**Dougherty Valley HS AP Chemistry**

**S-76**

**Acid Base Equilibrium**

**Quick Check #1**

**Name: Date: Period: Seat #:**

🞎 **Acid-Base Equilibria**

Consider the following equilibrium: HCN + H2O(*l*) ⮀ H3O+ + CN Ka for HCN = 4.0 x 1010

Identify the two **conjugate acid-base pairs**: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_

Draw a box around the more appropriate representation of this equilibrium:

HCN + H2O(*l*) ⮀ H3O+ + CN HCN + H2O(l) ⮀ H3O+ + CN

Which acid is ***weaker***? \_\_\_\_\_\_\_\_\_\_

🞎 **Conjugate Acids and Bases**

What is the…

conjugate ***base*** of H2O? \_\_\_\_\_\_

conjugate ***acid*** of NH3? \_\_\_\_\_\_

conjugate ***base*** of OH? \_\_\_\_\_\_

conjugate ***acid*** of HCO3? \_\_\_\_\_\_

🞎 **pH Calculations**

Fill in the chart below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **[H3O+]** | **[OH]** | **pH** | **pOH** | **Acidic or Basic** |
| 2.0 x 103 |  |  |  |  |
|  |  | 6.25 |  |  |
|  | 5.6 x 102 |  |  |  |