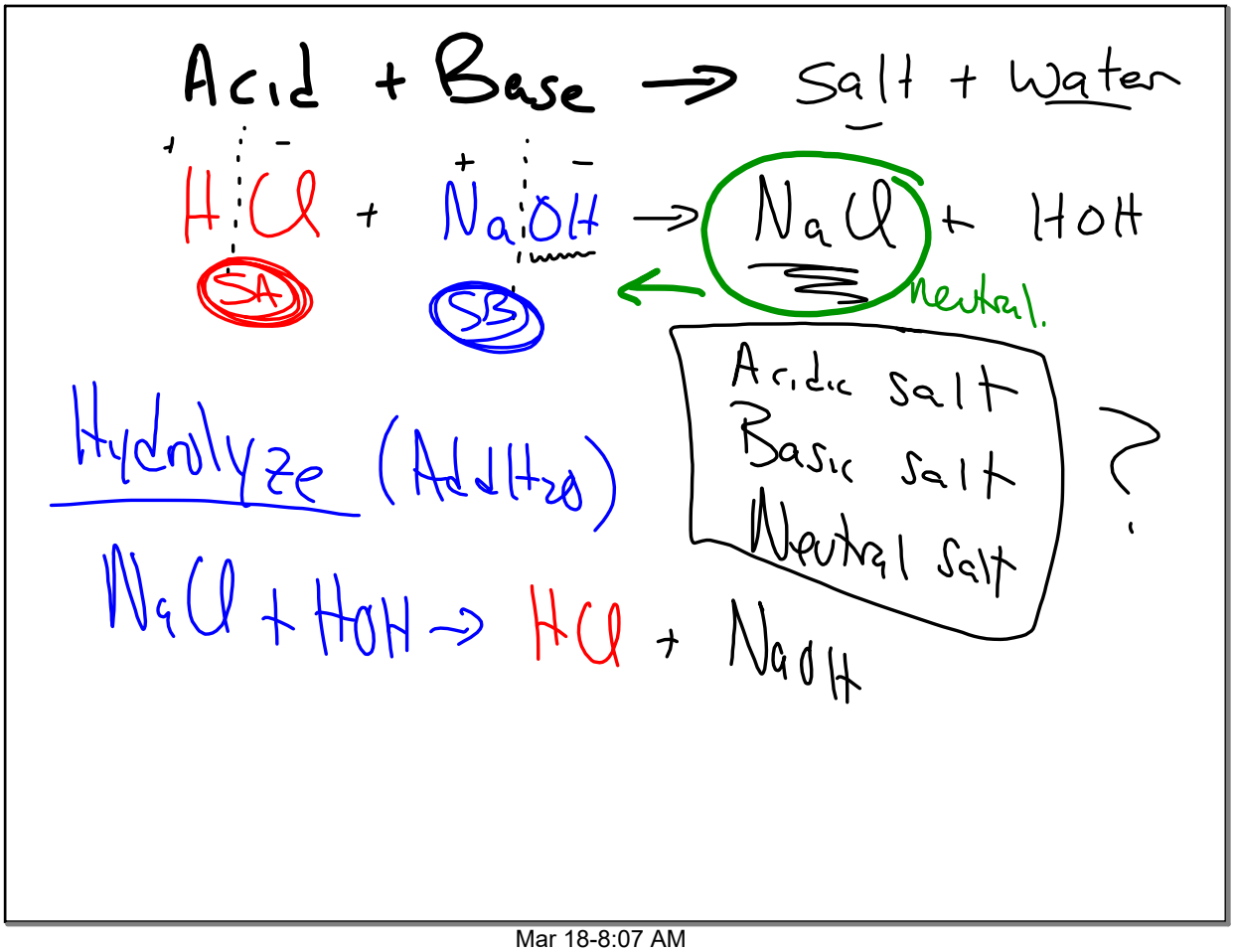
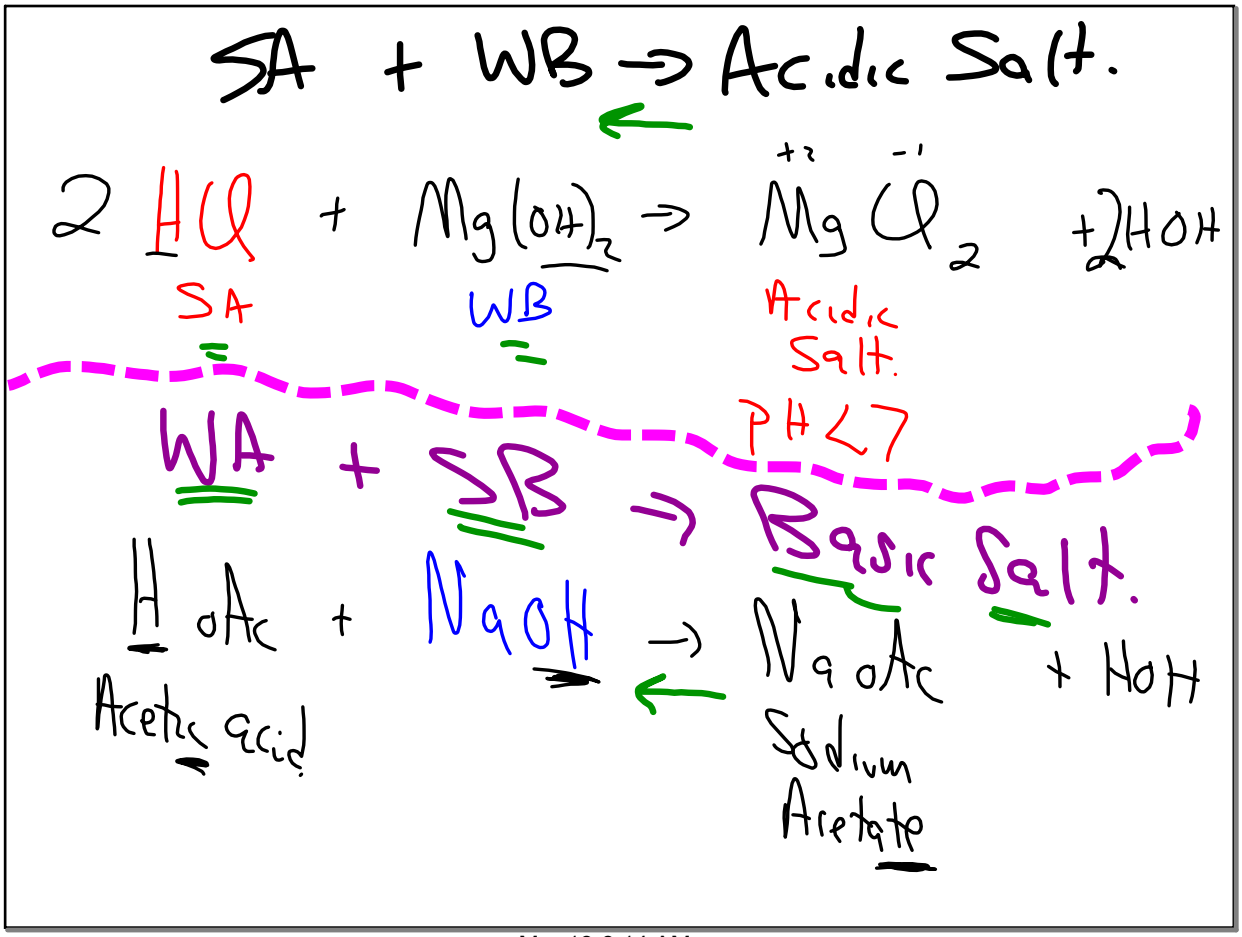


Mar 18-8:07 AM



Mar 18-8:14 AM

WA + WB → ?

How weak are they.

Compare K_a values

Acid dissoc. constant.

Large K_a = Stronger

Small K_a = weaker

$K_a * K_b = K_w$

$K_a = \frac{K_w}{K_b}$

Mar 18-8:19 AM

PS 16-1 2-22 even.

(6) $pH = -\log[H^+]$

Move ⊖ Sign 1st

$-8.11 = \log[H^+]$

anti Log

$[H^+]$

Mar 18-8:23 AM

(12) Find Conj. Acid

$H_3PO_4 \leftarrow H_2PO_4^-$ (BASE)

Accepts 1 Proton (H^+)

Conj Base: HPO_4^{-2}

Mar 18-8:26 AM

$ClH_2COOH \rightarrow H^+ + ClH_2CO^-$

? ORGANIC ACID

$HA \rightarrow H^+ + A^-$

	HA	H^+	A^-
I	0.025	0	0
Δ	$-x$	$+x$	$+x$
(E)	$0.025-x$	x	x

$K_a = 10^{-3}$

$[I] = 10^{-2}$

< 4 decimal place

KEEP x

$\frac{x^2}{0.025-x} = \frac{1.4\times10^{-3}}{1}$

$x = 5.29\times10^{-3}$

Mar 18-8:30 AM

(18) $HClO \rightleftharpoons H^+ + ClO^-$

	$HClO$	H^+	ClO^-
I	0.015 M	&	&
Δ	$-x$	$+x$	$+x$
E	$0.015-x$	x	x

Part

K_a 10^{-8}

$[I]$ 10^{-2}

Can ignore $-x$ $+x$

$$\frac{x^2}{0.015} = \frac{3\times10^{-8}}{1}$$

$x = 2.12\times10^{-5} = [H^+] = [ClO^-]$

$$\%\text{ ionization} = \frac{2.12\times10^{-5}}{0.015}\times100 = 0.14\%\text{ ionized}$$

Mar 18-8:35 AM

(20) $[OH^-]$ greatest.

(a) pH = 3

pOH = 11

$(OH^-) = 1\times10^{-11}$

(b) 1×10^{-4} M HNO_3 SA

1×10^{-4} M H^+

$(OH^-) = 1\times10^{-10}$

$(H^+)(OH^-) = 1\times10^{-14}$

(c) pOH = 12

$(OH^-) = 1\times10^{-12}$

(d) Water.

pH = 7, pOH = 7

$(OH^-) = 1\times10^{-7}$

(e) 1×10^{-9} M HCl

1×10^{-9} M H^+

1×10^{-5} (OH^-)

Mar 18-8:39 AM

(27) $K_a * K_b = K_w$

$3 \times 10^{-8} * K_b = 1 \times 10^{-14}$

3.33×10^{-7}

Mar 18-8:44 AM

HW

1 - 27 ODD + 24 + 26

Mar 18-8:46 AM