

$$c = 3.00 \times 10^8 \text{ m/s}$$

$$h = 6.626 \times 10^{-34} \text{ J}\cdot\text{s}$$

$$m_e = 9.11 \times 10^{-31} \text{ kg}$$

$$\mathcal{R} = 3.29 \times 10^{15} \text{ s}^{-1}$$

$$d_{\text{water}} = 1.00 \text{ g/mL}$$

$$1\text{lbs} = 453.6\text{g}$$

$$1 \text{ gal} = 3.785 \text{ L}$$

$$1 \text{ eV} = 1.602 \times 10^{-19} \text{ J}$$

$$T\lambda_{\text{max}} = \frac{1}{5}c_2$$

$$\nu = \mathcal{R} \left(\frac{1}{n_1^2} - \frac{1}{n_2^2} \right)$$

$$-\frac{\hbar^2}{2m} \frac{d^2\psi}{dx^2} + V(x)\psi = E\psi$$

$$\psi_n(x) = \left(\frac{2}{L}\right)^{\frac{1}{2}} \sin\left(\frac{n\pi x}{L}\right)$$

$$E_n = \frac{n^2 h^2}{8mL^2} \quad n = 1, 2, 3, \dots$$

$$E_n = -\frac{h\mathcal{R}}{n^2} \quad \mathcal{R} = \frac{m_e e^4}{8h^3 \epsilon_0^2}$$