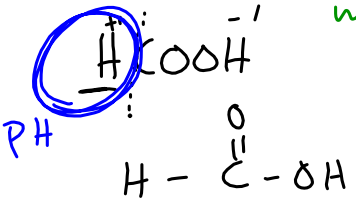
17.169 0.15M NaFor, 0.2M HFor

HCOONa

NaCOOH



Soluble SALT BASIC

What do I have?

WA

Ka low pH ↑

RICE Baby!

pH = ?

Mar 1-7:39 AM

What is original pH?

pH 2.22 0.2M HFor

$HFor \rightleftharpoons H^+ + For^-$

	HFor	H^+	For^-
I	0.2	0	0
Δ	−x	+x	+x
E	0.2−x	x	x

x Part

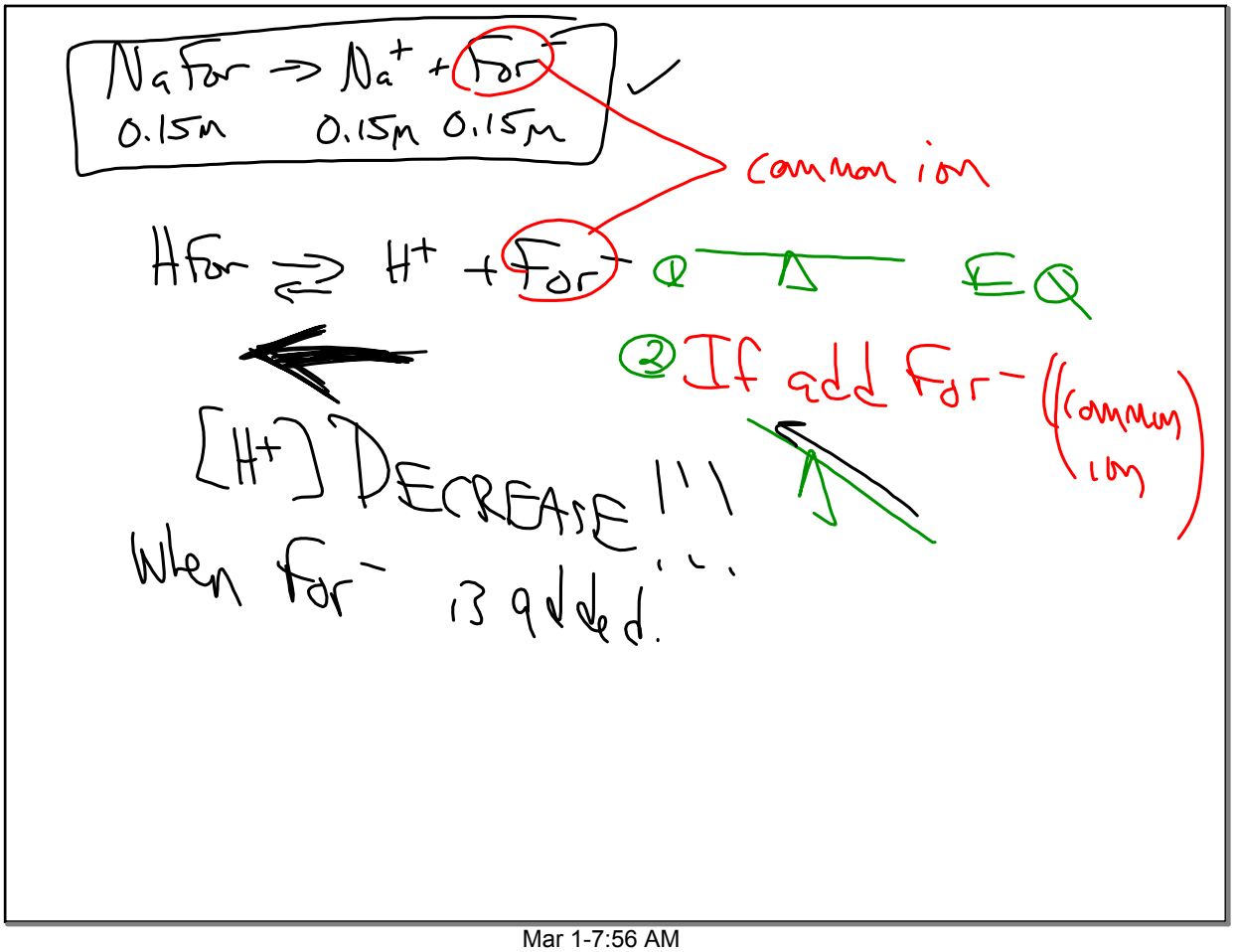
% ionization $\frac{6\times10^{-3}}{0.2}\times100 = 3\%$

$K_a = \frac{x^2}{0.2-x} = 1.8\times10^{-4}$

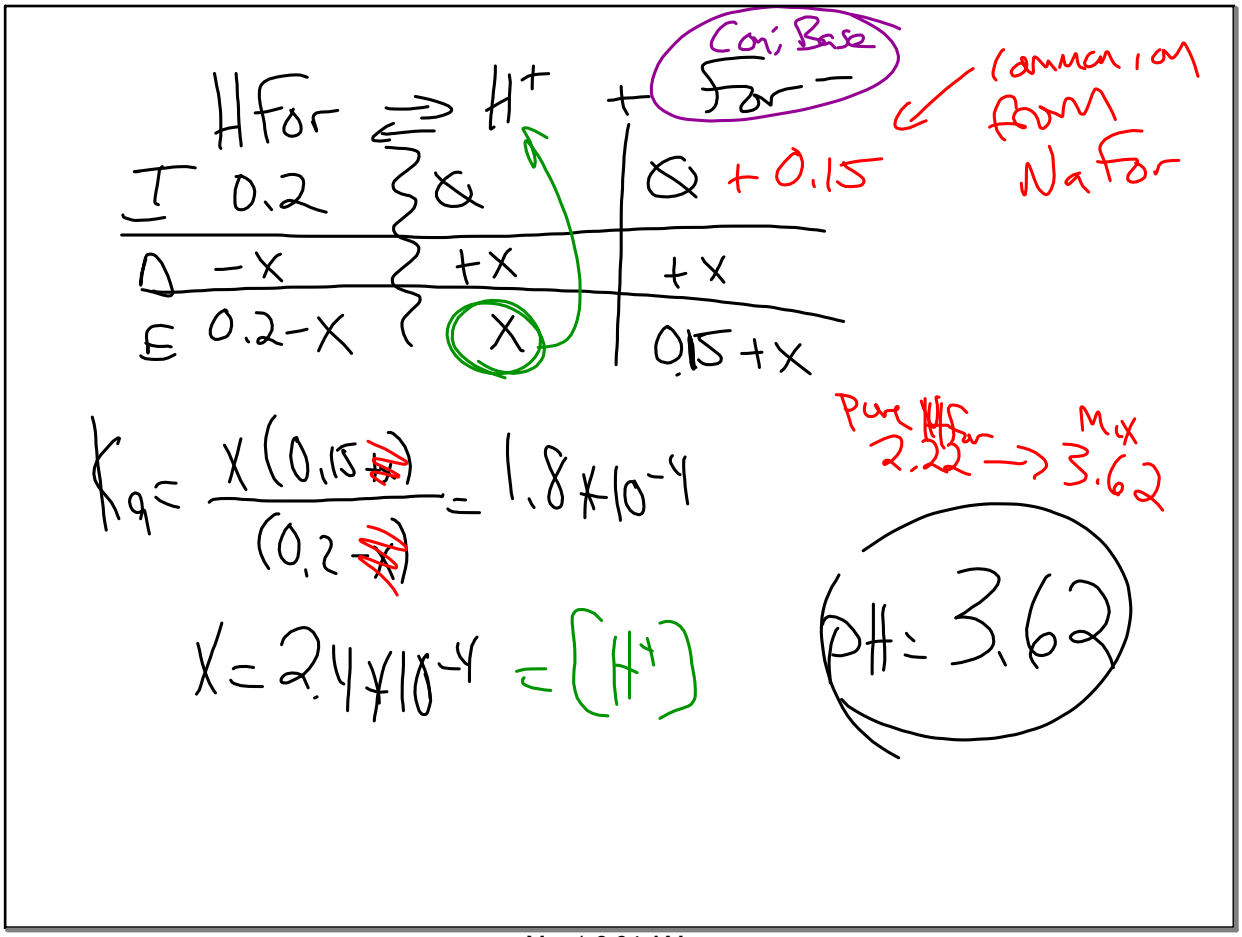
$x = 6\times10^{-3} = [H^+]$

pH = 2.22 Pure 0.2M HFor

Mar 1-7:57 AM



Mar 1-7:56 AM



Mar 1-8:04 AM

Buffer Add salt of an acid to a Weak Acid. (Salt of Base and WB (K_b))

↳ Prevents Marked changes in pH. (Large/Great/"HUGE")

↳ Absorbs excess H^+ / OH^- ions.

Mar 1-8:12 AM

Henderson-Hasselbach EQN for Buffers

Find pH for Buffers

$$pH = pKa + \log \frac{[Base]}{[Acid]}$$

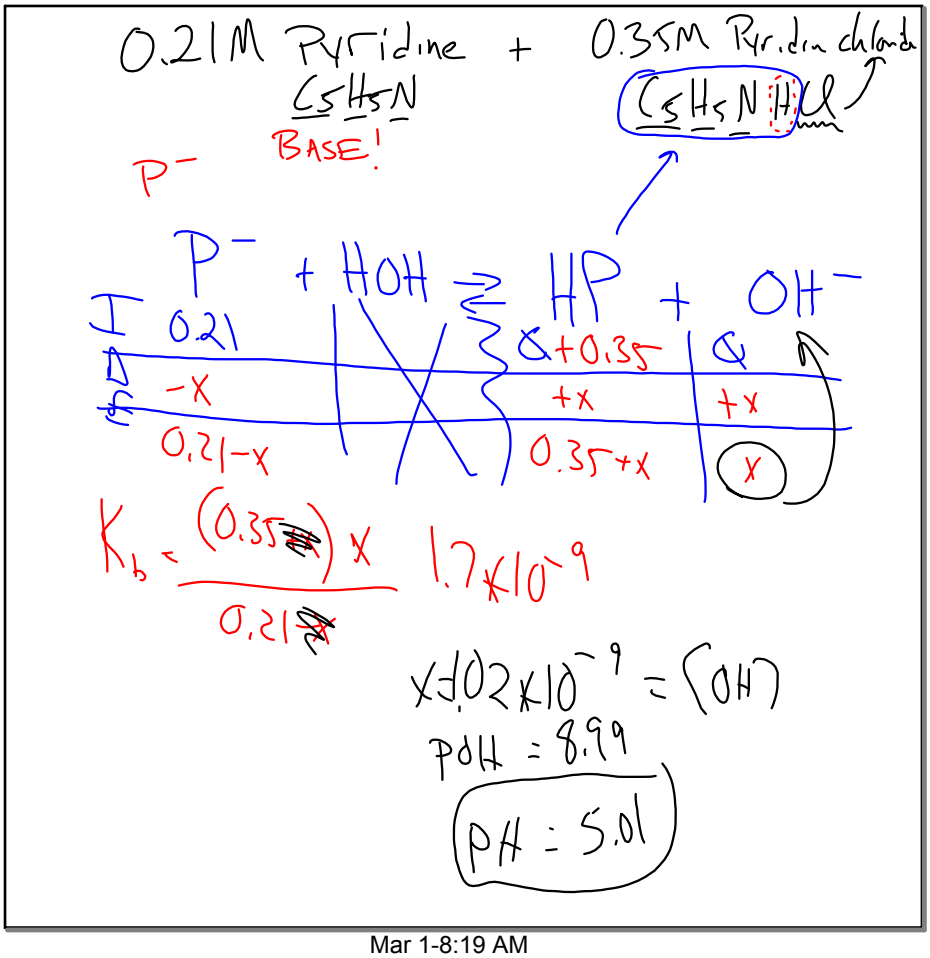
($-\log[H^+]$, $-\log(Ka)$)

HF for WA (0.2) + NaF for Salt of WA (0.15)

$pH = -\log(1.8\times10^{-4}) + \log \frac{0.15}{0.2}$

$pH = 3.62$

Mar 1-8:14 AM



Mar 1-8:19 AM

17 / #18

Mar 1-8:27 AM