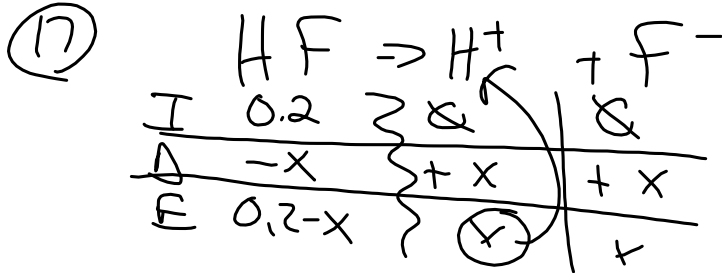


⑭ $\Delta G = \Delta H - T\Delta S$

5.7% Ionized



$pH = -\log(H^+)$
 $pH = 1.936$

$K_a = \frac{x^2}{0.2 - x} = 6.7 \times 10^{-4}$

$x = 1.157 \times 10^{-2}$

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⑱ $[OH^-] = 1.17 \times 10^{-9}$

$pOH = -\log(OH^-) = 8.93$

$pH + pOH = 14$ at 25°C

5.07 < 7
 ACID

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$$\textcircled{19} \quad \Delta G = -RT \ln K$$
$$\Delta G = - \left(\underset{\text{kJ}}{8.314 \times 10^{-3}} \right) (298) \ln (5 \times 10^8)$$
$$= -49.63 \text{ kJ/mol}_r$$

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May 13-9:17 AM