

The Ideal Gas Law

- $P V = N k_B T$

- P = pressure in N/m^2 (or Pascals)

- V = volume in m^3

- N = number of molecules

- T = absolute temperature in K

- k_B = Boltzmann's constant = $1.38 \times 10^{-23} \text{ J/K}$

- Note: $P V$ has units of $\text{N}\cdot\text{m}$ or J (energy!)



- $P V = n R T$

- n = number of moles

- R = ideal gas constant = $N_A k_B = 8.31 \text{ J/mol/K}$

