

2 Trials 1M HCl + 1M NaOH FRIDAY

MANDAM SYR. 0.1M
IM SYR.

1M HCl OR 1M NaOH + 19ml D₂O ⇒ [Beaker] 20ml Total

Why Same.

1 Trial Titrate with 0.1M HCl OR NaOH Syringe

Mar 20-7:38 AM

② 0.05M Ammonia $pH = 10.72$ $[OH^-] = ?$

WB

$pOH = 3.28$

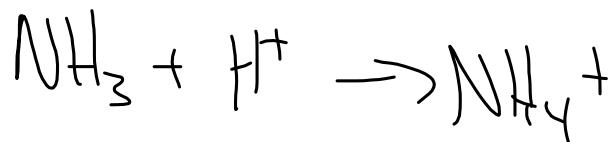
$pOH = -\log(OH)$

$-3.28 = \log(OH^-)$

$[OH^-] = 5.25 \times 10^{-4}$

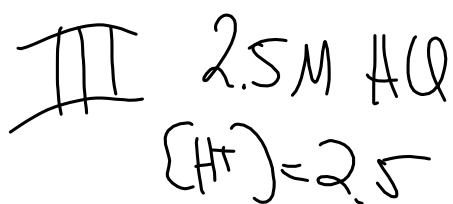
Mar 20-8:45 AM

③ Greatest $[\text{OH}^-]$ Best Base
 \uparrow pH



Mar 20-8:49 AM

⑤ I Acid pH < 7 FALSE



$$[\text{OH}^-] = 4 \times 10^{-15} \text{ M}$$

$$[\text{H}^+][\text{OH}^-] = 1 \times 10^{-14}$$

2.5

Mar 20-8:51 AM

⑦ $HA \rightleftharpoons H^+ + A^-$

I	0.01	}	0	0
D	-x	}	+x	+x
E	0.01-x	}	x	x

$\frac{x^2}{0.01-x} = K_a$

pH = 5.24
 $pH = -\log[H^+]$
 $-5.25 = \log[H^+]$
 $[H^+] = 5.62 \times 10^{-6}$

Mar 20-8:55 AM

⑧ pH

SM KOH

(SR) $[OH^-] = SM$

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

$pH + pOH = 14$

Mar 20-8:57 AM

⑩ ^{BASE} $\text{NH}_3 + \text{H}_2\text{O} \rightleftharpoons \text{NH}_4^+ + \text{OH}^-$

I	0.1		0	0
Δ	-x		+x	+x
E	0.1-x		x	x

$K_b = \frac{y^2}{0.1} = 1.8 \times 10^{-5}$

$x = 1.34 \times 10^{-3} = [\text{OH}^-]$

Mar 20-8:58 AM

⑪ pH 0.15M KF $K_a = 7 \times 10^{-4}$

~~KF~~ + H₂O ⇌ ~~KOH~~ + HF

I	0.15		0	0
Δ	-x		+x	+x
E	0.15-x		x	x

$K_b = \frac{x^2}{0.15} = 1.43 \times 10^{-4}$

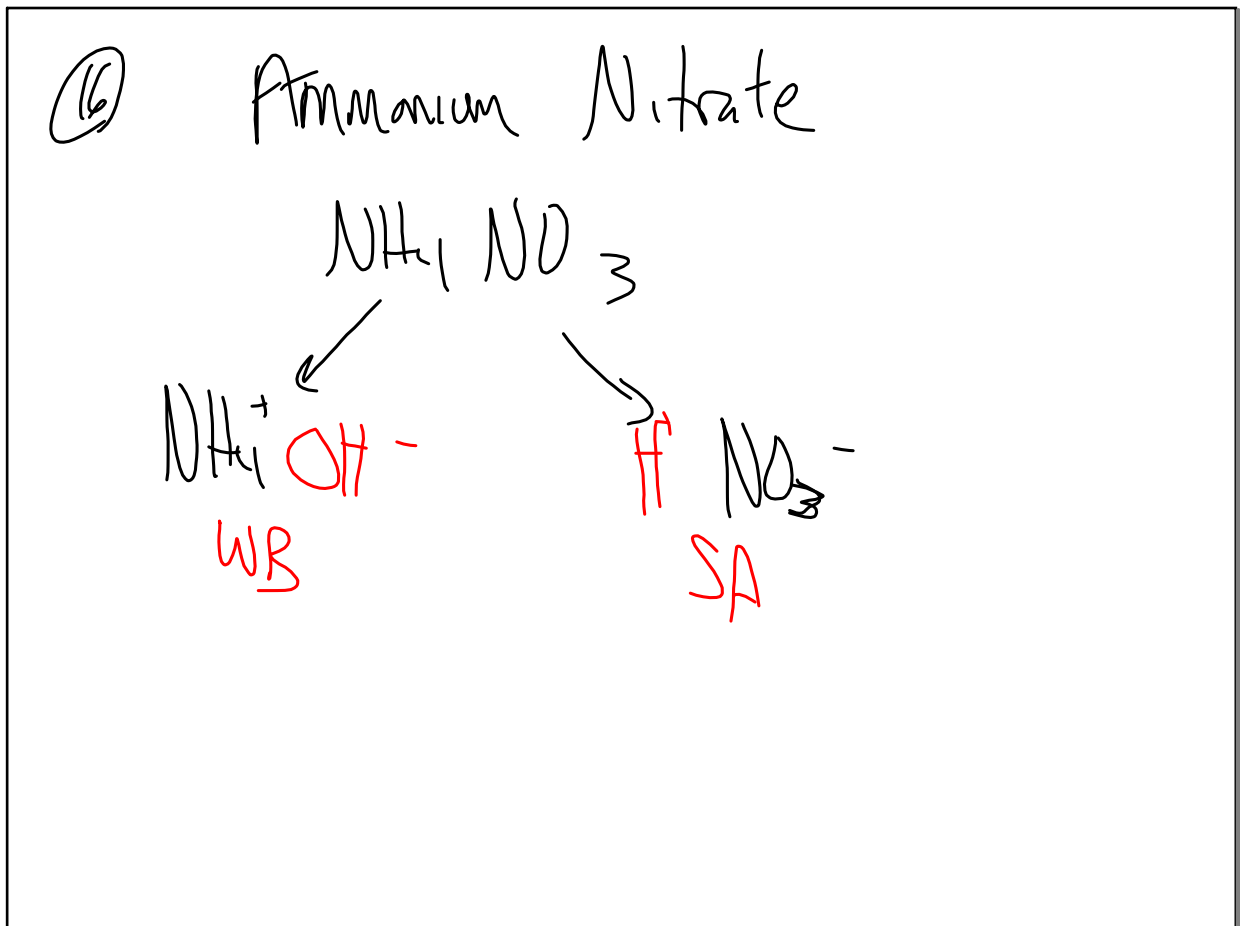
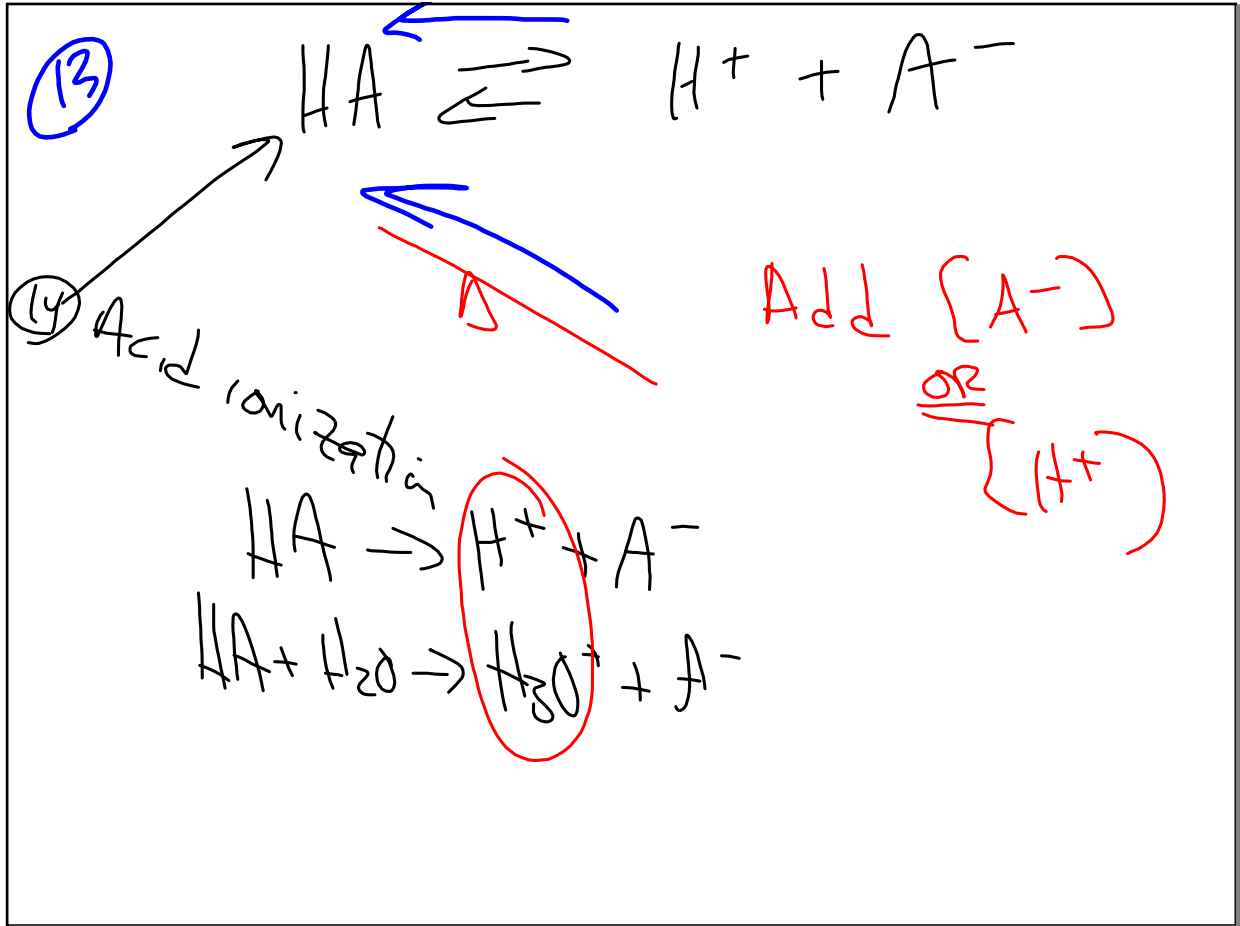
$x = 1.46 \times 10^{-5} = [\text{OH}^-]$

pOH = 5.83

pH = 8.17

$K_a \times K_b = K_w$

Mar 20-9:01 AM



(19)



Moles acid = Moles Base

n M l = n M l

$$2(M)(50) = 1(0.375)(62.5)$$

Mar 20-9:13 AM