

Mar 13-7:36 AM

(17) ~~NaOH~~ + HF → ~~NaF~~ + HOH
 50ml 0.1M 30ml 0.25M
 $K_a = 6.8 \times 10^{-4}$

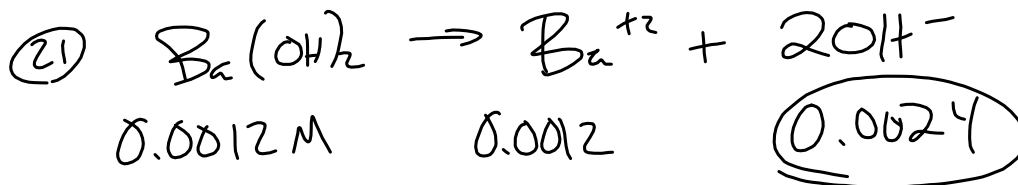
Net Ionic

	OH^-	HF	F^-	HOH
I	0.005	0.0075		
Δ	-0.005	-0.005	+0.005	
E		0.0025	0.005	

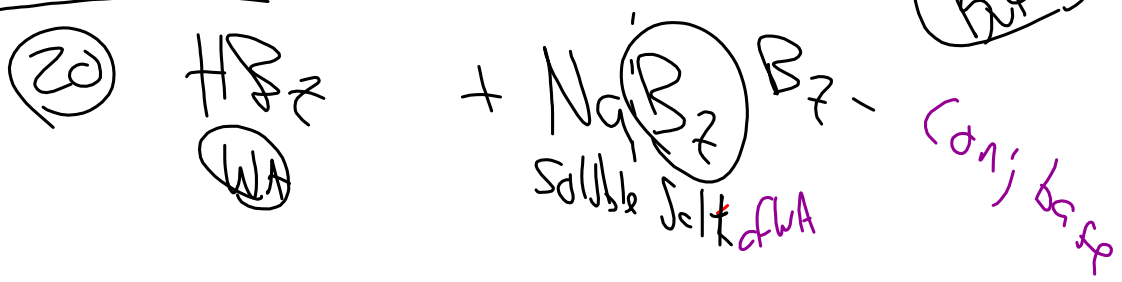
0.08 M Reactant (80ml)
 0.03125 M HF
 0.0625 M F^-

$pH = pK_a + \log \frac{base}{acid}$
 $= -\log(6.8 \times 10^{-4}) + \log \frac{0.0625}{0.03125}$
 $pH = 3.4685$

Mar 13-7:50 AM



$\textcircled{\text{SB}} \Rightarrow$ Dissociates $\sim 100\%$
 $\text{Gr} \approx \text{Gr} \text{Ba} \text{Sr}$



Mar 13-8:01 AM



$$K_{sp} = [\text{Pb}^{+2}] [\text{I}^-]^2$$

$(x)(2x)^2$

Mar 13-8:08 AM

(FC2)

	HNic	\rightarrow	H^+	$+$	Nic^-
I	0.057		x		x
A	-x		+x		+x
E	0.057-x		x		x

$K_a = \frac{x^2}{0.057-x} = 1.41 \times 10^{-5}$

$x = 8.9 \times 10^{-4} \text{ (H}^+)$

$\frac{2 \times 10^{-2} \text{ moles}}{0.35 \text{ L}} = 0.057 \text{ M}$

$\text{pH} = 3.05$

Mar 13-8:10 AM

(1) HOAc 25.5ml 0.257M \leftarrow NaOH 37.5ml 0.175M

$6.56 \times 10^{-3} \text{ moles} \leftarrow 6.56 \times 10^{-3} \text{ moles}$

EQUIV PT. = moles

(2) $\text{HOAc} + \text{OH}^- \rightarrow \text{OAc}^- + \text{H}_2\text{O}$

I	6.56×10^{-3}	6.56×10^{-3}		
A	-	-		
E			6.56×10^{-3}	

(3) pH of $6.56 \times 10^{-3} \text{ mole OAc}^-$ in $0.063 \text{ L} = 0.104 \text{ M OAc}^-$

$\text{OAc}^- + \text{H}_2\text{O} \rightarrow \text{HOAc} + \text{OH}^-$

I	0.104			
A	-x		+x	+x
E	0.104-x		x	x

$K_b = \frac{x^2}{0.104-x} = 5.56 \times 10^{-10}$

$x = 7.6 \times 10^{-6} = [\text{OH}^-]$

$\text{pOH} = 5.12$

$\text{pH} = 8.88$

Mar 13-8:21 AM