- Salts that yield basic solns
  - Salt of a weak acid & a strong base yields a basic soln in H_2O because the anion acts as a weak base & the cation does not react
  - ex: CH_3COONa is basic

$$CH_3COONa(s) + H_2O(l) \rightarrow Na^+(aq) + CH_3COO^-(aq)$$
$$CH_3COO^-(aq) + H_2O(l) \rightleftharpoons CH_3COOH(aq) + OH^-(aq)$$

- This is why, when you see a problem that has you working with, say, NH_4Cl or CH_3COONa you can write the equilibrium equation as

$NH_4^+ + \cdots$ or

$CH_3COO^- + \cdots$

immediately w/o worrying about dealing w/ the Na^+ or Cl^- ions

Problems:

Acidic, basic, or neutral

1. $KClO_4$
2. C_6H_5COONa
3. $CrCl_3$
4. $KClO_2$
5. $CH_3NH_3NO_3$
6. CsI

Solns:

1. Neutral → K^+ & ClO_4^- are ions from strong base & acid
2. Basic → $C_6H_5COONa \rightleftharpoons C_6H_5COO^- + H_2O \rightleftharpoons C_6H_5COOH + OH^-$
3. Acidic → Cr^{3+} is small ion w/ high charge => $Cr(H_2O)_6^{3+} + H_2O \cdots$
4. Basic → $ClO_2^- + H_2O \rightleftharpoons HClO_2 + OH^-$, K^+ from strong base
5. Acidic → $CH_3NH_3^+ + H_2O \rightleftharpoons CH_3NH_2 + H_3O^+$, NO_3^- from strong acid
6. Neutral → Cs^+ from strong base, I^- from strong acid