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Frequency (commonness)

$$\omega = \frac{d}{dt}\varphi = \eta k v = kc = \frac{2\pi}{\mathcal{T}} = 2\pi \cdot \nu = \frac{a}{v} = \frac{v}{r} = \frac{E}{\hbar} = \sqrt{\frac{k}{m}} = \sqrt{\frac{r \times F}{m}} = \sqrt{\frac{g}{l}} \overset{EM}{=} ... = \sqrt{\frac{1}{LC}} \overset{QM}{=} \frac{1}{2}\frac{p^2}{m}\frac{1}{\hbar} = \frac{(\hbar\vec{k})^2}{2m} \tag{1}$$

$$\nu = \frac{E}{h} = \frac{v_{phs}}{\lambda} = \frac{c^2}{v}\frac{1}{\lambda} = \frac{\omega}{k}\frac{1}{\lambda} = \frac{\omega}{2\pi} \tag{2}$$

$$\nu_i = \frac{eV_{0i}}{h} + \nu_0 = \frac{E_{kin}}{\hbar}\omega\mathcal{T} + \nu_0 \tag{3}$$

$$e = \text{electron charge} \qquad V_0 = \text{Opposing Potential } (I = 0)$$
$$\text{Energy Level: } i = [1, n] \in \mathbb{N} \tag{4}$$

$$E_{kin}^{max} = eV_0 = h(\nu - \nu_0) \tag{5}$$