

Equilibrium Expression

May, 24/13

- sometimes called Equilibrium Law



$$\left[K_{\text{eq}} = \frac{[C]^c [D]^d}{[A]^a [B]^b} \right] \quad \leftarrow \text{equilibrium "expression"}$$

↳ only substances with 'variable' concentration are included in the equilibrium expression (g) (aq)

ex



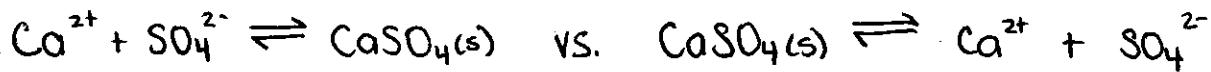
$$K_{\text{eq}} = \frac{[\text{NH}_3]^2}{[\text{N}_2][\text{H}_2]^3}$$

$$K_{\text{eq}} = \frac{1}{[\text{N}_2][\text{H}_2]^3}$$

K_{eq} - is a number

- is called the equilibrium constant
- can be looked up in tables
- temperature dependant (value changes for different temperatures)
- is not affected by anything else
- is dependant on the way the equilibrium is written

ex



$$K_{\text{eq}} = \frac{1}{[\text{Ca}^{2+}][\text{SO}_4^{2-}]}$$

$$K_{\text{eq}} = [\text{Ca}^{2+}][\text{SO}_4^{2-}]$$

↑ preferred choice