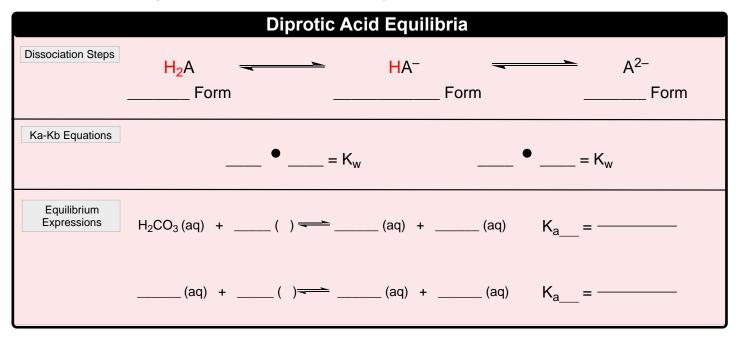
CONCEPT: DIPROTIC ACIDS AND BASES

Acid Dissociation Constant

- Diprotic Acids (______) can donate ____ acidic hydrogens and as a result possess two K_a values.
 - □ In terms of Ka magnitude: _____> ____.
 - K_{a1} deals with donating the ____ acidic proton (H+).
 - K_{a2} deals with donating the ____ acidic proton (H+).
 - □ The relationships between the Ka values and their respective Kb values are shown as:



EXAMPLE: Carbonic acid, H_2CO_3 , represents a weak diprotic acid with $K_{a1} = 4.3 \times 10^{-7}$ and $K_{a2} = 5.6 \times 10^{-11}$. Determine the base dissociation constant associated with the carbonate ion, CO_3^{2-} .

PRACTICE: Determine the equilibrium expression for the K_{a2} of hydrosulfuric acid, H₂S?