1°	2°
$t_{1/2} = \frac{0.693}{K}$	$t_{1/2} = \frac{1}{K[A_0]}$
only K can Δ $t_{1/2}$	K and $[A_0]$ can Δ $t_{1/2}$

Feb 11-7:38 AM

14-2

(6) $[A_o] = 2M$

$[A_t]$ 60% reacts ∴ 40% left over

$0.40(2) = 0.8$

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

$$\frac{1}{0.8} = k(3600\ \text{sec}) + \frac{1}{2}$$

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(7) $\frac{1}{A_t} = kt + \frac{1}{A_0}$

80% reacts
20% left now

$\frac{1}{0.02} = k(74) + \frac{1}{0.1}$

$0.20(0.1) = 0.02$

$A + B \rightarrow C$

$C + D \rightarrow E$

Intermediate, "C"

$A + B \rightarrow C$

$C + D \rightarrow E + B$

into start
out to end
UNCHANGED

Catalyst

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(10) $\ln K_1 - \ln K_2 = \frac{E_a}{R}\left(\frac{1}{T_2} - \frac{1}{T_1}\right)$

	T	K
(1)	25°C 298 K	5.8×10^{6}
(2)	43°C 316	K

$\ln(5.8 \times 10^{-6}) - \ln K_2 = \frac{92}{8.314 \times 10^{-3}}\left(\frac{1}{316} - \frac{1}{298}\right)$

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$$X = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

React $\xrightarrow[\text{foward}]{k}$ Prod. Rate $= K_{foward}$ [React]

Reverse Rxn

Prod $\xrightarrow[\frac{1}{K} \text{ or } K']{K_{Rev}}$ React Rate $= K_{Rev}$ [Products]

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Equilibrium

$$\text{RATE}_{\text{foward}} = \text{RATE}_{\text{Reverse}}$$

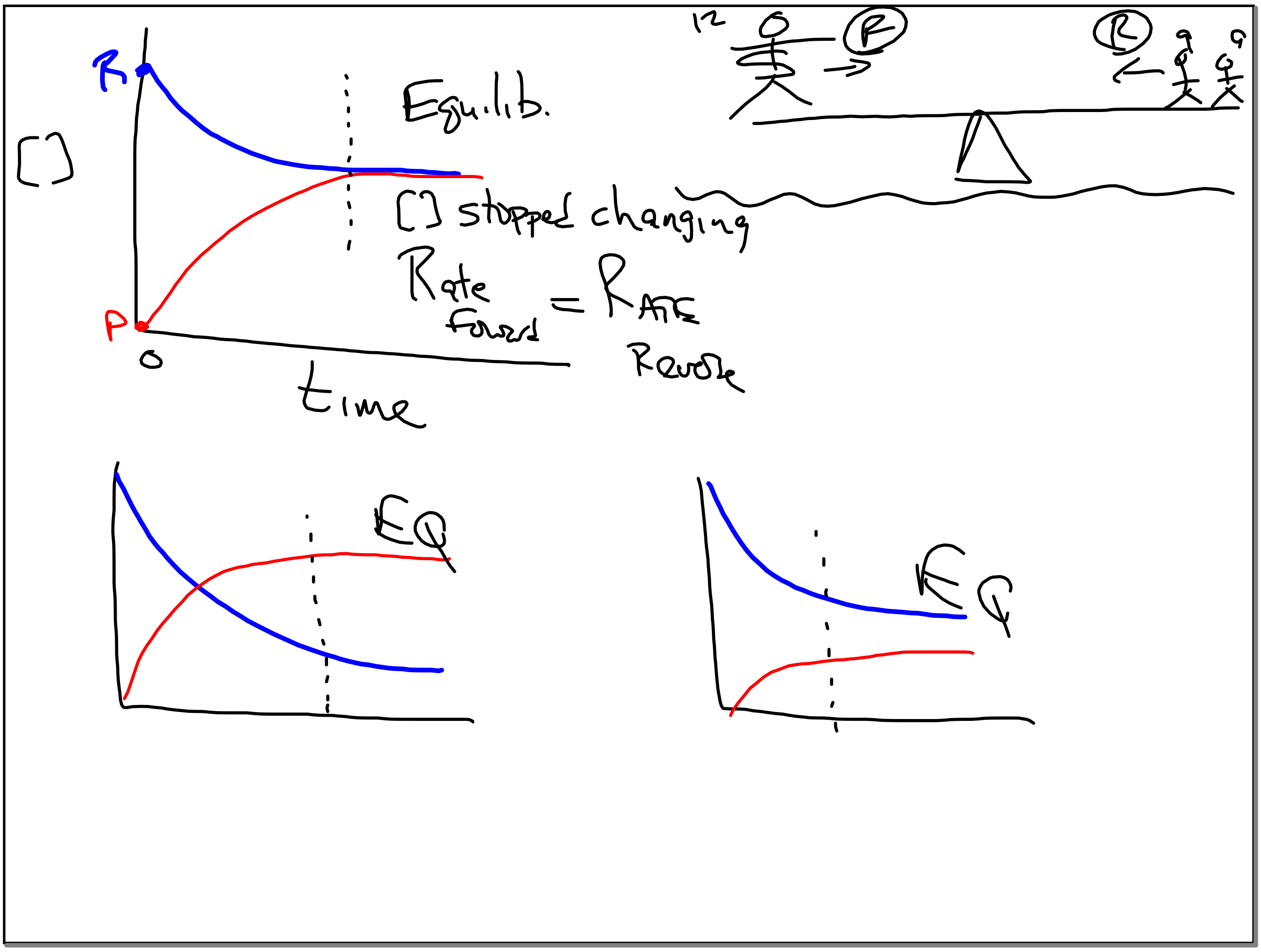
$$K_{\text{foward}}[\text{React}] = K_{\text{rev}}[\text{Prod}]$$

$$K_{eq} = \frac{K_{\text{foward}}}{K_{\text{reverse}}} = \frac{[\text{Prod}]}{[\text{React}]}$$

K_{eq}: Equilib constant

K_{eq} or K_c

Feb 11-8:14 AM


R
P
[ ]
0
time
Equilib.
[ ] stopped changing
Rate forward = Rate Reverse
12
P
R
Eq
Eq

Feb 11-8:18 AM