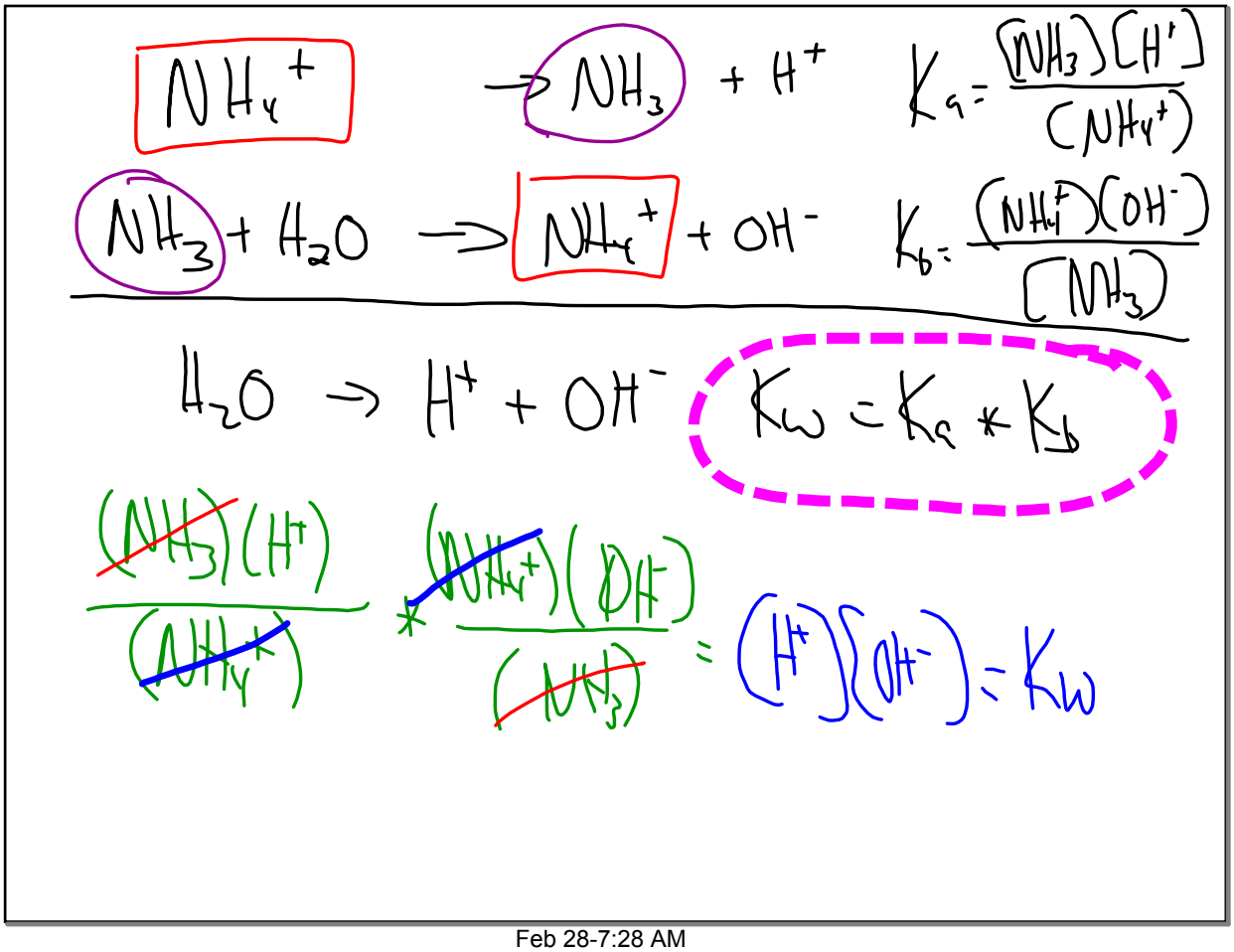
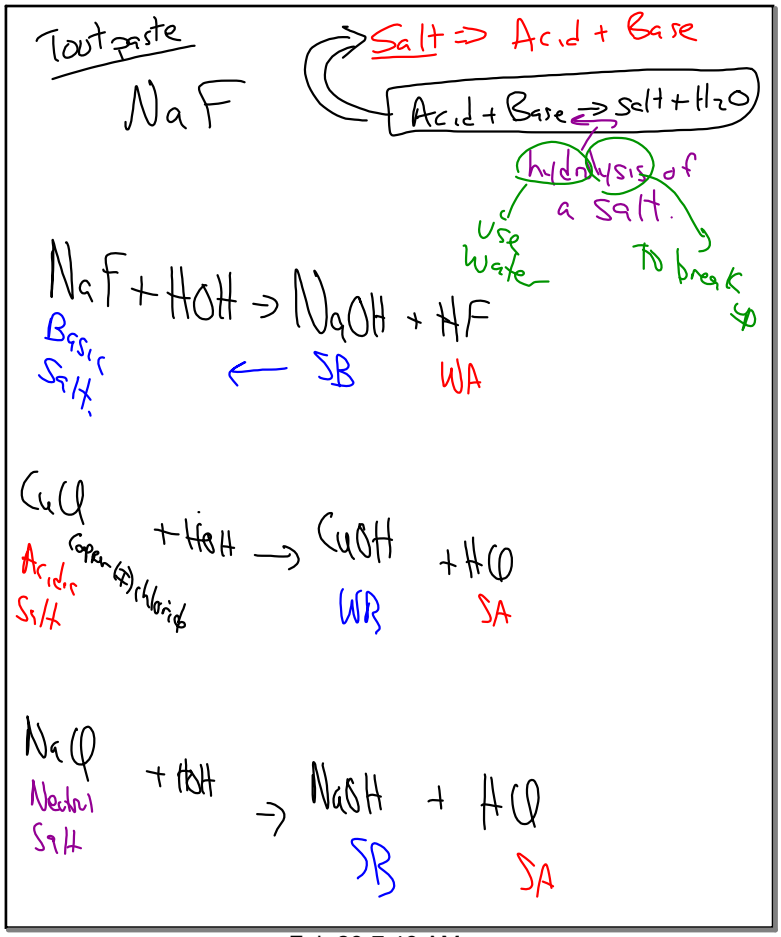
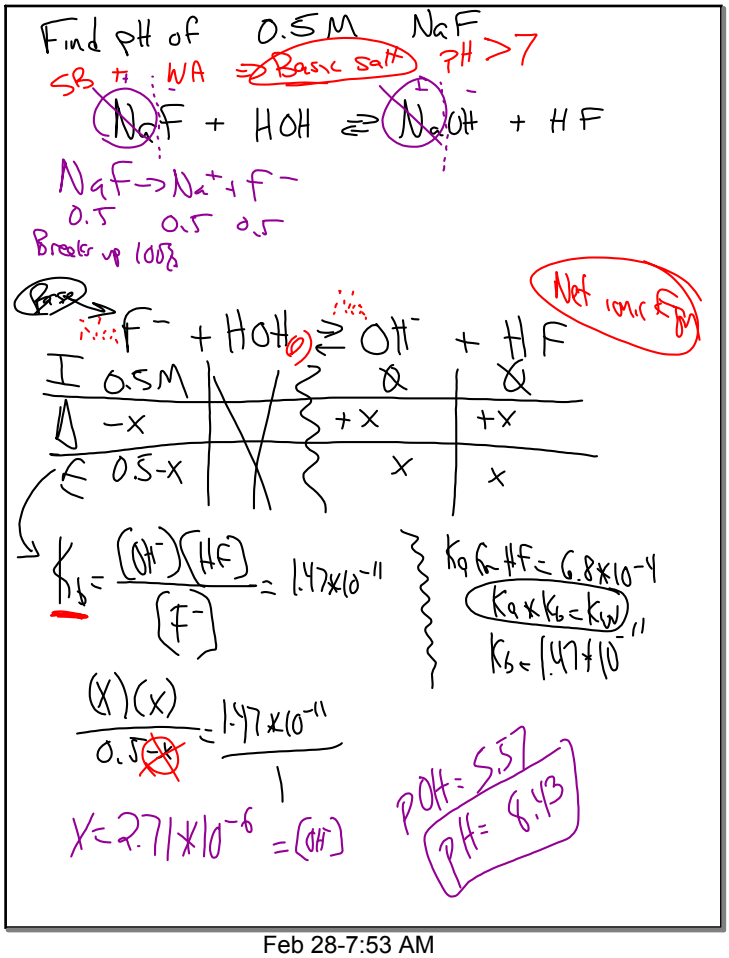


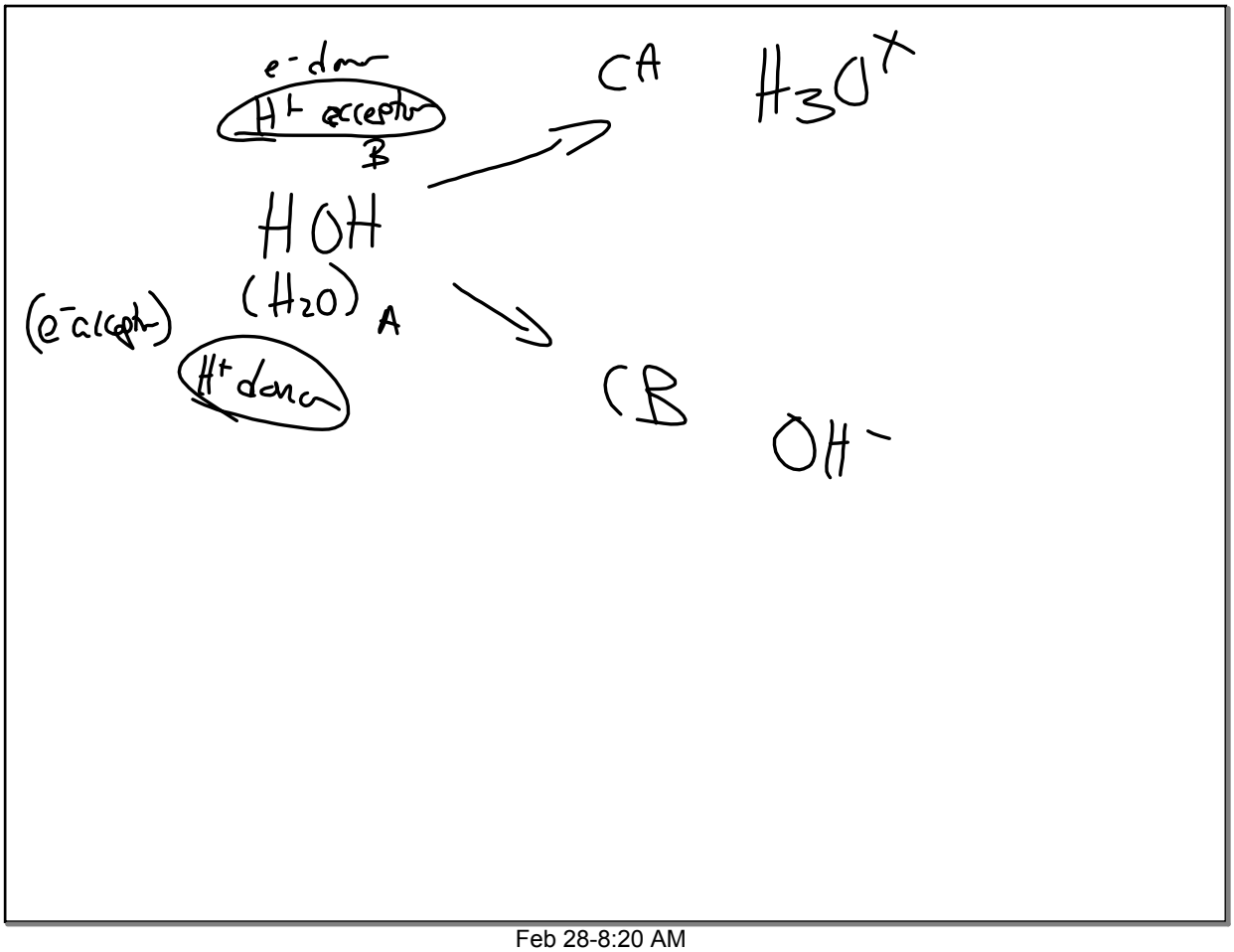
Feb 28-7:28 AM



Feb 28-7:46 AM



Feb 28-7:53 AM



Feb 28-8:20 AM

(11)

	HA	→	H^+	+	A^-
I	0.025		0		0
Δ	−x		+x		+x
E	0.025−x		x		x part

$$K_a = \frac{(x)(x)}{0.025-x} = 1.4\times10^{-3}$$

Large K_a or K_b → SA/SB

Small → WA/WB

Feb 28-8:24 AM

(18)

	HClO	→	H^+	+	ClO^-
I	0.015		0		0
Δ	−x		+x		+x
E	0.015−x		x		x

$$K_a = \frac{(x)(x)}{0.015-x} = 3\times10^{-8}$$

Part $x = 2.12\times10^{-5}$

$$\frac{\text{Part}}{\text{Whole}} \times 100 = \frac{2.12\times10^{-5}}{0.015} \times 100 = 0.14\%$$

Feb 28-8:28 AM

(20) $[OH^-]$

(a) pH = 3 ∴ pOH = 11 $[OH^-] = 1\times10^{-11}$

(b) 1×10^{-4} M HNO_3 SA = $[H^+]$ $[H^+][OH^-] = 1\times10^{-14}$ $(OH^-) = 1\times10^{-10}$

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

(d) H_2O (pure water) pH = 7 ∴ pOH = 7 $[OH^-] = 1\times10^{-7}$

(e) 1×10^{-9} M HCl SA $(OH^-) = 1\times10^{-5}$

Feb 28-8:31 AM

Calc (OH^-) and pH of 0.1M NaCN

$K_a = 4.9\times10^{-10}$ HCN

$NaCN + HOH \rightleftharpoons NaOH + HCN$

	CN^-		OH^-	
I	0.1		0	0
Δ	−x		+x	+x
E	0.1−x		x	x

$K_b = \frac{(x)(x)}{0.1-x} = 2.04\times10^{-5}$

$x = 1.4\times10^{-3} = [OH^-]$

pOH = 2.85

pH = 11.15

Feb 28-8:40 AM

HW 16.89 and

Find pH and (OH^-) for

0.08M Na_2CO_3

Feb 28-8:45 AM