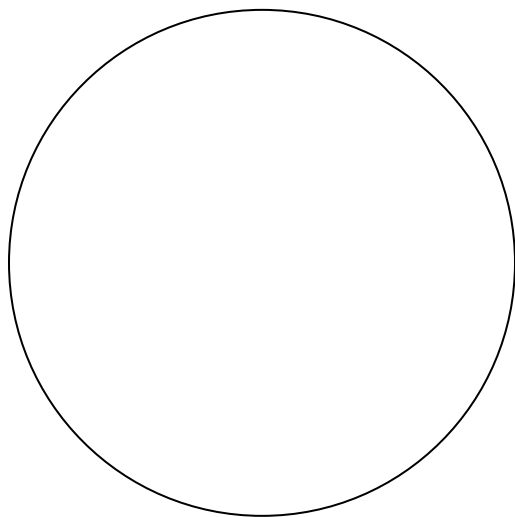


Acids & Bases Worksheet: Conceptual Understanding of Weak & Strong Acids

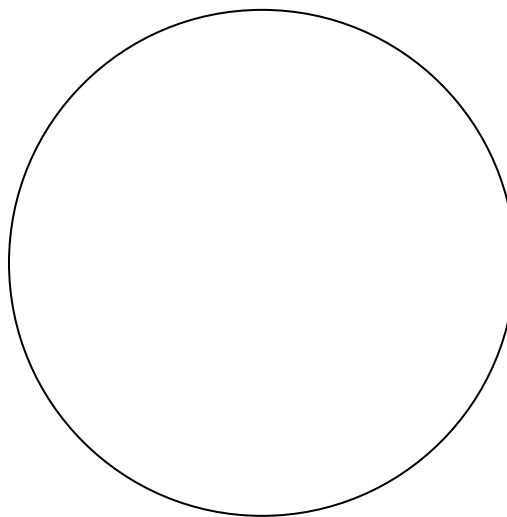
Soluble Ionic Compounds:

When ionic compounds dissolve in water, they break apart into their respective ions. “100% splitsville”

Draw 4 of each “molecule.”



0.50 M KBr

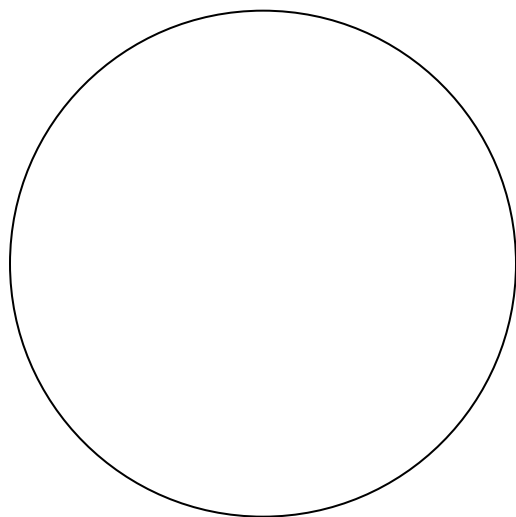


0.50 M CaCl₂

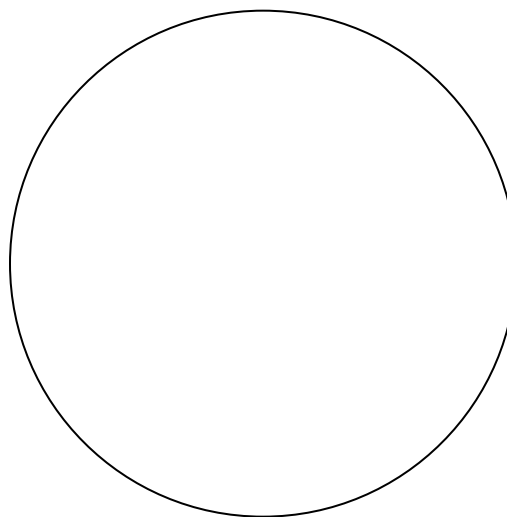
Insoluble Ionic Compounds:

These ions are trapped together. “They are locked in a box.”

Draw 4 of each “molecule.”



MgS (insoluble)

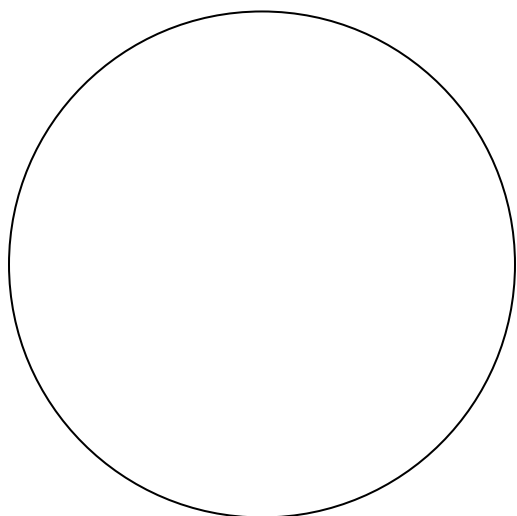


CaF₂ (insoluble)

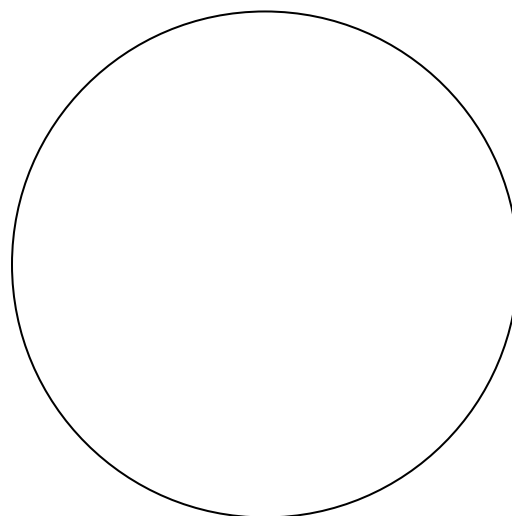
Strong Acids & Strong Bases:

These are soluble in water, and they always break apart into their respective ions. "100% splitsville"

Draw 4 of each "molecule."



0.02 M HBr (strong acid)

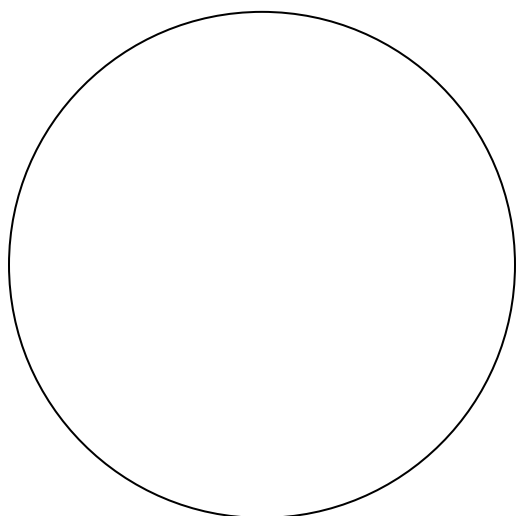


0.55 M KOH (strong base)

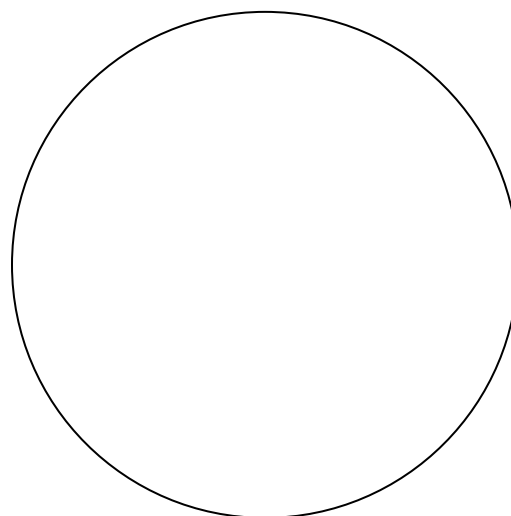
Weak Acids:

These are soluble in water, but over 80% remain "stuck together." The hydrogens rarely break free from the rest of the molecule.

Draw 6 of each "molecule."



HCN solution (weak acid)



HBrO solution (weak acid)

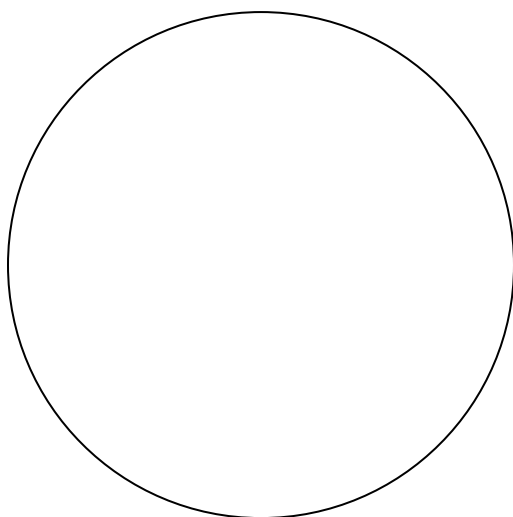
Acids & Bases Worksheet: Conceptual Understanding of Weak & Strong Acids

1. What is the molarity of the H_3O^+ and F^- ions in a 0.05 M solution of HF? The K_a for HF = 6.8×10^{-4}

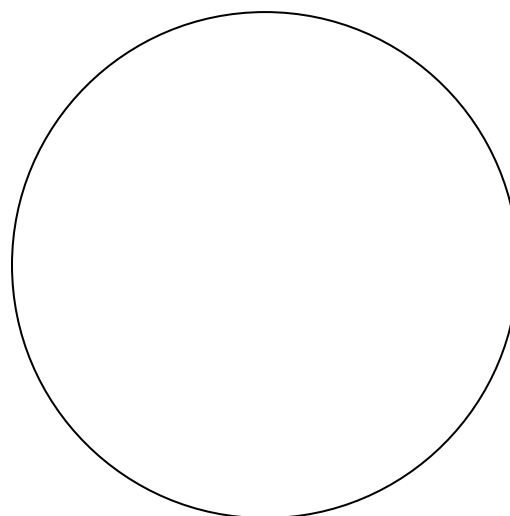
2. Based on your answer to question #1, what percentage of the original 0.05 M HF solution is ionized?

3. Imagine that you have the ability to see aqueous solutions at the molecular level.

Draw 10 “molecules” of each substance.



0.05 M HF solution



0.05 M HCl (strong acid)