Honors Chemistry Daily EQs

Unit # \_\_9\_\_\_\_

Dates \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



1. Answer the questions each day during the first 10 minutes of class.
2. If you are absent, you must make-up the missed questions the day you return.

**Score**

1. Write the correct answers for any questions you missed.
2. Turn in this assignment with your unit pack at the end of each unit.

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|  | Daily Warm-Ups: |
| Unit 9 Day 1 | A compound that contains only nitrogen and oxygen is 30.4 % N by mass; the molar mass of the compound is 92 g/mol.   1. What is the empirical formula of the compound? 2. What is the molecular formula?   A seashell composed largely of calcium carbonate is placed in a solution of hydrochloric acid. As a result 1500 ml of dry carbon dioxide gas at STP is produced. The other products are calcium chloride and water.   1. Write a balanced equation for this reaction 2. Based on the above information how many grams of CaCO3 are consumed in this reaction? 3. What volume of 2.00 M HCl solution is used in this reaction? |
| Unit 9 Day 2 | What is the molarity of a solution made by dissolving 25 g of sodium nitrate in 350 ml of solution?  A solution is prepared by mixing 10.00 g of ethanol (C2H5OH) with 100.0 g of water to give a final volume of 110 ml. Calculate the M of ethanol in this solution.  How much 5M hydrochloric acid is needed to make a 500 mL of a 0.5M solution of hydrochloric acid? |
| Unit 9 Day 3 | List 4 characteristics of acids  List 4 characteristics of bases. |
| Unit 9 Day 4 | Nitrogen and oxygen react to form nitrogen monoxide.   1. Write a balanced equation for this reaction. 2. Write the equilibrium expression for this reaction.   Explain any shift that would occur for the following and explain why:   1. more phosphorus pentachloride is added. 2. The temperature is decreased 3. The pressure is increased 4. Chlorine gas is removed |