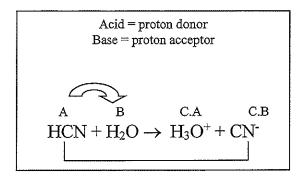
How to reaction produce H₃O⁺ and OH⁻ ions?

- What are the ways in which a reaction can produce H+ or OH-
 - Student will be able to characterize the different ways reactions can make H+ and OH- are produced.
 - Students will be able to write hydrolysis reactions for acids and bases.



1. How many ways can an acid produce Hydronium Ions? Explain.

HX + HzU -> H30+ +x - Hydrolysis-(only way)

2. How many different ways can base produce hydroxide ions? Explain.

X+H2O-> HX+OH- /Solubility

Identify the Bronsted acid-base and the conjugates in each example

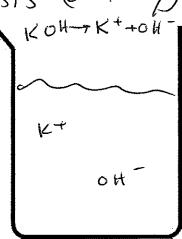
- 3. HCO3 + H2O → H2CO3 + OH But 10 1C. Aid Conj Boss
- 4. HNO2+H2O -> NO2-+H3O+
- 5. HCO₃ + H₂O → CO₃² + H₃O⁺ a cid Bush C. a cid
- 6. NH3 + H2O -> OH + NH4+ Box ocid (Box C. Acid

Write the Hydorlysis equations for the following acids and bases

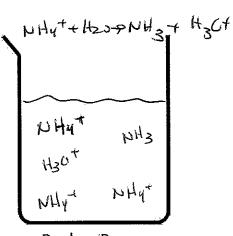
7.
$$HNO_3 + H_2O \rightarrow NO_3 + H_3O^+$$

ACID

- 8. $HSO_4^- + H_2O \rightarrow H_3O^+ + SO_4^{-2}$ ACID
- 9. NH3 +Hzo NHy+ + OH-
- 10. NH+++1/20 → N H3+ H30+
 acid
- 11. Show Beaker A filled with water after having some solid KOH dissolved
- 12. Show Beaker B filled with NH₄ + dissolving in water and a small fraction undergoing hydrolysis. (add an anion where appropriate.)



Beaker A



Beaker B

Reputant favored