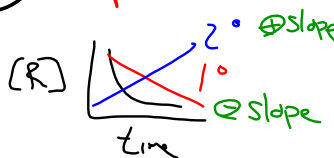


Final Tues May 17 Chap 14 → 21, 25

1° First order  
 $y = mx + b$   
 $\ln A_t = -kt + \ln A_0$   
 $t_{1/2} = \frac{0.693}{k}$

2° Second order  
 $\frac{1}{A_t} = kt + \frac{1}{A_0}$   
 $y = mx + b$

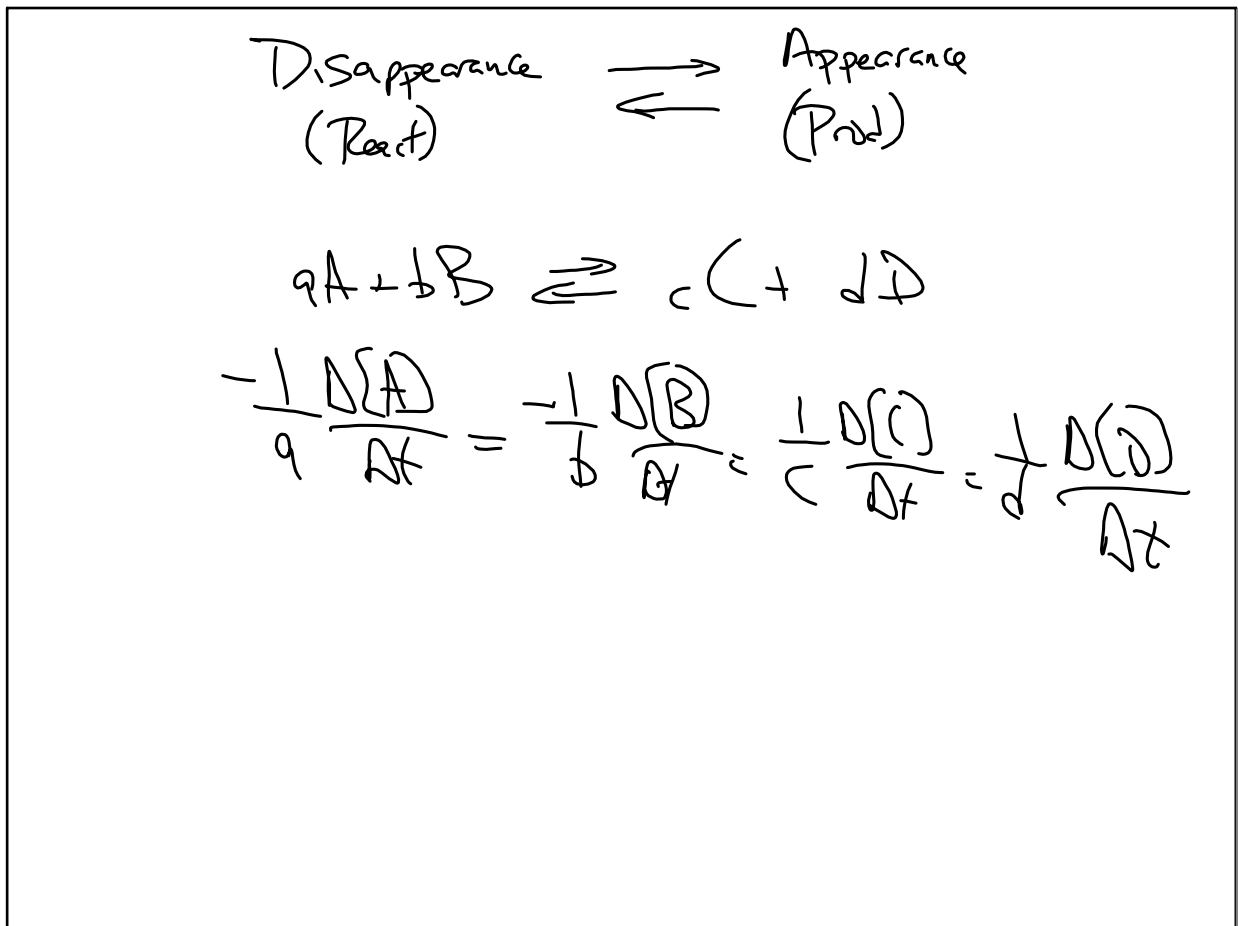
(R) 

units!  $y = mx + b$

$\ln \frac{k_1}{k_2} = \frac{E_a}{R} \left( \frac{1}{T_2} - \frac{1}{T_1} \right)$

(Units!)

May 9-8:49 AM



May 9-9:03 AM

2015

①  $2A + B \rightarrow C$  NEVER USE coefficients of eqn as rxn orders

$A + B \rightarrow D$  (fast)

$D + B \rightarrow E$  (slow)

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$A + 2B \rightarrow E$  Rxn order

① Rate =  $k[A]^1[B]^2$  3<sup>rd</sup> order overall

RATE =  $k [\text{React}]^3$

$$\frac{\frac{\Delta}{\Delta t} \frac{M}{\text{Sec}}}{M^3} = k \frac{M^3}{M^3}$$

$$M^{-2} \cdot \frac{1}{M^3 \cdot \text{Sec}} = k$$

$$\frac{M}{\text{Sec}} \div \frac{M^3}{1} =$$

$$\frac{M}{\text{Sec}} * \frac{1}{M^3} = \frac{1}{M^2 \cdot \text{Sec}}$$

May 9-9:05 AM

$$2O_3 \rightleftharpoons 3O_2$$

$$\frac{3}{1} * \frac{-1}{2} \frac{\Delta [O_3]}{\Delta t} = \frac{+1}{3} \frac{\Delta [O_2]}{\Delta t} * \frac{3}{1}$$

$$\frac{3}{2} \frac{\Delta [O_3]}{\Delta t} = \frac{\Delta [O_2]}{\Delta t}$$

$$\frac{3}{2} (7 * 10^{-3}) = \frac{\Delta [O_2]}{\Delta t} = 1.05 * 10^{-2}$$

May 9-9:13 AM