

16-1 (14) 0.025M  $\text{CH}_2\text{COOH}$   $[\text{H}^+] = ?$

$\text{CH}_2\text{COOH} \rightleftharpoons \text{H}^+ + \text{CH}_2\text{COO}^-$  (17)

I	0.025	0	0
A	-x	+x	+x
E	0.025-x	x	x

$K_a = \frac{x^2}{0.025-x} = 1.4 \times 10^{-3}$

$\leftarrow$  P 1115  $K_a$

Mar 4-7:39 AM

16-1 (8)  $\text{HClO} \rightleftharpoons \text{H}^+ + \text{ClO}^-$

I	0.015	0	0
A	-x	+x	+x
E	0.015-x	x	x

$K_a = \frac{x^2}{0.015-x} = 3 \times 10^{-8}$

$x = 2.12 \times 10^{-5} \text{ M}$

% ionized

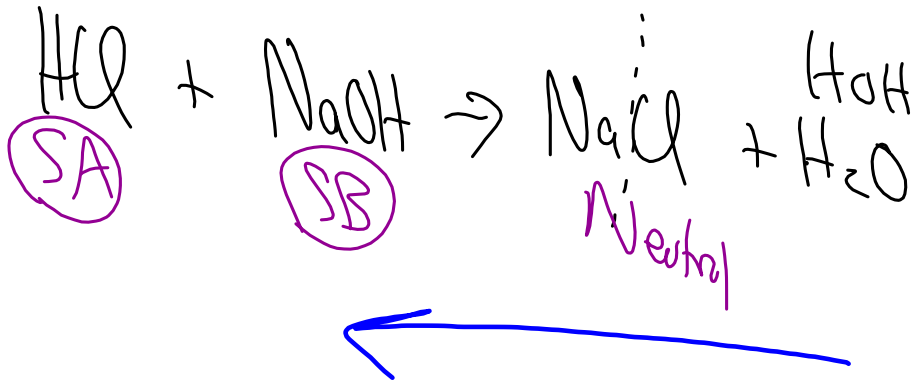
$$\frac{2.12 \times 10^{-5}}{0.015} \times 100$$

**0.14**

Mar 4-7:58 AM

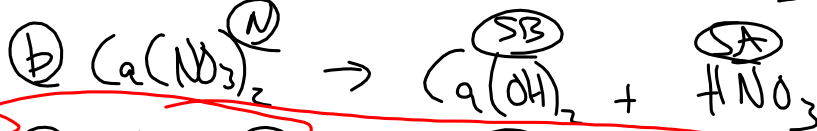
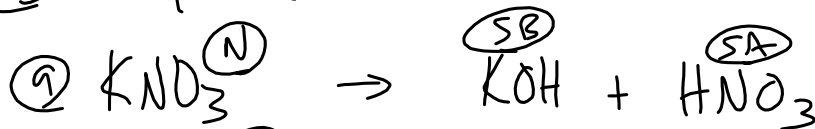
$$K_a \times K_b = K_w$$

Acid + Base  $\rightarrow$



Mar 4-8:04 AM

(24) hydrolyze your salt.



Mar 4-8:10 AM

Basic Salt      WA + SB

NaF ← HF + NaOH

0.2M NaF      pH = ?      USE Net ionic eqn

SA, SB, Sol. Salts.      ← molecular eqn

$0.2 \text{ NaF} + \text{H}_2\text{O} \rightarrow \text{NaOH} + \text{HF}$

~~$\text{Na}^+ + \text{F}^-$~~  +  $\text{H}_2\text{O} \rightarrow \text{Na}^+ + \text{OH}^- + \text{HF}$       Complete ionic

$\text{F}^- + \text{H}_2\text{O} \rightarrow \text{OH}^- + \text{HF}$       Net ionic

Mar 4-8:14 AM

BASE  $\text{F}^-$  +  $\text{H}_2\text{O} \rightleftharpoons \text{HF} + \text{OH}^-$       pH = ?

I 0.2M			
<del>Δ -x</del>		+x	+x
E 0.2-x		x	x

$K_b = \frac{x^2}{0.2-x} = 1.47 \times 10^{-11}$

$K_a(\text{HF}) = 6.8 \times 10^{-4}$

$K_a \times K_b = K_w$

Base  $\text{H}^+$  acceptors

Mar 4-8:21 AM

(HW) Q on assign page  
16-2 # 9 → 18  
0.08 M Na<sub>2</sub>CO<sub>3</sub> pH=?

Mar 4-8:28 AM