

- Conjugate acid/base pairs exist in aqueous solutions of weak acids. What is the difference between a weak acid and its conjugate base?

An acid and its conjugate base differ by a proton (H^+). The conjugate base of an acid has *one less proton*.

How are the strength of a weak acid and its conjugate base related?

The weaker the acid, the stronger the conjugate base: $K_a \times K_b = 10^{-14.00}$

From the following list select 2 conjugate acid/base pairs. Identify acid and base in both pairs.



| acid | base |
|-------------|--------------|
| H_3PO_4 | $H_2PO_4^-$ |
| H_2CO_3 | HCO_3^- |
| $H_2PO_4^-$ | HPO_4^{2-} |