

# Constante de Equilibrio

Identificar y comprender el procedimiento para obtener la constante de equilibrio

Constante Equilibrio

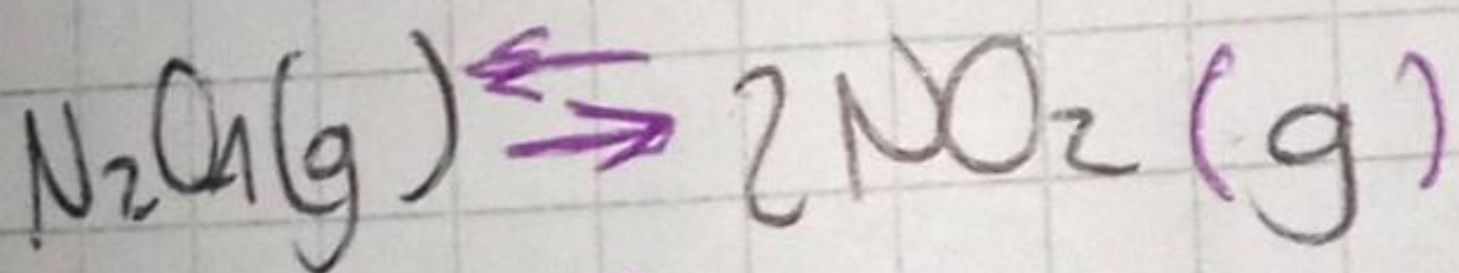
$$K = \frac{[C]^c \times [D]^d}{[A]^a \times [B]^b}$$

K = Constante equilibrio

A, B = productos      C, D = reactivos

{A} Concentración de equilibrio de A en moles

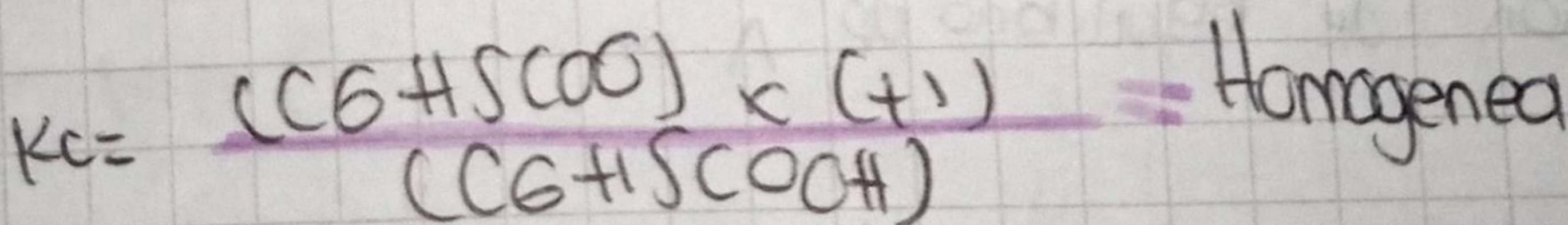
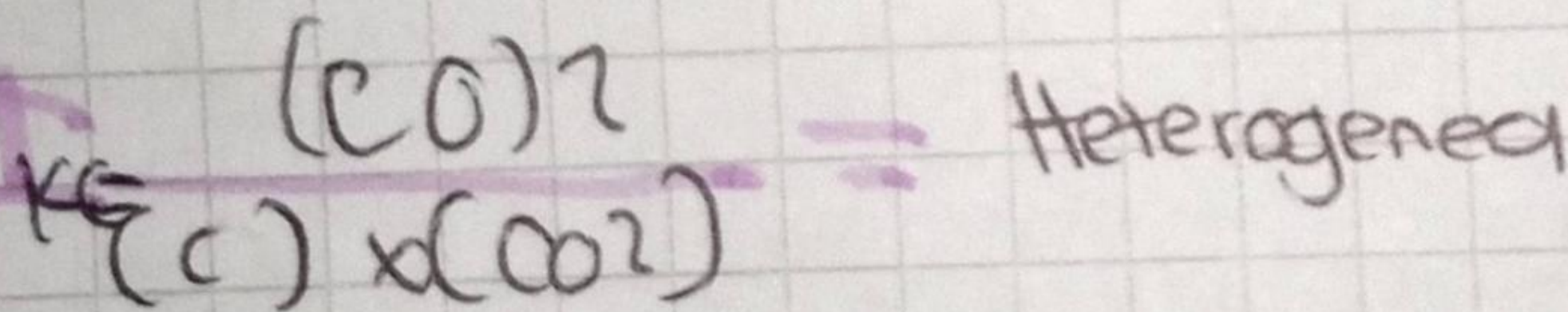
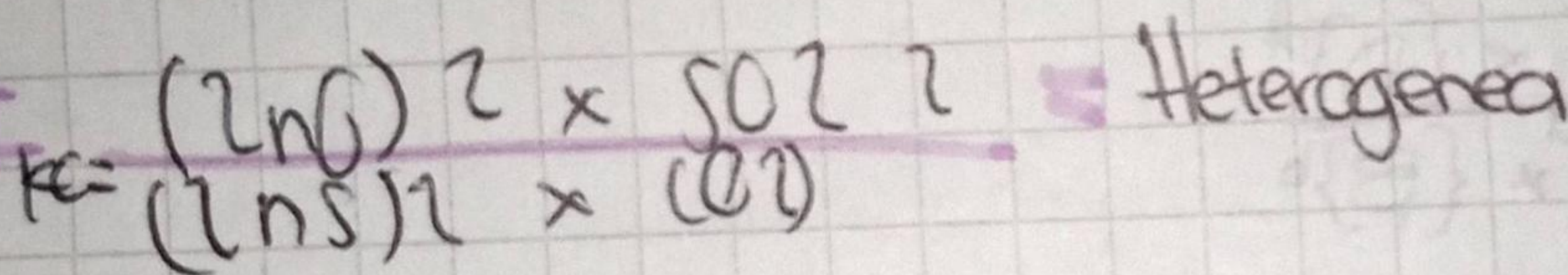
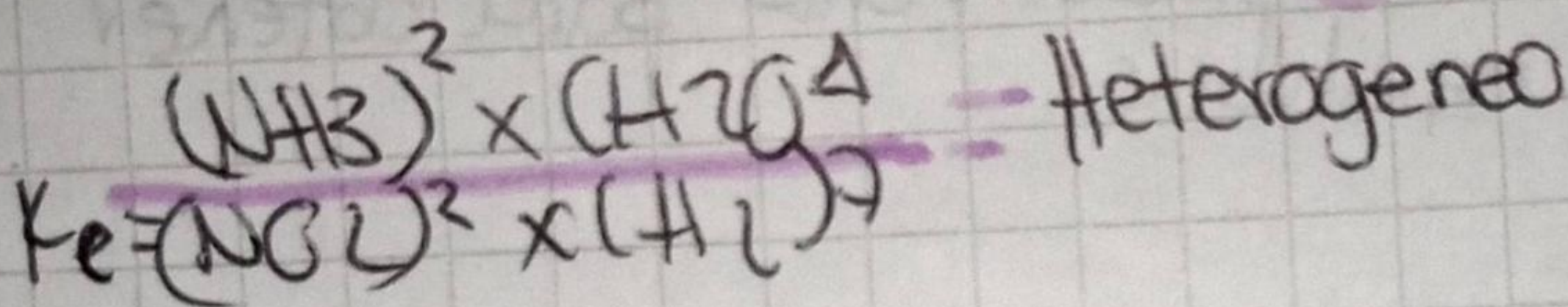
a números de moles de A



$$K = \frac{[\text{NO}_2]^2}{[\text{N}_2\text{O}_4]}$$

l = líquido  
s = sólido  
g = gaseoso  
AC = acuoso

# EXERCICIOS



Ejercicios :)

$$\frac{K C^c}{A^a} \times \frac{D^d}{B^b}$$

Sólido  
líquido  
baseado  
Acuoso

Segundo  $\leftrightarrow$  Primerero

$M_1$  3,1  $S_m$   $NH_3$  14M

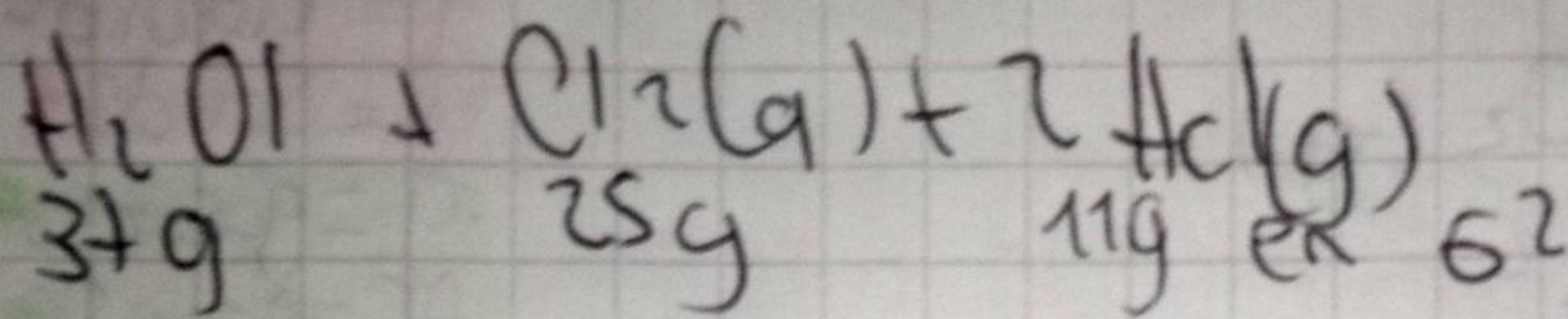
$K = ( )$	$N_2$	$H_2$	$NH_3$
$( ) ( )$	3,1	5	1,4

$$(3,1)^2$$

$$K = \frac{1,4^2}{(3,1)(5^3)} = \frac{1,96}{3,1 \cdot 125} = \frac{1,96}{387,5} = 0,005$$

0,28,60

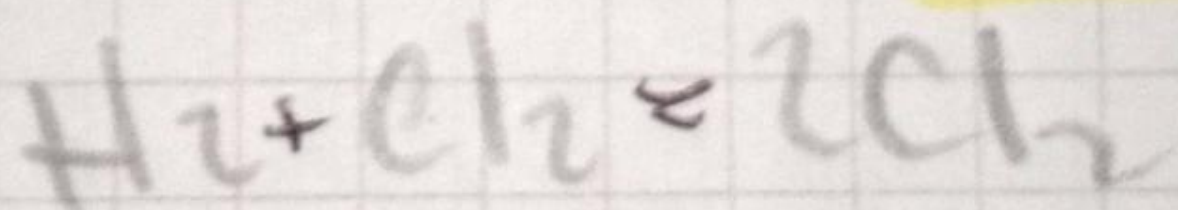
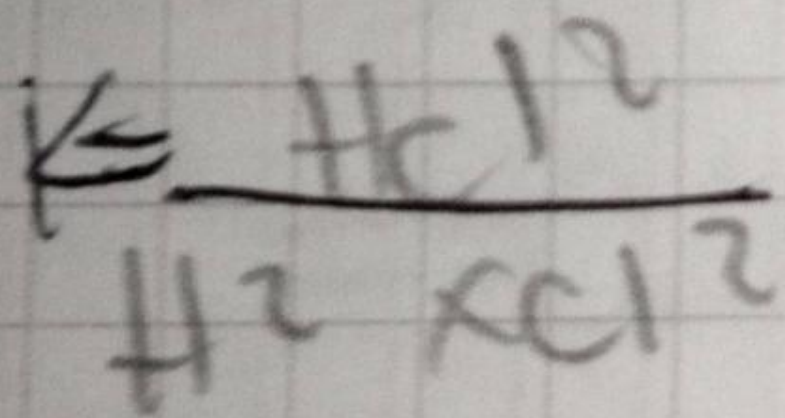
~~0,28,60~~  
60



$$\text{H}_2 = 1 \times 2 = 2 \rightarrow 37 / 2 \text{ g/mol} = 18,5 \rightarrow 18,5 / 6 = 3,08$$

$$\text{Cl}_2 = 35 \times 2 = 70 \rightarrow 70 / 36 \text{ g/mol} = 1,94 \rightarrow 1,94 / 6 = 0,32$$

$$\text{HCl} = 36 \text{ g/mol} \rightarrow 1 / 36 \text{ g/mol} = 0,027 \rightarrow 0,027 / 6 = 0,0045$$



# SOLUCIÓN

$$f_{Cl} = f_{g/35}$$

	H <sub>2</sub>	Cl <sub>2</sub>	H <sub>2</sub>
g	37g	25	11
M	3,08	0,038	0,030

$$K_C = \frac{HCl^2}{H_2 \cdot Cl_2}$$

$$K_C = \frac{0,030^2}{3,08 \cdot 0,038}$$

$$= \frac{0,025}{0,11864}$$

$$= 0,073_{mol}$$

$$= 0,073_{mol}$$