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$$\frac{\text{slope}}{1} = -\frac{E_a}{R}$$
~~$$\frac{-1.07 \times 10^4}{1} = \frac{E_a}{8.314 \times 10^{-3} \text{ KJ}}$$~~

Feb 7-9:37 AM

① $\text{NO} + \text{Br}_2 \xrightleftharpoons[k_{-1}]{k_1} \text{NOBr}_2$ (FAST)

② $\text{NOBr}_2 + \text{NO} \xrightarrow{k_2} 2\text{NOBr}$ GOAL (SLOW)

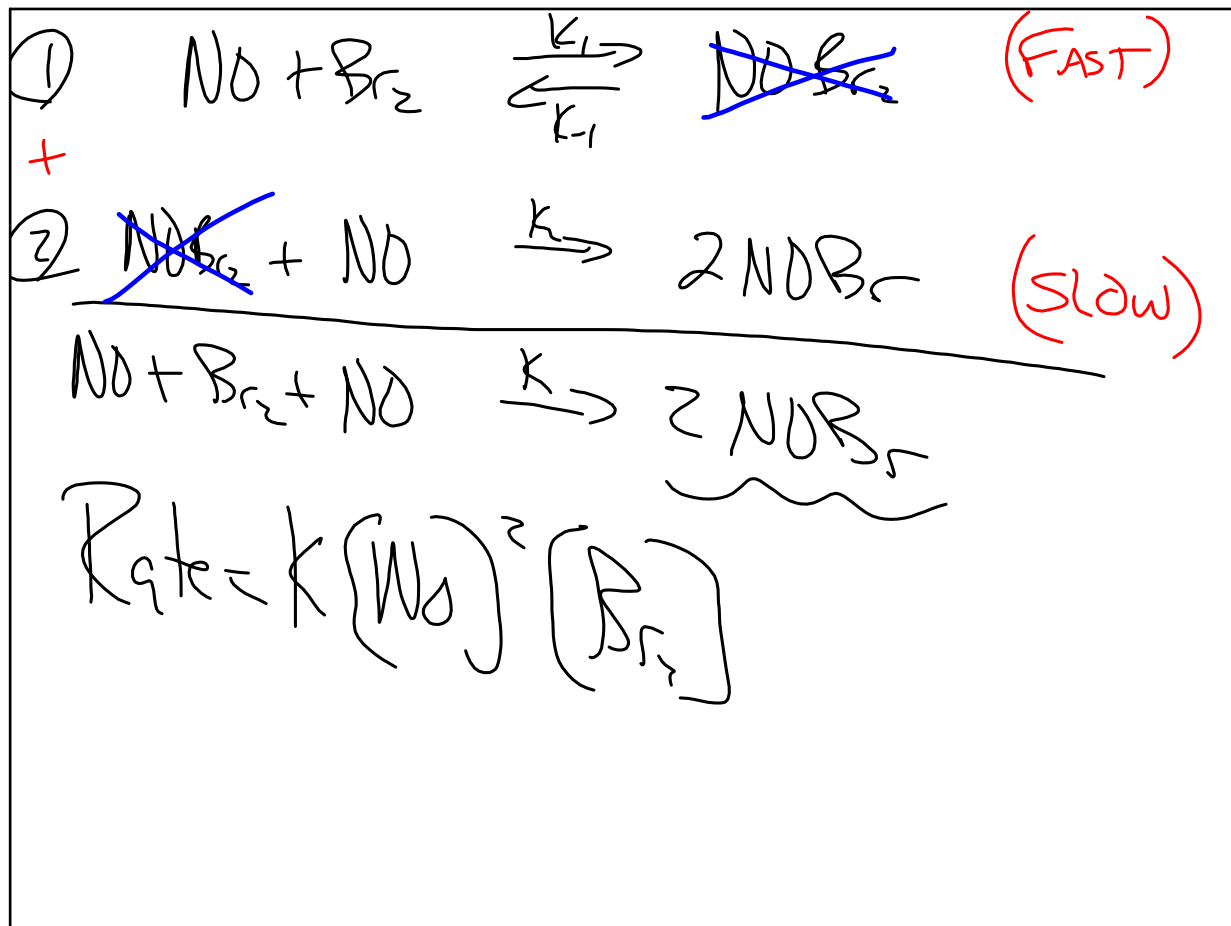
Rate = $k_2 [\text{NOBr}_2] [\text{NO}]$ (from NOBr_2)
 GOAL

$= k_2 [k_1 [\text{NO}] [\text{Br}_2]] [\text{NO}]$

Rate = $k [\text{NO}]^2 [\text{Br}_2]$

from NOBr_2
 Rate FORWARD = $k_1 [\text{NO}] [\text{Br}_2]$
 Rate REVERSE = $k_{-1} [\text{NOBr}_2]$
 EQUILIBRIUM \Rightarrow Rate FORWARD = Rate REVERSE
 $k_1 [\text{NO}] [\text{Br}_2] = k_{-1} [\text{NOBr}_2]$
 $\frac{k_1 [\text{NO}] [\text{Br}_2]}{k_{-1}} = [\text{NOBr}_2]$
 EQN 1

Feb 7-10:21 AM



Feb 7-10:40 AM

PS 1 #25

14 / 68 + 69

Feb 7-10:46 AM