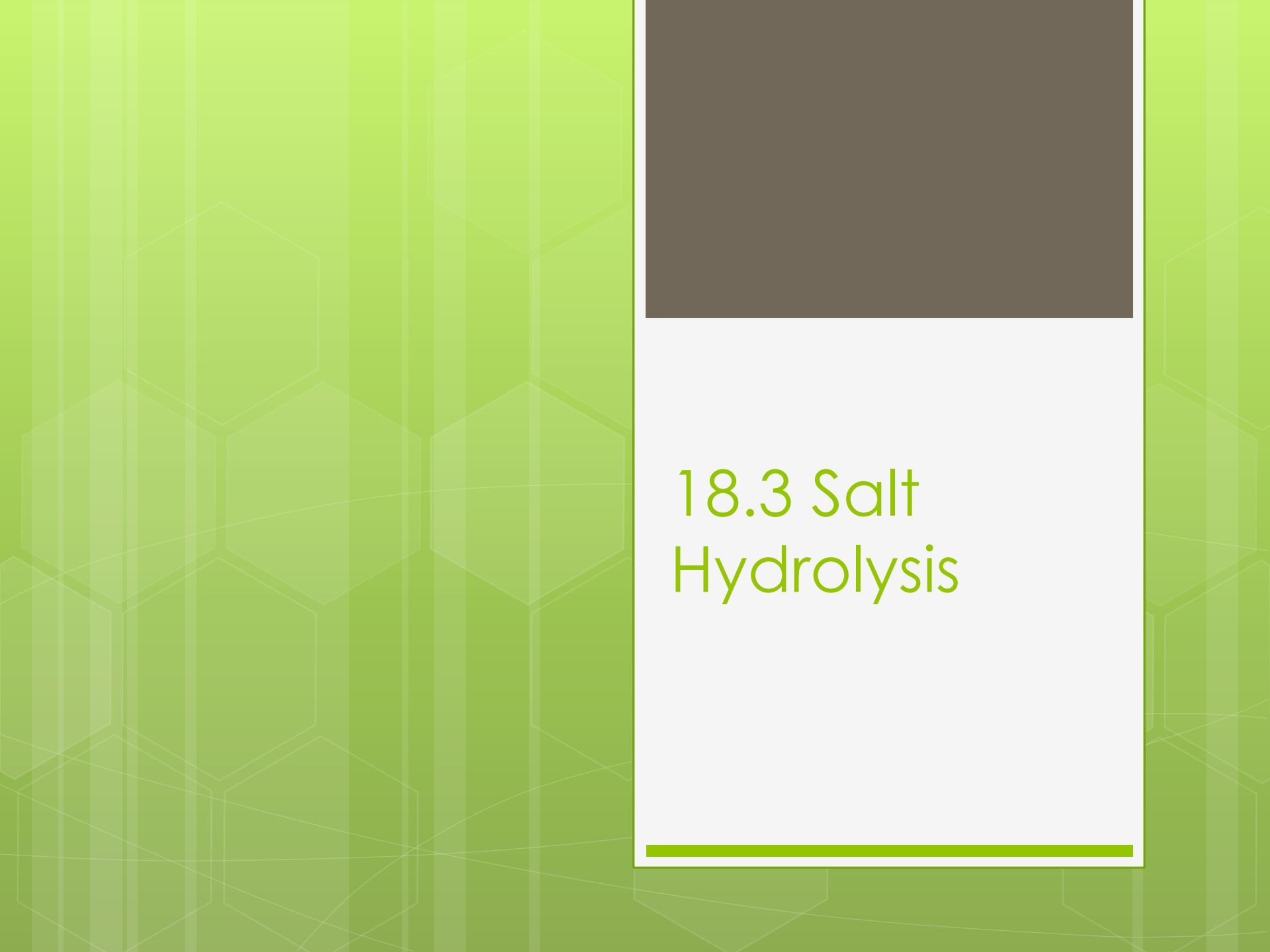


Warm-up 4/30

1. Which compounds can be mixed together as solutions of equal volume and concentration to form a buffer solution?

- A. Nitric acid and potassium hydroxide
- B. Nitric acid and potassium nitrate
- C. Propanoic acid and potassium hydroxide
- D. Propanoic acid and potassium propanoate

2. Determine the pH of the solution resulting when 100 cm³ of 0.50 mol dm⁻³ HCl(aq) is mixed with 200 cm³ of 0.10 mol dm⁻³ NaOH(aq).



18.3 Salt Hydrolysis

What is a salt?

- Ionic compound comprised of cations from a base (i.e. Na^+ from NaOH) and anions from an acid (i.e. Cl^- from HCl).
 - These completely dissociate in aqueous solutions.
- Can have acid/base properties

18.3.1

- Deduce whether salts form acid, alkaline or neutral aqueous solutions.

Sample Problem # 1

- For each of the following salts, determine relative pH of aqueous solution:



*Determine where each cation and ion came from → the pH goes toward the stronger component

Sample Problem #2

- Analyze $\text{Ca}(\text{NO}_3)_2$ in an aqueous solution.

Sample Problem #3

- Analyze HCO_2Na in an aqueous solution.

Sample Problem #4

- Explain why Al^{3+} acts as an acid in water, but Mg^{2+} and Na^{+} do not.

- Be^{2+} , Fe^{3+}