

(16.39) $[H^+] = 7.5 \times 10^{-3}$ $2.12 \Rightarrow pH = -\log(H^+)$
 $11.88 \Rightarrow pOH$
 (OH^-)

$pOH = -\log(OH^-)$ } $pH + pOH = 14$
 $11.88 = -\log(OH^-)$ }
 $-11.88 = \log(OH^-)$
 $[OH^-] = 1.32 \times 10^{-12}$

Feb 22-7:53 AM

K_c (g)
 K_p (g) No (s) or (l)
 K_w (H₂O)
 K_a WA P1115
 K_b WB P1116

Feb 22-8:43 AM

(16.60) HClO $K_a = 3 \times 10^{-8}$ 0.00000003

> 3 decims
place!
 $\text{HClO} + \text{H}_2\text{O} \rightleftharpoons \text{H}_3\text{O}^+ + \text{ClO}^-$

	HClO	H^+	ClO^-
Δ	$-x$	$+x$	$+x$
E	$0.009 - x$	x	x

$K_a = \frac{[\text{H}^+][\text{ClO}^-]}{[\text{HClO}]} = \frac{(x)(x)}{0.009 - x} = 3 \times 10^{-8}$

$x = 1.6 \times 10^{-5} \text{ M} = [\text{H}^+] = [\text{ClO}^-]$

$[\text{HClO}] = 0.009 - 1.6 \times 10^{-5} = 8.98 \times 10^{-3} \text{ M}$

% ionization

$\frac{\text{Part}}{\text{Whole}} \times 100$

$\frac{1.6 \times 10^{-5}}{0.009} \times 100 = 0.18\%$ *ionized*

< 5% ionized

Feb 22-8:46 AM

Generic ^{Weak} Acid

$\text{HA} \rightleftharpoons \text{H}^+ + \text{A}^-$

$K_a = \frac{[\text{H}^+][\text{A}^-]}{[\text{HA}]}$

$[\text{H}^+] = \frac{K_a [\text{HA}]}{[\text{A}^-]}$

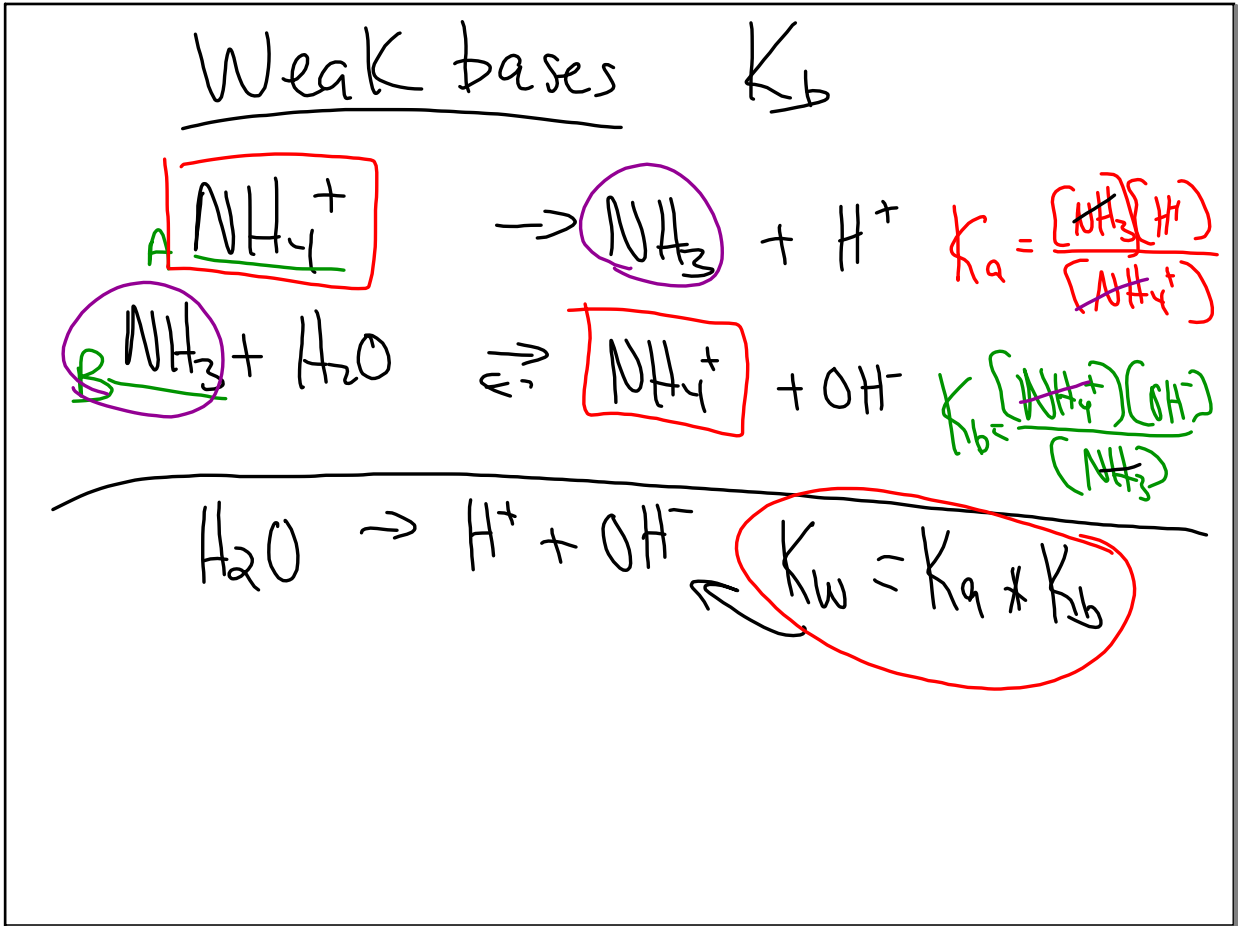
$-\log(\text{H}^+) = -\log \left(\frac{K_a [\text{HA}]}{[\text{A}^-]} \right)$

$\text{pH} = -\log K_a + -\log \frac{[\text{HA}]}{[\text{A}^-]}$

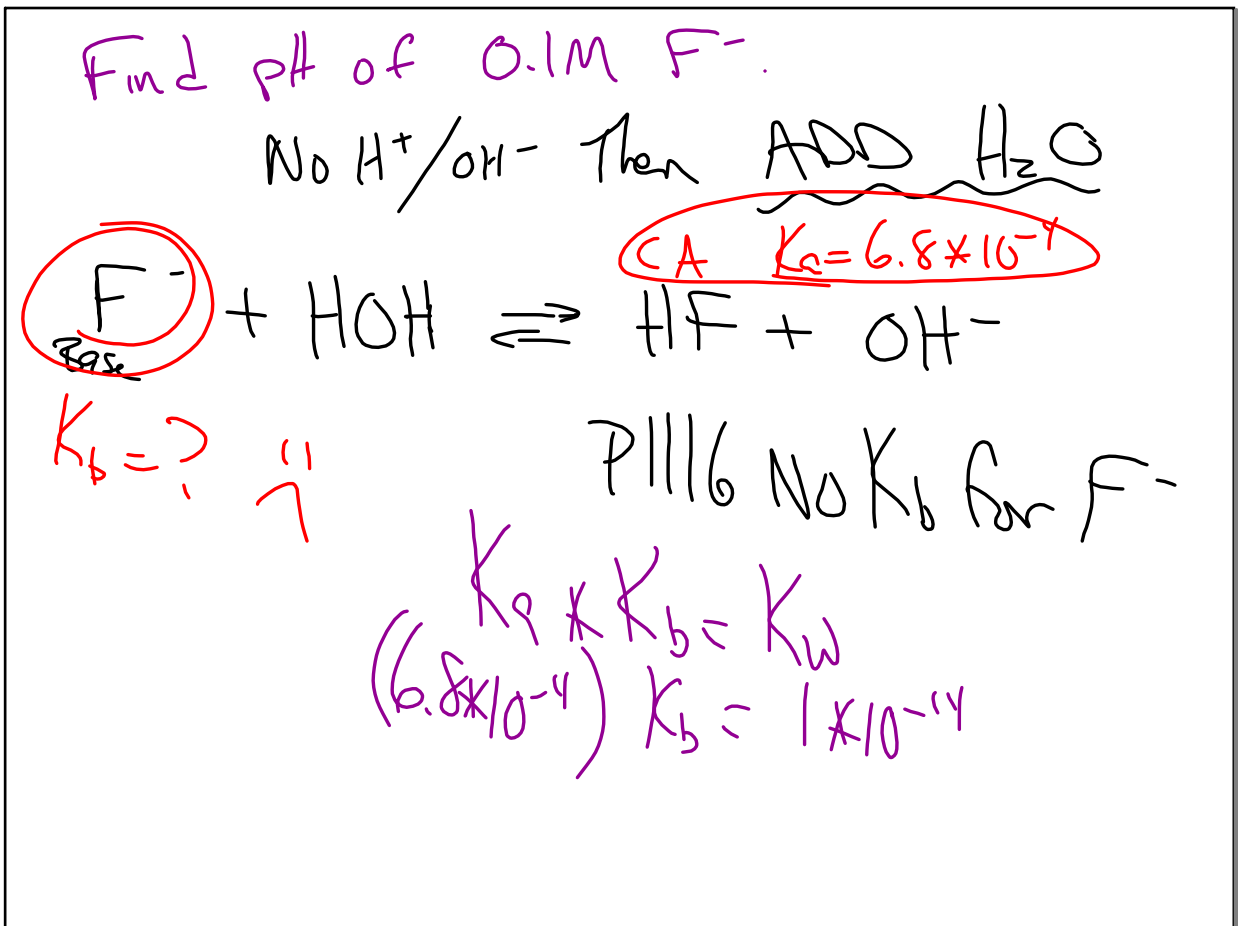
Henderson Hasselbalch eqn

$\text{pH} = \text{p}K_a + \log \frac{[\text{A}^-]}{[\text{HA}]}$ *Base / Acid*

Feb 22-9:03 AM



Feb 22-9:07 AM



Feb 22-9:11 AM

16/76 BOH
76 + 84

Feb 22-9:16 AM