

Kc and Kp

Chemistry

Writing the expression, and what the value tells you.

The equilibrium constant is the ratio of product to reactant concentrations at equilibrium, each raised to its stoichiometric coefficient.

$$K_c = [C]^c[D]^d \div [A]^a[B]^b$$

K much greater than 1

Products favoured

K much less than 1

Reactants favoured

Changing temperature

K changes

The only thing that changes K.

THE COMMON MISTAKE

✗ **Thinking a catalyst or pressure change alters K**

✓ **Only temperature changes K**

Pressure and concentration shift the position of equilibrium; the constant itself stays the same at fixed temperature.

Kp uses partial pressures. Omit solids and pure liquids from both expressions — their activity is defined as 1.