert to grams |
| How many grams of SnF2 are produced from the reaction of 30.00 g of HF with Sn?  Sn + 2HF -> SNF2 + H2 | Pg 310 | 117.5 g SnF2 |
| If 6.0 mol HF is added to 4.5 mol SiO2, which is the limiting reactant?  SiO2 + 4HF -> SiF4 + 2H2O | Pg 313 | HF is the limiting reactant |

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| SUMMARY: | Reaction stoichiometry involves the mass relationships between reactants and products |
| In a chemical reaction. Relating one substance to another requires expressing both in |
| Terms of moles. A mole ratio is the conversion factor that relates the amount of moles |
| Of any two substances in a chemical reaction. This is derived from the equation. |
| In an ideal stoichemietric calculation, the mass or amount of any reactant or product is |

calculated if the balanced chemical equation and the mass/amount of the reactant/product are known. In reactions, the reactant may be present in proportion that differs from the stoichiometric proportions required for a reaction. The limiting reactant controls the maximum product. For many reactions, the quantity of a product is less than the theoretical maximum