16/10

$H_2SO_4 \leftarrow HSO_4^- \rightarrow SO_4^{-2}$

B A B

Amph.

Feb 21-7:38 AM

16/22

$H_2C_6H_7O_5^- + H_2O_{(l)} \rightarrow H_3C_6H_7O_5 + OH^-$

B H^+ OH^-

H^+ acceptors

Polyatomic ions

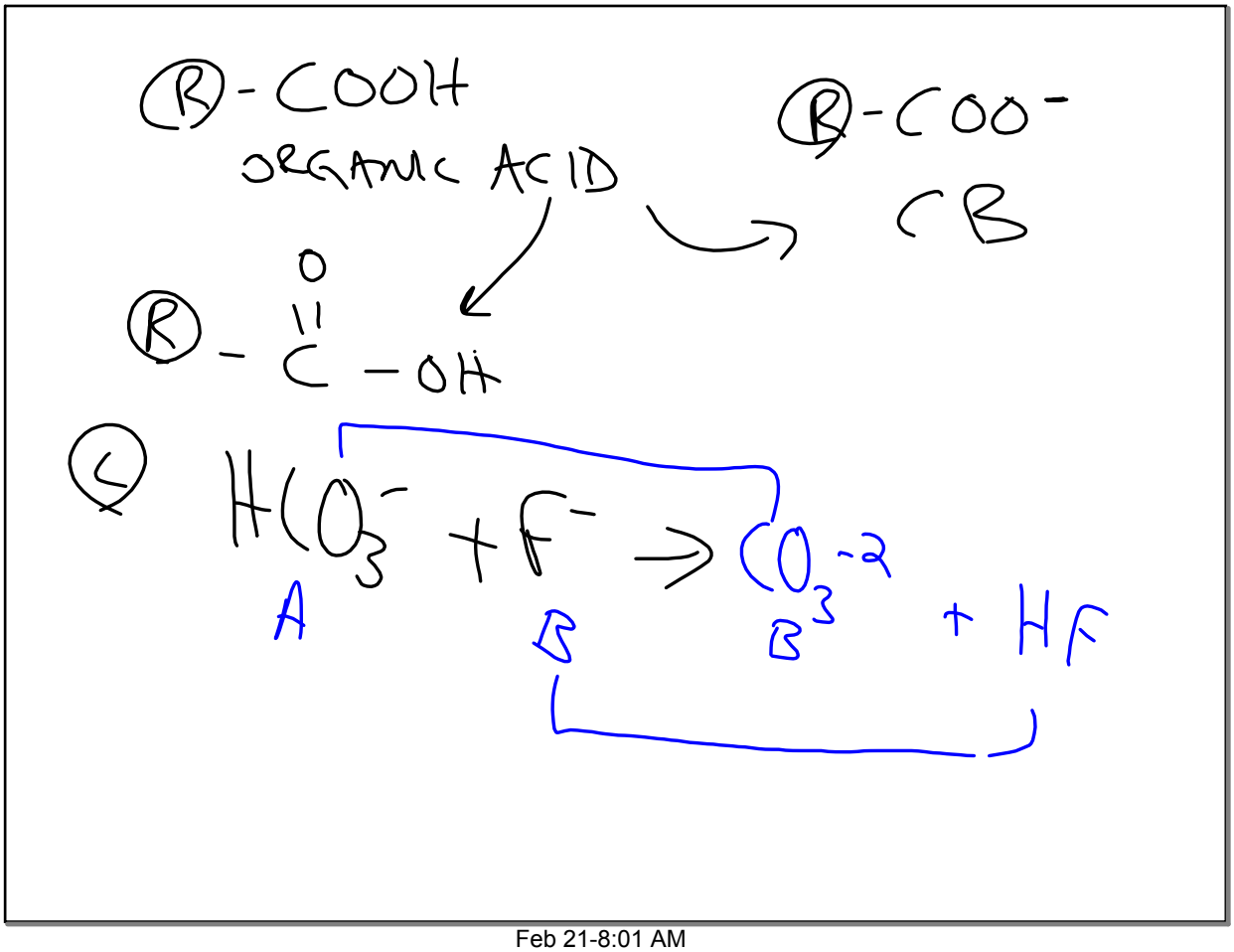
NEUTHHH Change

A

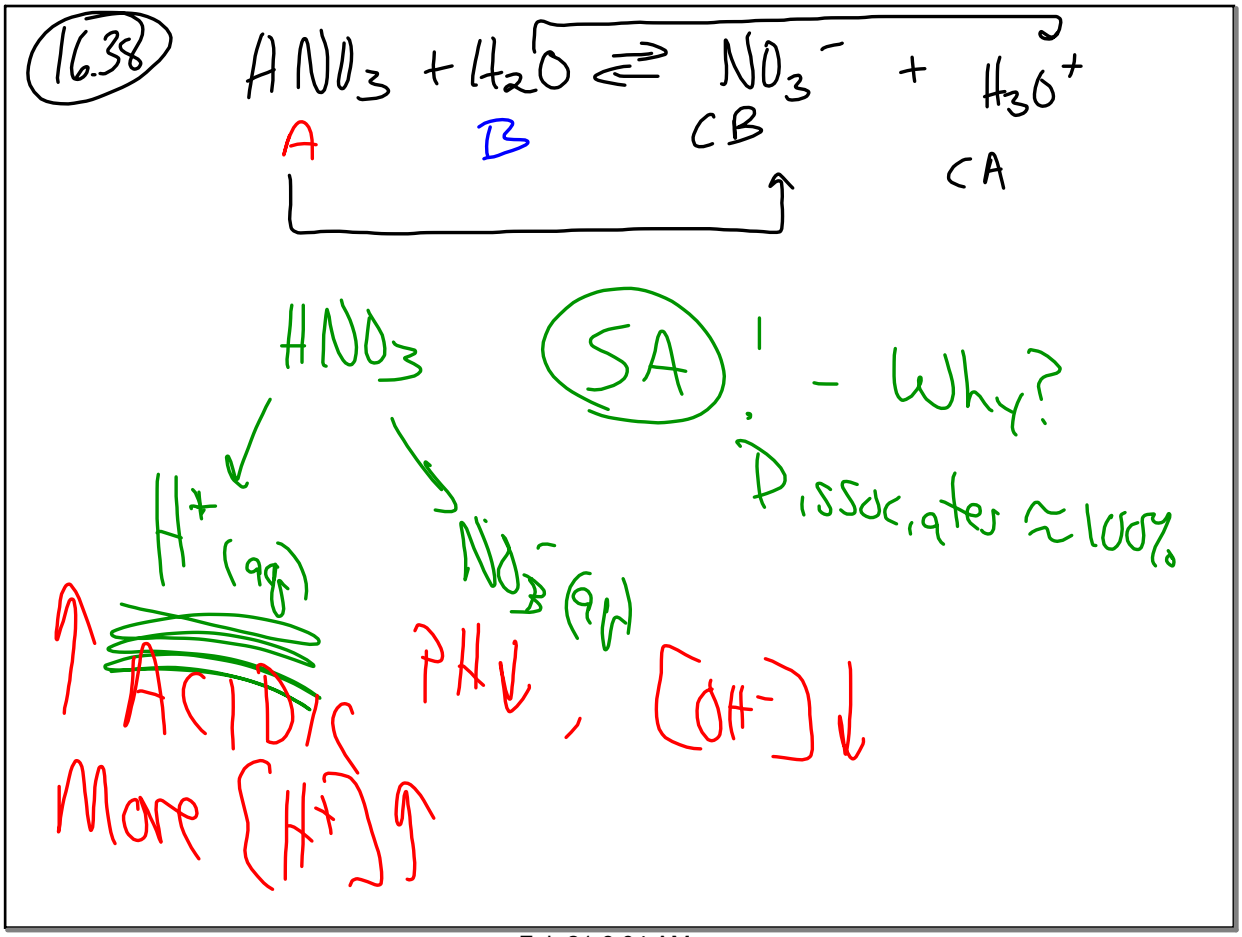
H^+ donor

$H_2C_6H_7O_5^- + H_2O \rightarrow HC_6H_7O_5^{-2} + H_3O^+$

Feb 21-7:56 AM



Feb 21-8:01 AM



Feb 21-8:04 AM

16.38 $[OH^-] = 0.014M$ pH = ?

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

$pOH = -\log(0.014)$

$-pOH = -\log(0.014)$

$pOH = 1.854$

$pH = 12.146$

$pH + pOH = 14$

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

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

$pH + pOH = 14$

$K_w = [H^+][OH^-] = 1 * 10^{-14}$ @ 25°C

Feb 21-8:10 AM

$pH = 6.6$

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

$6.6 = -\log(H^+)$

$-6.6 = \log(H^+)$

$[H^+] = 2.51 * 10^{-7}$

$[H^+] = 2.51 * 10^{-7}$

$[OH^-] = 4 * 10^{-8}$

$[H^+][OH^-] = 1 * 10^{-14}$

$[OH^-] = \frac{1 * 10^{-14}}{2.51 * 10^{-7}}$

Feb 21-8:15 AM

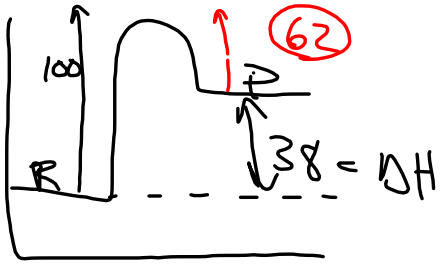
Exam 1

④ $t_{1/2} = \frac{0.693}{K} = \frac{0.693}{35\ min^{-1}} = 0.0198 min$

$\times 60$

$1.188\ sec$

⑤



Feb 21-8:40 AM

⑦ $\frac{1}{A_t} = Kt + \frac{1}{A_0}$

$\frac{1}{A_t} = (1.2 \times 10^{-2})(180)^{sec} + \frac{1}{0.045}$

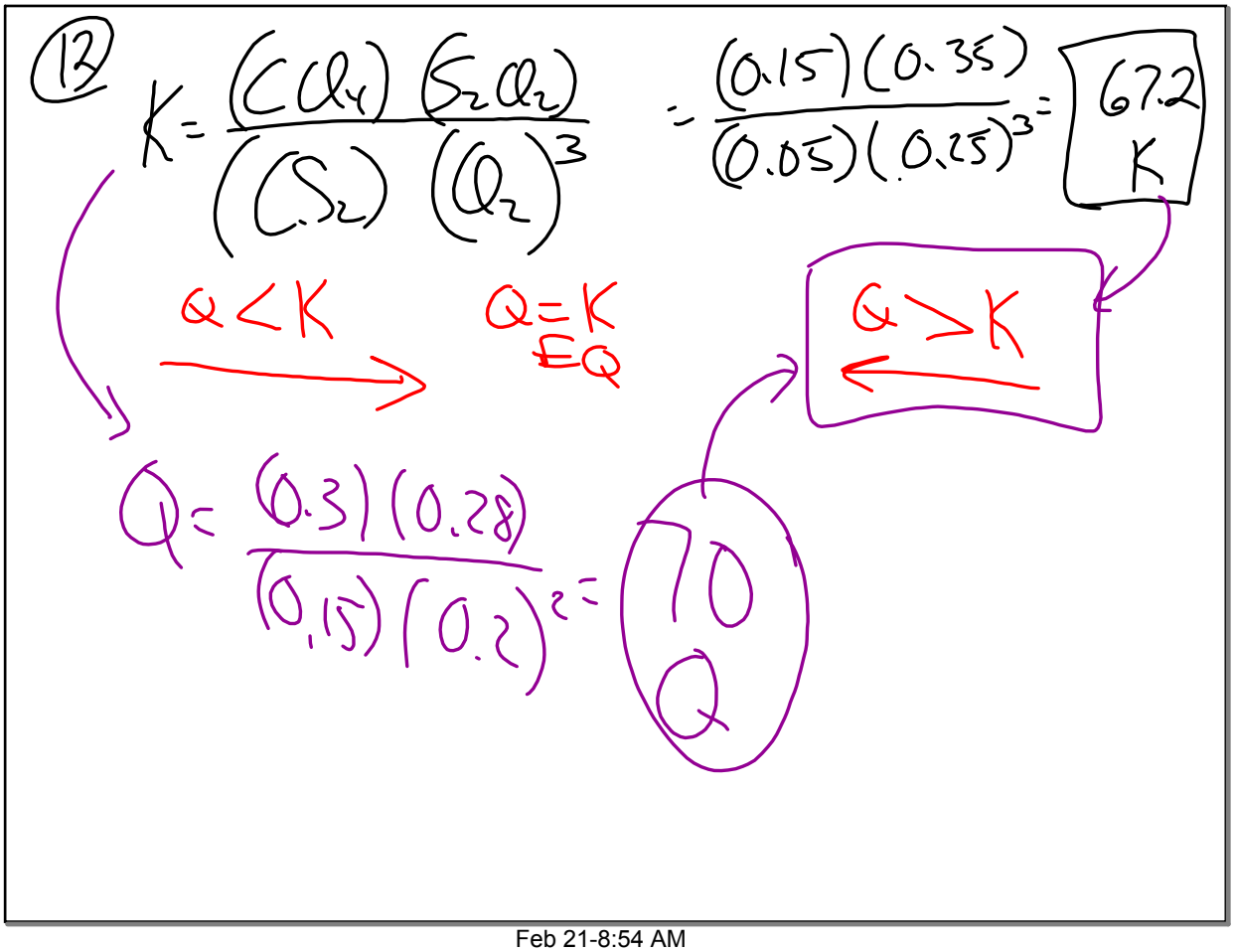
sec

⑧ $t_{1/2} = \frac{1}{K(A_0)} = \frac{1}{(1.2 \times 10^{-2})(0.3)} = 277.78_{sec}$

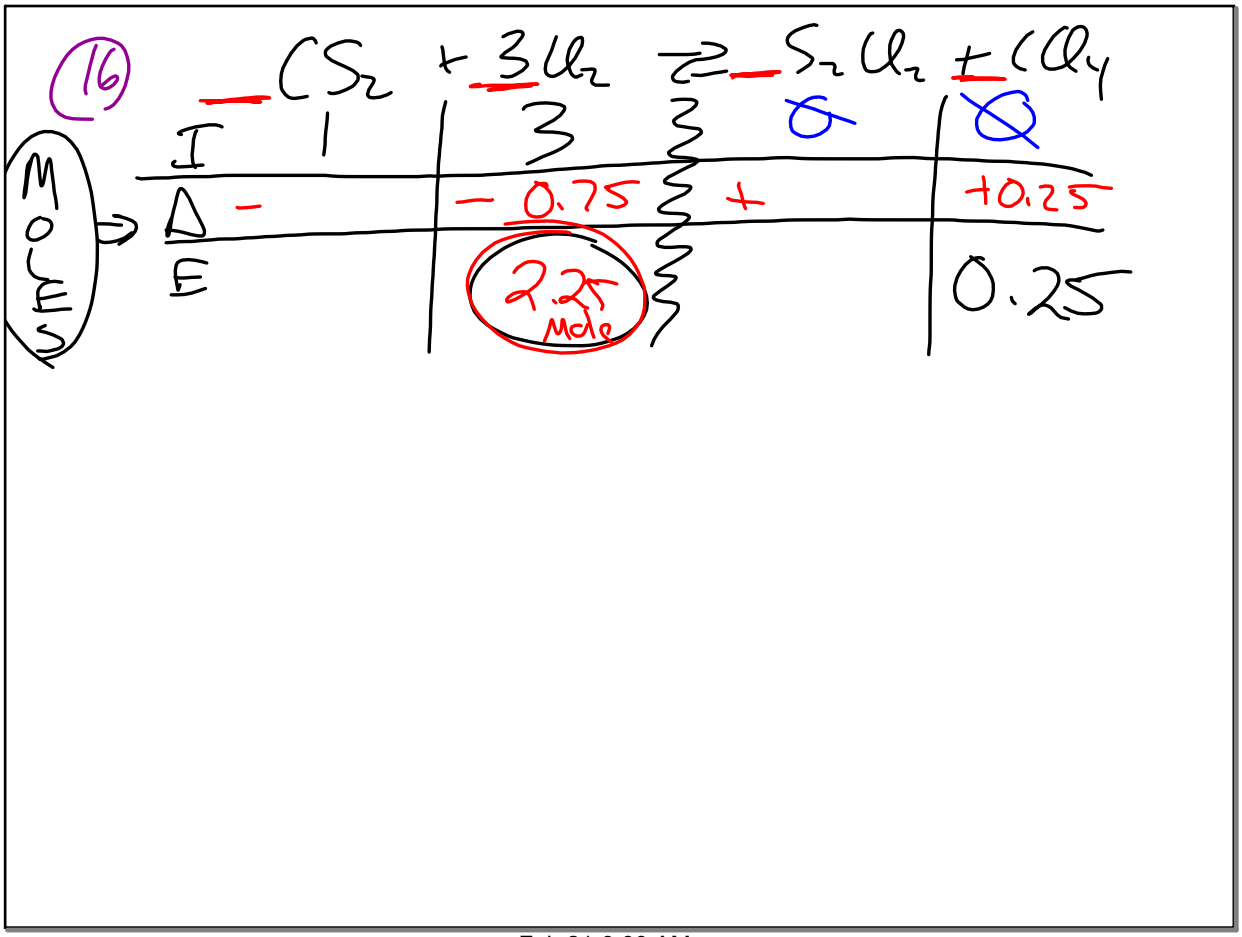
$\div 60$

$4.63\ min$

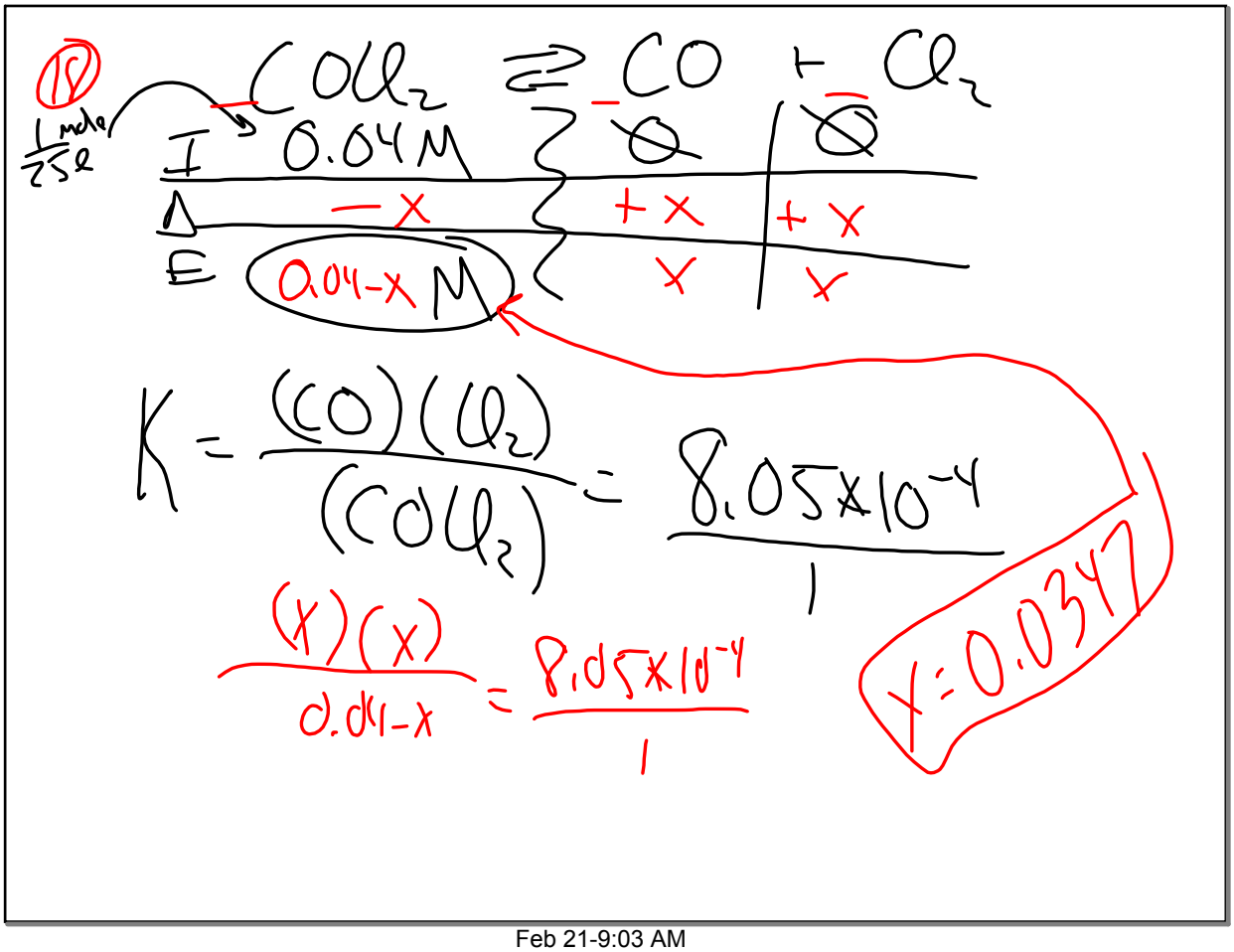
Feb 21-8:49 AM



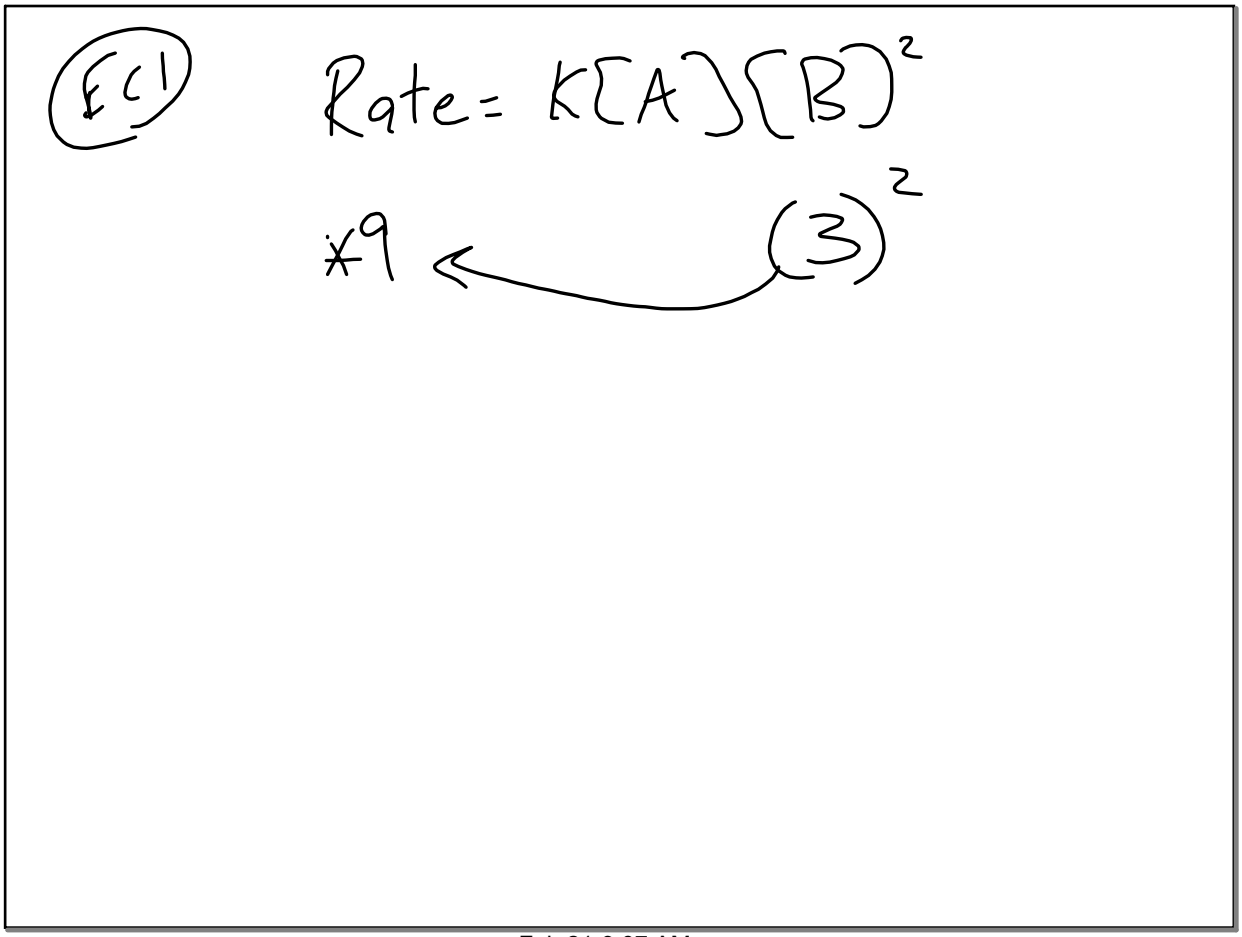
Feb 21-8:54 AM



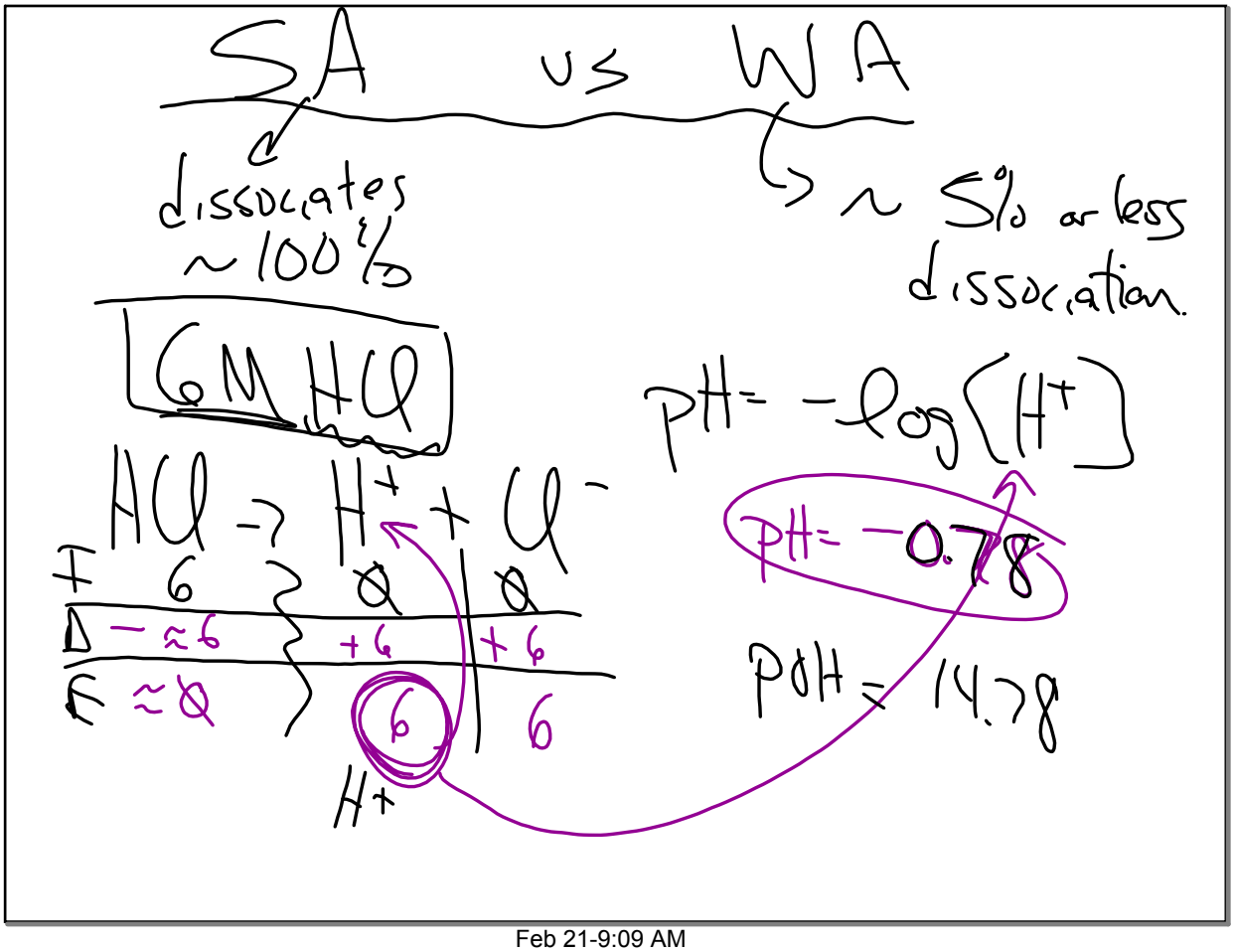
Feb 21-9:00 AM



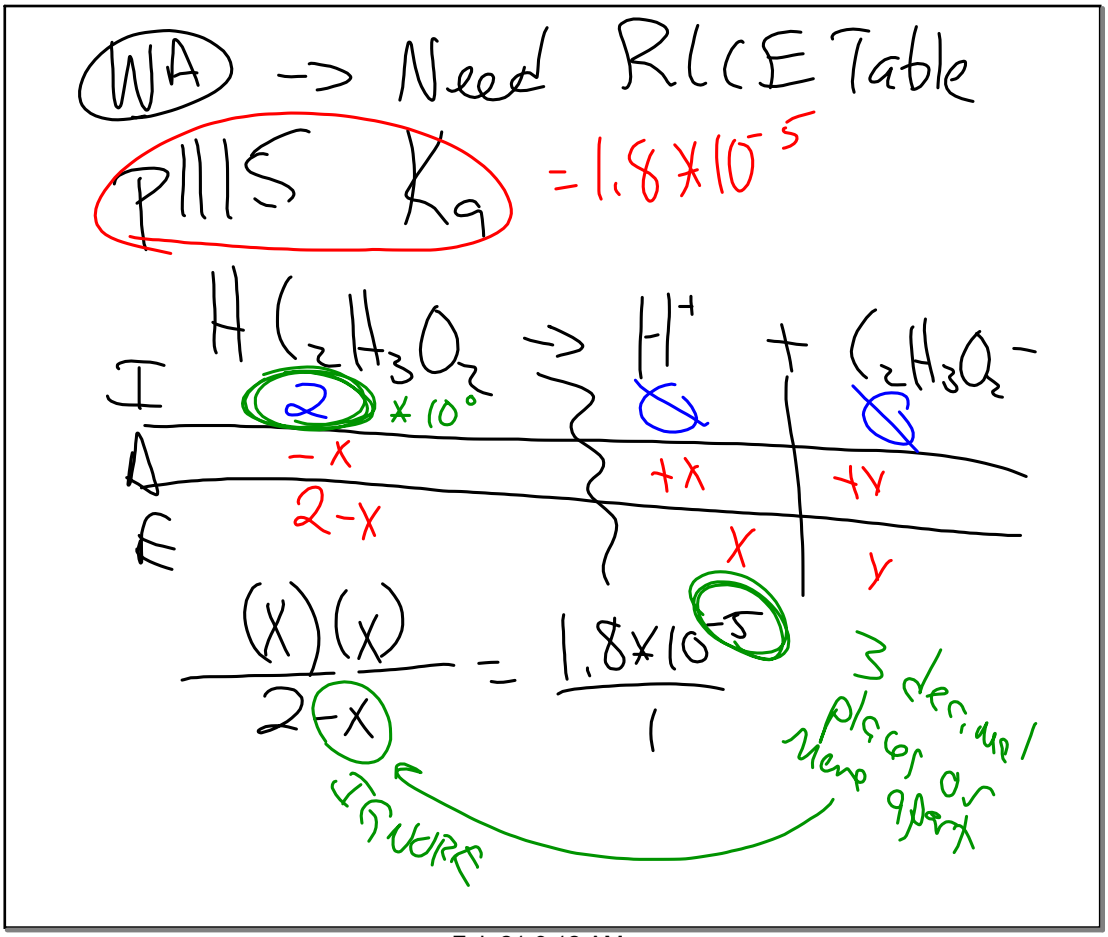
Feb 21-9:03 AM



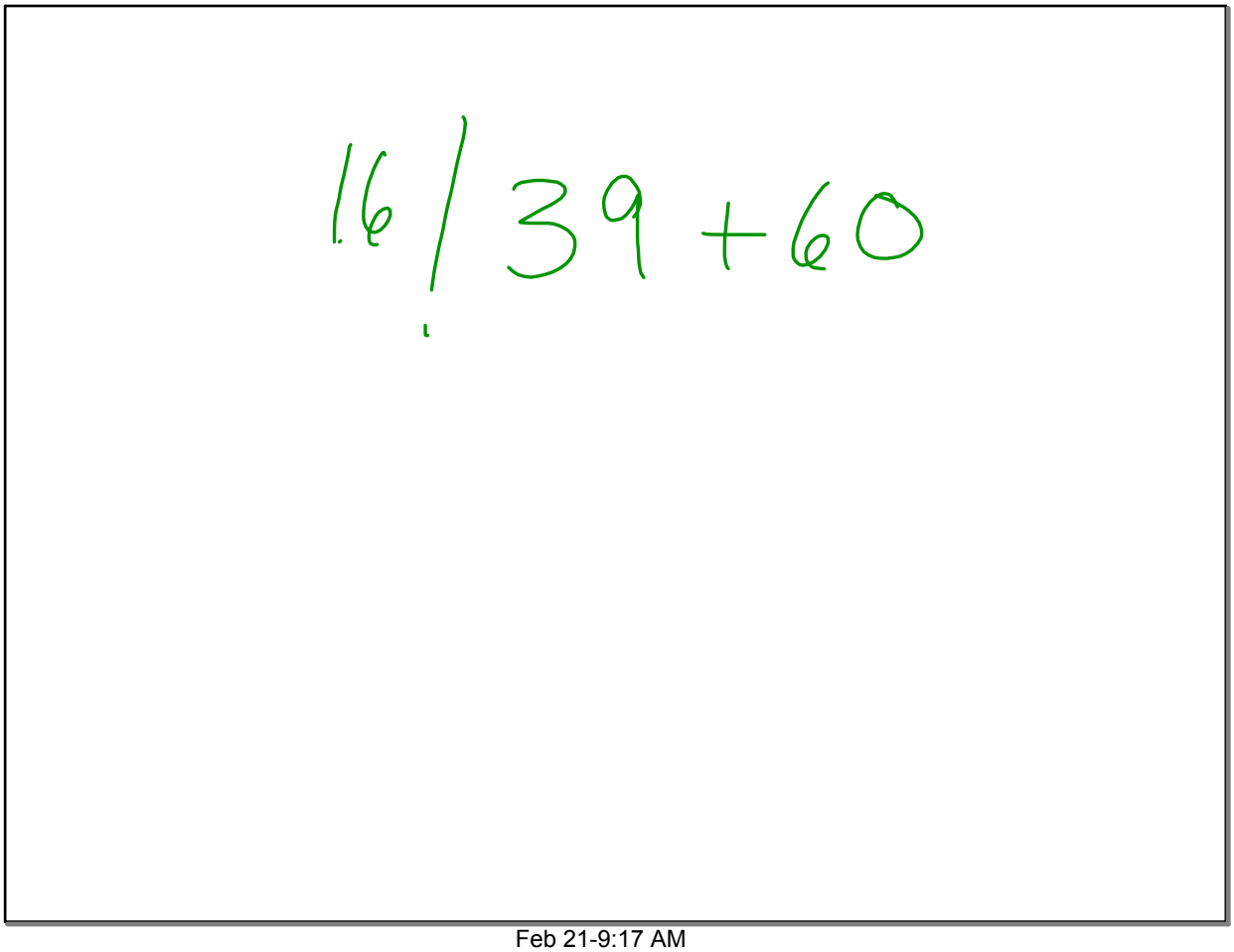
Feb 21-9:07 AM



Feb 21-9:09 AM



Feb 21-9:12 AM



Feb 21-9:17 AM