

Constants

$$\begin{aligned}a_0 &= 5.29177249 \times 10^{-11} \text{ m} \\c &= 2.99792458 \times 10^8 \text{ m/s} \\\epsilon_0 &= 8.854187817 \times 10^{-12} \text{ C}^2/\text{N m}^2 \\F &= 96485.47 \text{ C/mol } q_e \\k_e &= 8987551788.0 \text{ N m}^2/\text{C}^2 \\G &= 6.67259 \times 10^{-11} \text{ N m}^2/\text{kg}^2 \\g &= 9.8 \text{ m/s}^2 \\h &= 6.626075 \times 10^{-34} \text{ J s} \\k_B &= 1.380658 \times 10^{-23} \text{ J/K} \\\lambda_C &= 2.42631058 \times 10^{-12} \text{ m} \\\mu_0 &= 12.5663706144 \times 10^{-7} \text{ N/A}^2 \\m_e &= 9.1093897 \times 10^{-31} \text{ kg} \\M_{earth} &= 5.98 \times 10^{24} \text{ kg} \\M_{moon} &= 7.36 \times 10^{22} \text{ kg} \\m_n &= 1.6749286 \times 10^{-27} \text{ kg} \\m_p &= 1.672623 \times 10^{-27} \text{ kg} \\M_{sun} &= 1.991 \times 10^{30} \text{ kg} \\N_A &= 6.0221367 \times 10^{23} \text{ 1/mol} \\P_{std} &= 1.013 \times 10^5 \text{ Pa} \\q_e &= 1.60217733 \times 10^{-19} \text{ C} \\R &= 8.314510 \text{ J/K mol} \\R_{earth} &= 6.37 \times 10^6 \text{ m} \\R_{earth_{moon}} &= 3.84 \times 10^8 \text{ m} \\R_{earth_{sun}} &= 1.496 \times 10^{11} \text{ m} \\R_H &= 1.0973731534 \times 10^7 \text{ 1/m} \\R_{moon} &= 1.74 \times 10^6 \text{ m} \\R_{sun} &= 6.96 \times 10^8 \text{ m} \\u &= 1.6605402 \times 10^{-27} \text{ kg} \\V_m &= 22.414 \times 10^{-3} \text{ m}^3/\text{mol}\end{aligned}$$