

Ch12 Kinetics Review Sheet

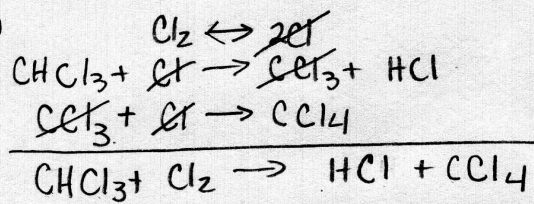
6. a) Rate = $k[\text{NH}_3]^0 = k$ $[A] = -kt + [A]_0$

b) Rate = $k = 2.5 \times 10^{-4} \text{ mol L}^{-1} \text{ min}^{-1}$

c) Rate = $k = 2.5 \times 10^{-4} \text{ mol L}^{-1} \text{ min}^{-1}$

d) $[\text{NH}_3] = -2.5 \times 10^{-4} \text{ mol L}^{-1} \text{ min}^{-1} (2.50 \text{ min}) + [0.040 \text{ mol L}^{-1}]$
 $= 0.039 \text{ mol L}^{-1}$

7. a)



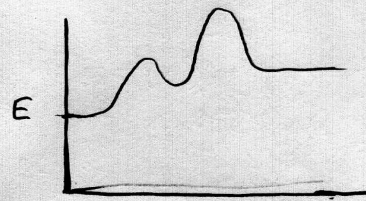
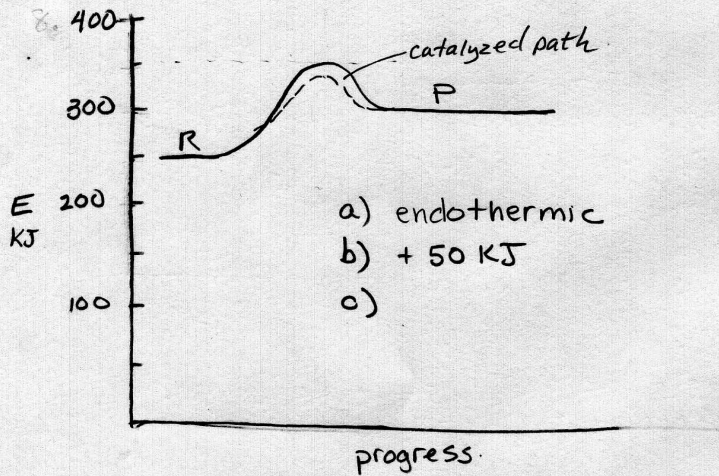
b) Cl , CCl_3

c) rate = $k[\text{CHCl}_3][\text{Cl}]$

$K_{eq} = \frac{[\text{Cl}]^2}{[\text{Cl}_2]}$ $[\text{Cl}] = \sqrt{K_{eq}[\text{Cl}_2]}$

rate = $k[\text{CHCl}_3]\sqrt{K_{eq}[\text{Cl}_2]}$
 $= k[\text{CHCl}_3]K_{eq}^{1/2}[\text{Cl}_2]^{1/2}$

8.



OR

