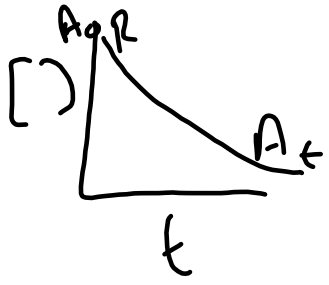
1° $t_{1/2} = \frac{0.693}{K}$

2° $t_{1/2} = \frac{1}{K[A_0]}$



$A_0 \rightarrow A_t$

D

⑨ $t_{1/2} = \frac{1}{(1.2\times10^{-2})(0.3)} = 277.78\ s_{rr}$

Feb 23-7:38 AM

⑫ $1 \xrightarrow[19]{} 0.5 \xrightarrow[19]{} 0.25 \xrightarrow[19]{} 0.125$ ⑫

$t_{1/2} = \frac{0.693}{K}$; $\ln A_t = -Kt + \ln A_0$ ⑪

$K = \frac{0.693}{19}$; $\ln(0.125) = (0.036_{49})t + \ln 1$

$K = 0.0365\ \frac{1}{s_{rr}}$

Feb 23-7:53 AM

16 (a) =

(b) ←

(c) →

(d) →

Feb 23-7:57 AM

$$\frac{(L_{(1)})(S_2 Q_2)}{(S_2)(Q_2)^3}$$

$$Q = \frac{(0.3)(0.28)}{(0.15)(0.2)^3} = 70$$

$Q > K$

$$K = \frac{(0.15)(0.35)}{(0.05)(0.25)^3} \quad 67.2$$

←

Feb 23-8:00 AM

(22) $K = \dfrac{(NH_3)^2}{N_2 (H_2)^3} = \dfrac{(0.0027)^2}{(0.0402)(0.1207)^3}$

$K_c = 0.103$

$PV = nRT$

$P = \frac{n}{V}RT$

$P = MRT$

$K_p = K_c (RT)^{\Delta n} = (0.103)\left[0.08206(745)\right]^{-2}$

Feb 23-8:05 AM

(23) $K_1 = 5.5 \times 10^{-4}\ s^{-1}$ $T_1 = 39^\circ C = 312\ K$

$K_2 = 2.32 \times 10^{-3}\ s^{-1}$ $T_2 = 56^\circ C = 329\ K$

$E_a = ?$

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

Feb 23-8:09 AM