* + - Strong Acid $→$ Weaker Conjugate Base
		 *(not much effect on pH)*
		- Weak Acid$ →$ Stronger Conjugate Base
		 *(potential effect on pH)*
		- Strong Base $→$ Weaker Conjugate Acid
		 *(not much effect on pH)*
		- Weak Base $→$ Stronger Conjugate Acid

 *(potential effect on pH)*

* + - Ion from a Strong Acid $→$ Neutral
		(*is a weak conj. base*)
		- Ion from a Weak Acid $→$ Basic
		(*is a strong conj. base*)
		- Ion from a Strong Base $→$ Neutral
		(*is a weak conj. acid*)
		- Ion from a Weak Base $→$ Acidic
		(*is a strong conj. acid*)
		- Cation is a charged metal ion, and anion is from a strong acid $→$ Acidic metal hydrate + Neutral anion - salt is acidic

* + - Neutral + Acidic = Acidic
		- Neutral + Basic = Basic
		- Neutral + Neutral = Neutral
		- Acidic + Basic = ?
		*Use Ka and Kb to determine* Ka > Kb 🡪 Acidic

Ka < Kb 🡪 Basic
Ka = Kb 🡪 Neutral

* + - Kw = Ka x Kb Kw = 1.0 x 10-14 (*if at 25 °C, may be different if not at 25°C*)

 If you are looking for the Ka of an acidic conjugate ion, use Kw and the Kb of the base it came from

$$K\_{acidic conj. ion}= \frac{K\_{w}}{K\_{b (of the base that the ion came from)}}$$

If you are looking for the Kb of a basic conjugate ion, use Kw and the Ka of the acid it came from

$$K\_{basic conj. ion}= \frac{K\_{w}}{K\_{a (of the acid that the ion came from)}}$$

**R-39**





