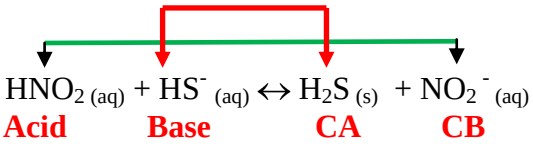
**Unit #10 Practice Blackboard Insert**

1. (**2 pts.**) Identify the acid, base, conjugate acid and conjugate base in the following reaction.




2. (**2 pts.**) Based on the given pH values, indicate whether the substances that are listed below are acidic, basic, or neutral.

| Substance | pH | Acidic/basic/neutral |
|---|---|---|
| Sea water | 8.5 | **Basic** |
| milk | 6.4 | **Acidic** |
| Green tea | 7.90 | **Basic** |
| listerine | 5.45 | **Acidic** |

3. (**2 pts.**) Circle the phrase in parentheses which will make the statement correct.

   A solution with a pH of 5.75 is (more acidic / **less acidic**) than a solution with a pH of 3.25.

   A solution with a pH of 11.50 is (**more basic** / less basic) than a solution with a pH of 9.75.

4. (**4 pts.**) 25.00 mL of 0.280 M Aluminum Hydroxide are required to neutralize 18.50 mL of a Hydrochloric Acid solution. What is the molarity of the Hydrochloric Acid solution?

   **Neutralization Reaction:** $3\ HCl_{(aq)} + Al(OH)_{3\ (aq)} \rightarrow AlCl_{3\ (aq)} + 3\ H_2O_{(l)}$

   $$\frac{0.280\ \text{moles Al(OH)}_3}{1000\ \text{mL}} \times 25.00\ \text{mL} \times \frac{3\ \text{moles HCl}}{1\ \text{mole Al(OH)}_3} \times \frac{1}{0.01850\ \text{L}} = 1.14\ \text{M}$$

**Extra Credit (1 pt):**

Convert name to formula or visa versa … from the list of names in unit 5