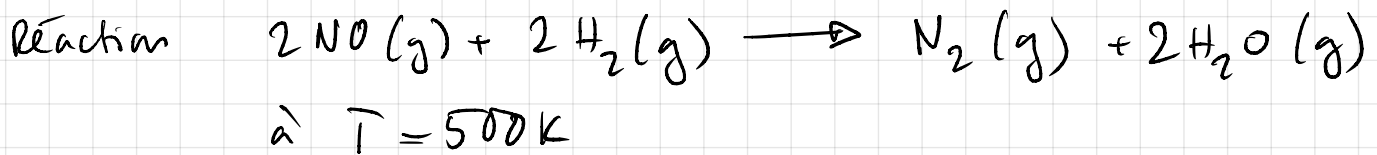


Exemple 1



Expériences :

	$p(\text{NO}_2) [\text{kPa}]$	$p(\text{H}_2) [\text{kPa}]$	$\frac{dp(\text{N}_2)}{dt} [\text{kPa} \cdot \text{s}^{-1}]$	
1	50	50	1.5	$v(\text{N}_2) \propto p(\text{H}_2)$
2	50	100 $\times 2$	3.0 $\times 2$	
3	50	150 $\times 3$	4.5 $\times 3$	
4	100 $\times 2$	150	18.0	$v(\text{N}_2) \propto p(\text{NO})^2$
5	150 $\times 3$	150	40.5 $\times 9$	

a) loi de vitesse $v(\text{N}_2) = k \cdot p(\text{NO})^2 \cdot p(\text{H}_2)$
ordre global $2 + 1 = 3$

b) valeur de k

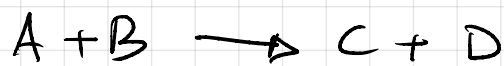
$$p(\text{NO}) = 50 \text{ kPa}$$

$$p(\text{H}_2) = 50 \text{ kPa}$$

$$v(\text{N}_2) = 1.5 \text{ kPa} \cdot \text{s}^{-1} \quad v = k p(\text{NO})^2 \cdot p(\text{H}_2)$$

$$k = \frac{v(\text{N}_2)}{p(\text{NO})^2 p(\text{H}_2)} = \frac{1.5 \cdot 10^{-5} (\text{kPa})^{-2} \text{s}^{-1}}{}$$

Example 2



t/s	$[B]/M$	$\Delta[B]/\Delta t$ ($\times 10^{-3}$)	$\ln([B]/c^\circ)$	$\Delta \ln/\Delta t$ ($\times 10^3$)
0	1.0		0.	
27.5	0.9	-3.6	-0.11	-4
62.5	0.8	-2.9	-0.22	-3.2
125	0.67	-2.1	-0.4	-2.9
250	0.5	-1.4	-0.69	:
750	0.25	:	-1.39	:
1750	0.125	:	-2.08	:
		ordre 0	ordre 1	

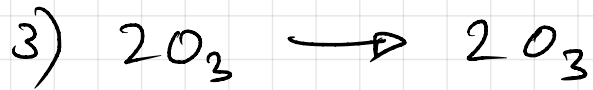
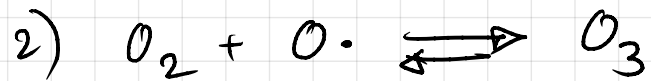
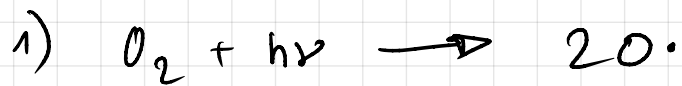
t/s	$[B]/M$	$1/[B]/M^{-1}$	$\Delta 1/B/\Delta t$ ($\times 10^{-3}$)
0	1.0	1	
27.5	0.9	1.11	4.
62.5	0.8	1.25	4
125	0.67	1.49	3.8
250	0.5	2.0	4.1
750	0.25	4.0	4.0
1750	0.125	8.0	4.0

ordre 2



$$k = 4 \cdot 10^{-3} M^{-1} s^{-1}$$

Exemple 3



loi de vitesse $v = k' \frac{p(O_3)^2}{p(O_2)}$

→ mécanisme en deux étapes!

