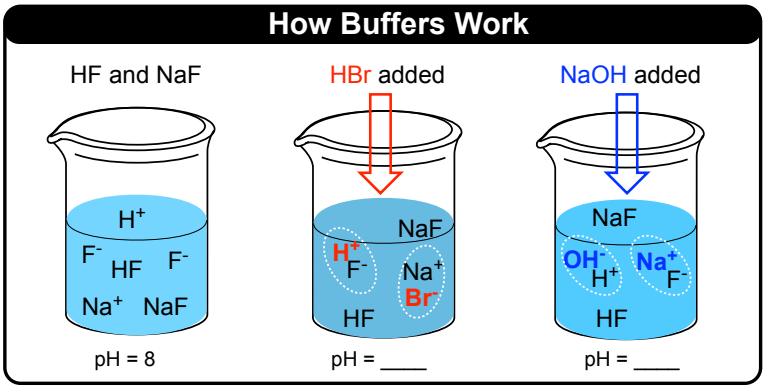
CONCEPT: INTRO TO BUFFERS

- **Acid-Base Buffers** are solutions which _____ drastic changes in pH by _____ additional acid or base.
  - □ A *Buffer* contains both _____ and _____, which neutralizes added ____ and ____ ions, respectively.



Buffer Creation

- There are ____ ways to create a Buffer:

Buffer Creation	
1. Weak acid or base + _____	0.40 M NH_3 and 0.40 M NH_4^+ - ideal buffer: [weak] [conj.]
2. Strong Acid + Weak Base - weak base needs to be ___ [ ]	0.20 M HCl and ___ M CH_3NH_2
3. Strong Base + Weak Acid - weak acid needs to be ___ [ ]	1.3 M KNH_2 and ___ M H_2SO_3

EXAMPLE: Select ALL pair(s) that could form a buffer solution.

a) CH_3CO_2H and HF b) HNO_3 and NH_3 c) HCl and NaCl d) KOH and HCN e) NaBr and NaOH

PRACTICE: Which pairs of compounds are capable of making a buffer? Select all that apply.

a) 1.3 M LiOH and 1.7 M HCOOH

b) 0.784 M NH_4^+ and 0.323 M $HClO_4$

c) 0.35 M CH_3CO_2H and 0.34 M $CH_3CO_2^-$

d) 0.80 HNO_3 and 0.15 MgO