**Name: Period: Seat#:**

**Worksheet #4**

**Directions:** Show all work including the balanced chemical reaction taking place. Box your final answer.

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| 1. What is the pH of a 0.100 M solution of sodium acetate? Kb = 5.65 x 10-10. *8.876*
 |
| 1. What is the pH of a 0.0500 M solution of KCN? Kb = 2.1 x 10-5. *11.01*
 |
| 1. Find the pH of a 0.30 M solution of sodium benzoate, C6H5COONa. The Kb for C6H5COO- (benzoate ion) is 1.55 x 10-10. *8.83*
 |
| 1. Find the pH of a 0.20 M solution of sodium propionate (C2H5COONa), where the Ka of propionic acid = 1.34 x 10¯5. *9.09*
 |
| 1. What is the pH of a 0.0500 M solution of ammonium chloride, NH4Cl. Ka = 5.65 x 10-10. *5.274*
 |
| 1. What is the pH of a 0.100 M solution of methyl ammonium chloride (CH3NH3Cl). Ka of the methyl ammonium ion (CH3NH3+ = 2.70 x 10-11. *5.784*
 |
| 1. Given the pKa for ammonium ion is 9.26, what is the pH of 1.00 L of solution which contains 5.45 g of NH4Cl (the molar mass of NH4Cl = 54.5 g mol-1. *Yes I know this molar mass is off, but I don’t want to redo the whole answer key! Ha!*) *5.13*
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