CONCEPT: ACIDS INTRODUCTION

- Recall, acids are covalent compounds that have a **hydrogen ion** connected to a nonmetal _____ or a polyatomic ion.
  - □ Generally, the hydrogen ion is at the _____ of the compound except for **acetic acid** and _____ **amines**.
    - Recall, amines are covalent compounds containing ____ & ____ or ____, ____ & ____.

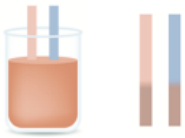
Common Acids						
HCl	H_2S	HCN	H_3PO_4	CH_3COOH	NH_4^+	$CH_3NH_3^+$

EXAMPLE: Which of the following does not represent the possible structure of an acid?

a) HBr b) HIO_3 c) CH_4 d) HOCl

Characteristics of Acids

- Acids belong to a distinct class of covalent compounds because of their characteristics in _____ solutions.

Characteristics of Acids			
Dissolution	Taste	Reactivity	Litmus Paper
Ionize to **hydrogen/hydronium ions** (_____ or _____) and an anion when dissolved in a solvent.	Presence of H^+ or H_3O^+ ions gives acids a _____ taste.	React with metals to form ___ (g)	A type of paper that changes colors in response to an acid or base.
HCl (aq) ⟶ _____ + _____		HCl (aq) + Mg (s) ⟶ ____ + ____	
H_2SO_4 (aq) ⟶ _____ + _____			**Acid:** Blue litmus paper turns _____.

EXAMPLE: H_2SO_4 is added to large container of water. How is the solution different from the original water?

a) The solution has fewer hydrogen ions.

b) The solution turns blue litmus paper red.

c) The solution turns red litmus paper blue.

d) The solution has more water molecules.

PRACTICE: Which of the following is true in regards to HNO_3?

a) It has a bitter taste.

b) It produces H^+ ions in water.

c) It exists as only molecules when dissolved in H_2O.

d) It decreases the acidity of the solution.