HW 1 Review- acids, bases NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

pH, pOH, [H+], [OH-] DATE\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Answer the following questions and complete the following activities to begin preparation for the quiz tomorrow. In addition, you will have to understand your notes to be completely prepared for the quiz.

1. Write the equation for the following acid/base reactions:
   1. Sodium hydroxide plus sulfuric acid
   2. Carbonic acid plus potassium hydroxide
   3. Hydrochloric acid and aluminum hydroxide
2. Write the equation for the acid/base reaction that produces the following salts:
   1. Aluminum chloride
   2. Calcium nitrate
   3. Potassium carbonate
3. If the [H+] = 2.1 x 10-4 M, what is the pH? pOH? [OH-]? Is the solution acidic, basic or neutral?
4. Calculate the pOH if the [OH-] = 5.9 x 10-1 M. What is the pH? [H+]? Is the solution acidic, basic or neutral?
5. Calculate [H+] for a solution with pH 8.25. Calculate the [OH-] for the same solution. Is the solution acidic, basic or neutral?
6. Complete the table below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **pH** | **[H+]** | **[OH-]** | **pOH** | **Acid/Base** |
| 12.7 |  |  |  |  |
|  | 2.2x10-3 M |  |  |  |
| 6.1 |  |  |  |  |
|  |  |  | 2.9 |  |
|  |  | 8.5x10-1 M |  |  |
|  |  |  | 11.3 |  |
| 4.5 |  |  |  |  |