Dougherty Valley HS AP Chemistry
Acid Base Equilibrium
Quick Check #2

S-77

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

☐ **Equilibrium Favors the Weaker Acid/Weaker Base**

Consider this equation: $HCN + H_2O \leftrightarrows H_3O^+ + CN^-$ $K_a = 4.0 \times 10^{-10}$.

The two bases are: _____ and _____. The weaker base is _____.

☐ **I.C.E. Box Problem**

Calculate the pH of a 0.100 M HCN solution. K_a for HCN = 4.0×10^{-10}

	HCN	$H_2O(l)$	⇆	H_3O^+	CN^-
Initial					
Change					
Equilibrium					

☐ **pH Problems**

Calculate the pH of a 0.100 M HBr solution. _____

Calculate the pH of a 0.100 M KOH solution. _____

Calculate the pH of a 0.100 M NH_3 solution. _____ K_b for $NH_3 = 1.8 \times 10^{-5}$

	NH_3	$H_2O(l)$	⇆	NH_4^+	OH^-
Initial					
Change					
Equilibrium					

☐ **Conjugate Bases**

CN- is the conjugate base of the weak acid, HCN. Finish the equation below:

$CN^- + H_2O \leftrightarrows$