(94g) Find $[OH^-]$ and pH 0.082M KOH

$KOH \rightarrow K^+ + OH^-$

	KOH	K^+	OH^-
I	0.082	0	0
Δ	−0.082	+0.082	+0.082
E	~0	0.082	0.082

← MOLE RATIO !

$pOH = -\log[OH^-] = 1.09$

$pH + pOH = 14$ $pH = 12.91$

Feb 25-7:47 AM

Exam 1

(15) $2CO_2 \rightleftharpoons 2CO + O_2 + 514KJ$ ←

(18) $\ln A_t = -kt + \ln A_0$

$t = 79$ min

85% has reacted

15% left

$\ln 0.15 = -k(79) + \ln 1$

$0.024\ min^{-1}$

Feb 25-8:19 AM

(19) $3H_{2(g)} + N_{2(g)} \rightleftharpoons 2NH_{3(g)}$

$\Delta n = -2$

$K_p = K_c (RT)^{\Delta n}$

$K_p = K_c (RT)^{-2}$

$\frac{K_p}{1} = \frac{K_c}{(RT)^2}$ $\rightsquigarrow$ $\boxed{K_c = K_p (RT)^2}$

Feb 25-8:25 AM

(20) ① $A + 2B \rightleftharpoons AB_2$ $K_1 = 1 \times 10^3$

② $A + B \rightleftharpoons AB$ $K_2 = 1 \times 10^5$

③ $AB_2 \rightleftharpoons AB + B$ $K_3 = ?$

② $AB_2 \rightleftharpoons A + 2B$ $K_1 = \frac{1}{1 \times 10^3} = 1 \times 10^{-3}$

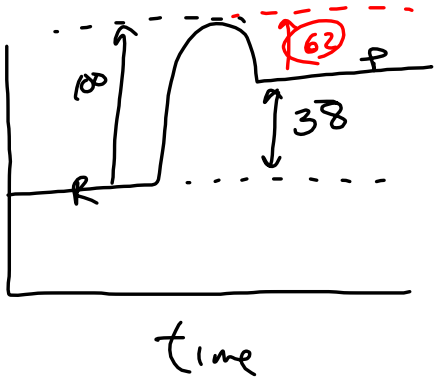
$A + B \rightleftharpoons AB$ $K_2 = 1 \times 10^{-5}$

$AB_2 \rightleftharpoons AB + B$ 1×10^{-8}

Feb 25-8:28 AM

(21)

E



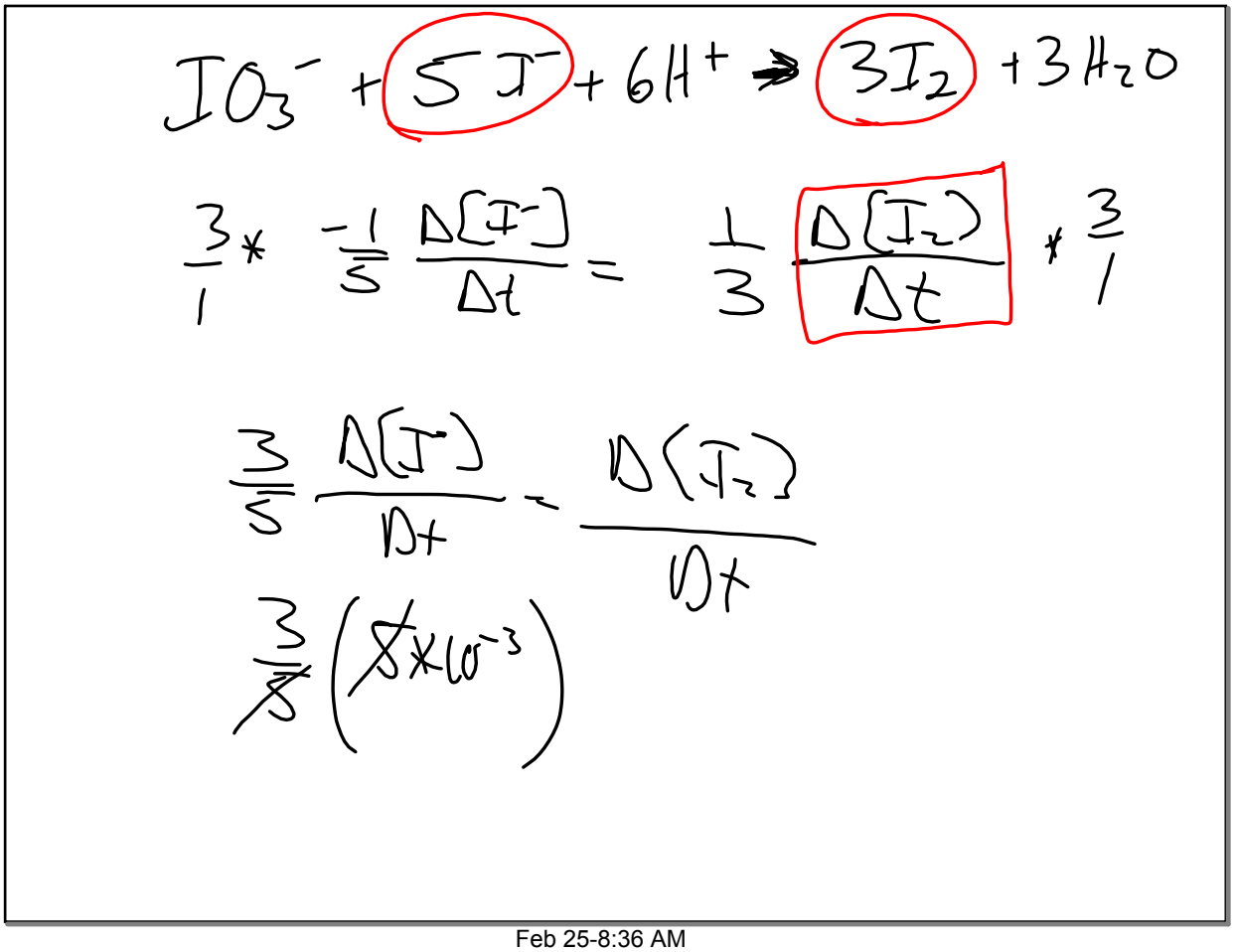
Feb 25-8:32 AM

(23)

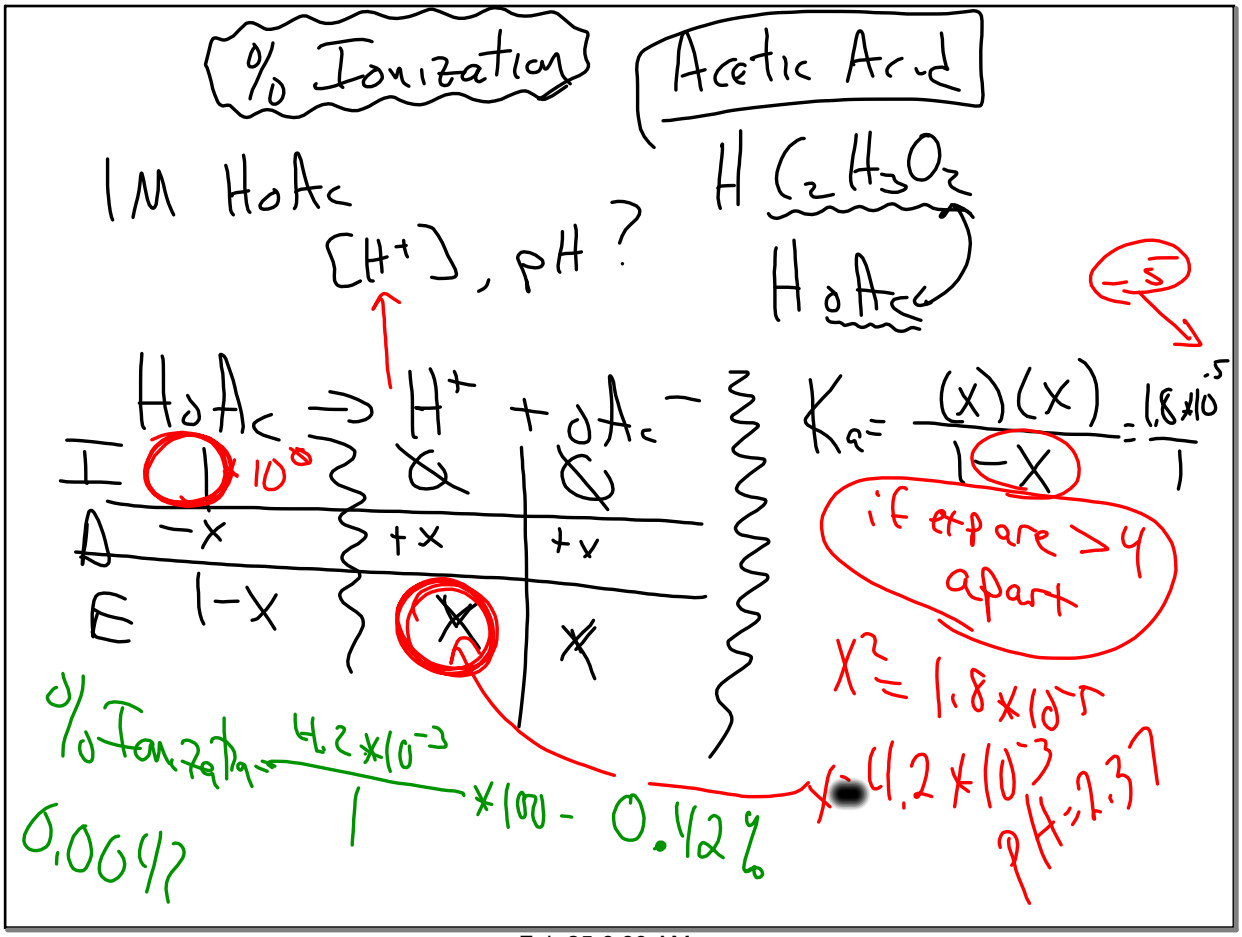
$$\frac{1}{A_t} = kt + \frac{1}{A_0}$$

$$\frac{1}{A_t} = \left(1.2\times10^{-2}\ \frac{1}{s}\right)\left(1800\ s\right) + \frac{1}{0.045}$$

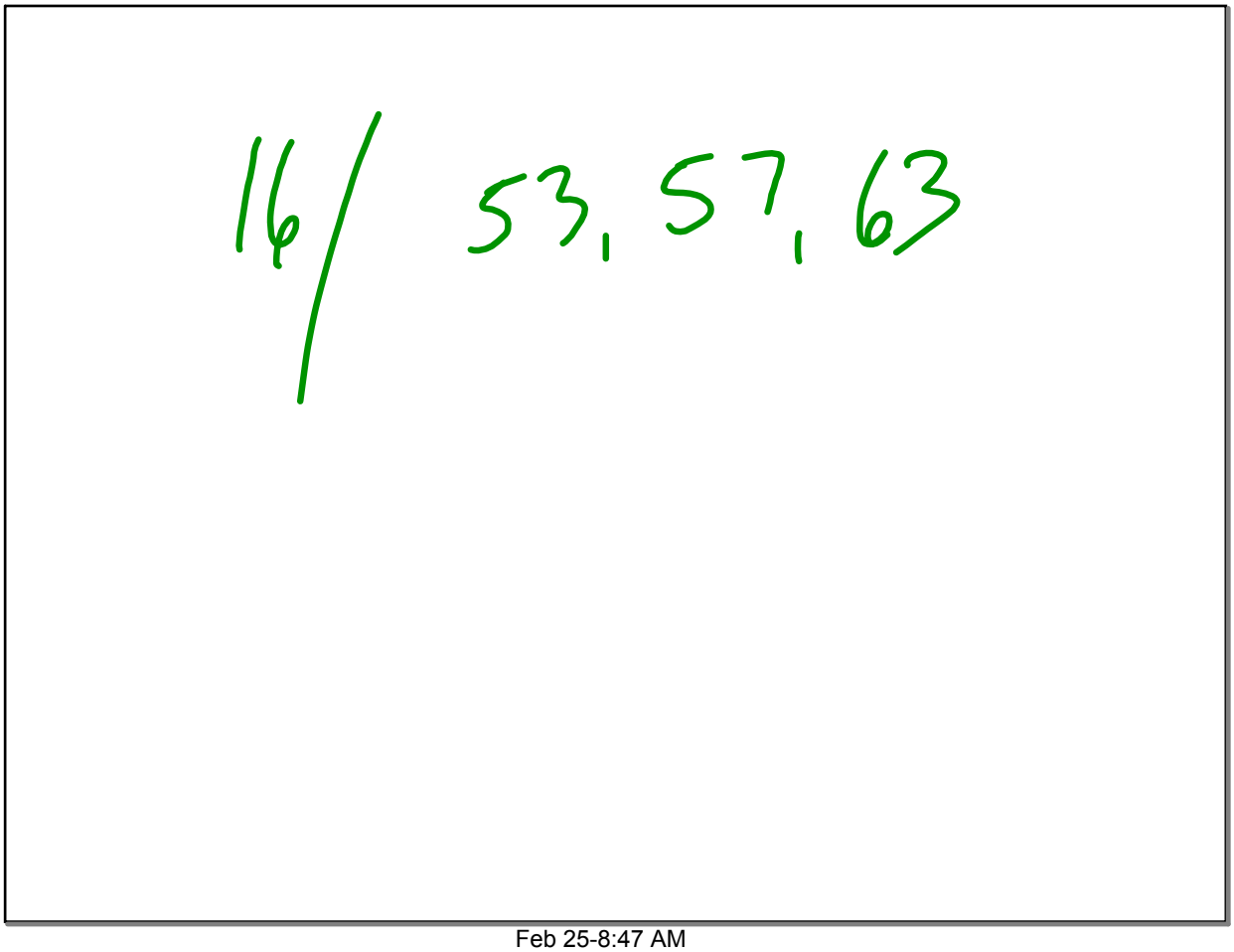
Feb 25-8:35 AM



Feb 25-8:36 AM



Feb 25-8:39 AM



Feb 25-8:47 AM