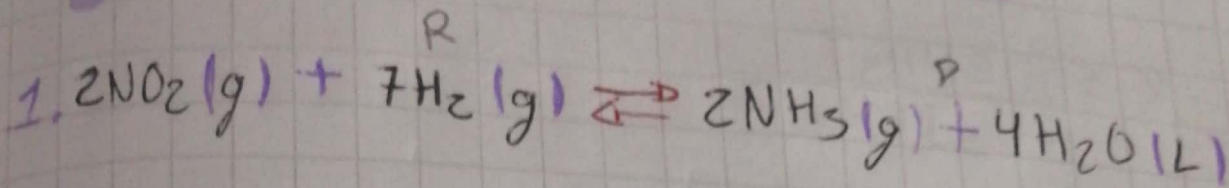
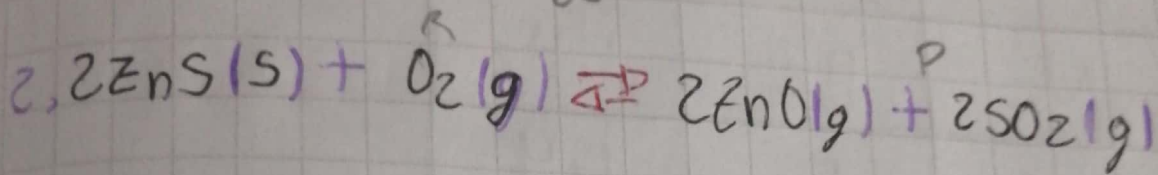


# Ejercicios



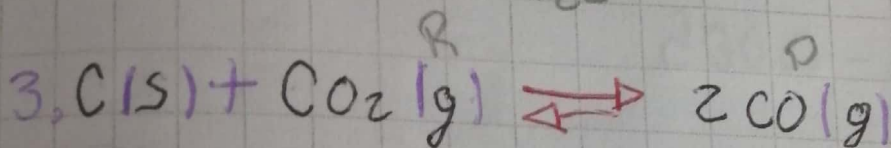
$$K_c = \frac{[\text{NH}_3]^2 \times [\text{H}_2\text{O}]^4}{[\text{NO}_2]^2 \times [\text{H}_2]^7}$$

heterogénea



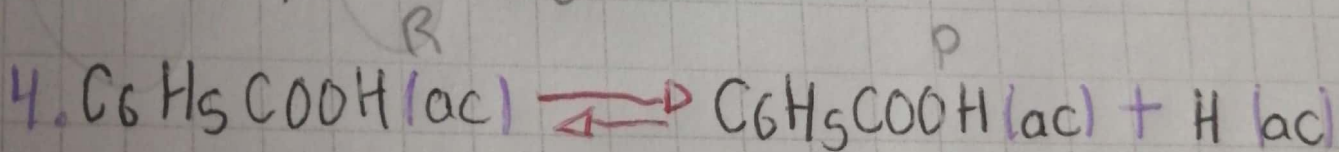
$$K_c = \frac{[\text{ZnO}]^2 \times [\text{SO}_2]^2}{[\text{ZnS}]^2 \times [\text{O}_2]^1}$$

heterogénea



$$K_c = \frac{[\text{CO}]^2}{[\text{C}]^1 \times [\text{CO}_2]^1}$$

heterogénea



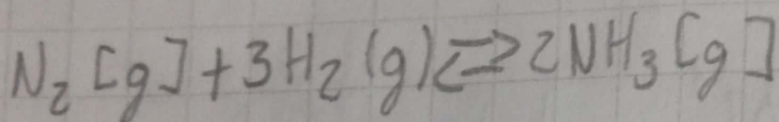
$$K_c = \frac{[\text{C}_6\text{H}_5\text{COO}^-]}{[\text{C}_6\text{H}_5\text{COOH}] \times [\text{H}^+]}$$

homogénea

# Ejercicio

Calcular la constante de equilibrio para la siguiente reaccion, si la concentracion de nitrogeno es de 3,1, la del hidrogeno es de 5 y la de amoniaco es de 1,4.

$$K = \frac{[NH_3]^2}{[N_2][H_2]^3}$$

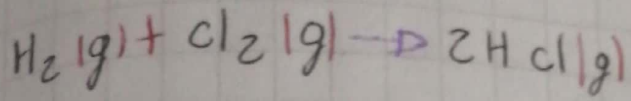


	$N_2$	$H_2$	$NH_3$
equilibrio M	3,1	5	1,4

$$\frac{[1,4]^2}{[3,1][5]^3} = \frac{1,96}{385,5} = 0,005$$

*Handwritten signature or initials.*

# Ejercicio



La cual contiene  $\text{H}_2$  37g  $\text{Cl}_2$  25g y  $\text{HCl}$  11g en 6L

$$n = g / PM$$

$\text{H}_2$

$\text{HCl}$

$$37g / 2 = 18.5m$$

$$M = 0.050$$

$$M = m / L$$

$$18.5 / 6$$

$$M = 3.083$$

$\text{Cl}_2$

$$M = 0.038$$

$$25 / 6 = 4.166$$

$$4.166 / 6 = 0.694$$

$$0.694 - 0.038 = 0.656$$

$$0.656 / 6 = 0.109$$

$$0.109 \times 2 = 0.218$$

$\text{H}_2$	$\text{Cl}_2$	$\text{HCl}$
37g	25g	11g
3.08M	0.038M	0.050M

$$K_c = \frac{[\text{HCl}]^2}{[\text{H}_2][\text{Cl}_2]}$$

$$K_c = \frac{[0.050]^2}{[3.08][0.038]} = \frac{0,0025}{0,17864} = K_c = 0,013$$