$$\langle 1 \rangle \quad \mathrm{F}(\omega) = \mathcal{F}[f(t)] = \int_{-\infty}^{\infty} f(t) e^{-iwt} \mathrm{d}t$$

$$\langle 2 \rangle \quad \mathrm{e}^{i\pi} + 1 = 0$$

$$\langle 3 \rangle \quad \int_{-\infty}^{\infty} \mathrm{e}^{-x^2} dx = \sqrt{\pi}$$

$$\langle 4 \rangle \quad -\frac{\hbar^2}{2\mu} \frac{\partial^2 \Psi(\mathrm{x},\mathrm{t})}{\partial \mathrm{x}^2} + \mathrm{U}(\mathrm{x},\mathrm{t})\Psi(\mathrm{x},\mathrm{t}) = \mathrm{i}\hbar \frac{\partial \Psi(\mathrm{x},\mathrm{t})}{\partial \mathrm{t}}$$

$$\langle 5 \rangle \quad \begin{cases} \nabla \cdot \mathbf{D} = \rho_f \\ \nabla \cdot \mathbf{B} = 0 \\ \nabla \times \mathbf{E} = -\dfrac{\partial \mathbf{B}}{\partial t} \\ \nabla \times \mathbf{H} = \mathbf{J}_f + \dfrac{\partial \mathbf{D}}{\partial t} \end{cases}$$

$$\langle 6 \rangle \quad \pi(k) = k - 1 + \sum_{j=2}^{k} \left[\frac{2}{j} \left(1 + \sum_{s=1}^{[\sqrt{j}]} \left(\left[\frac{j-1}{s} \right] - \left[\frac{j}{s} \right] \right) \right) \right]$$

$$\langle 7 \rangle \quad \sum_{\tau \in S_n : \tau(i) = j} \operatorname{sgn} \tau b_{1,\tau(1)} \ldots b_{n,\tau(n)}$$
$$= \sum_{\sigma \in S_{n-1}} (-1)^{i+j} \operatorname{sgn} \sigma b_{ij} a_{1,\sigma(1)} \cdots a_{n-1,\sigma(n-1)}$$
$$= b_{ij} (-1)^{i+j} |M_{ij}|$$

$$\langle 7 \rangle \quad \prod_{m=1}^{\infty} \left(1 - x^{2m}\right)\left(1 - x^{2m-1} y\right)\left(1 - x^{2m-1} y^{-1}\right) = \sum_{n=-\infty}^{\infty} (-1)^n x^{n^2} y^n.$$

⟨Green′s identities⟩

$$\langle 1.1 \rangle \quad \iint_D \left(\frac{\partial Q}{\partial x} - \frac{\partial P}{\partial y} \right) \mathrm{d}x \mathrm{d}y = \oint_{L+} (P \mathrm{d}x + Q \mathrm{d}y)$$

$$\langle 1.2 \rangle \quad \int_{\mathrm{U}} \left(\psi \nabla^2 \phi - \phi \nabla^2 \psi \right) \mathrm{d}V = \oint_{\partial \mathrm{U}} \left(\psi \frac{\partial \phi}{\partial n} - \phi \frac{\partial \psi}{\partial n} \right) \mathrm{d}S$$

$$\langle 1.3 \rangle \quad \int_{\mathrm{U}} (\psi \nabla^2 \phi + \nabla \phi \cdot \nabla \psi) \mathrm{d}V = \oint_{\partial \mathrm{U}} \psi \frac{\partial \phi}{\partial n} \mathrm{d}S$$

$$\langle 1.4 \rangle \quad \psi(\mathrm{x}) = \oint_{\partial \mathrm{U}} \left[\psi(\mathrm{x}') \frac{\partial G(\mathrm{x},\mathrm{x}')}{\partial n'} - G(\mathrm{x},\mathrm{x}') \frac{\partial \psi(\mathrm{x}')}{\partial n'} \right] \mathrm{d}S'$$

⟨Stokes′ theorem⟩

$$\langle 2.1 \rangle \quad \iint_S \begin{vmatrix} \cos\alpha & \cos\beta & \cos\gamma \\ \frac{\partial}{\partial x} & \frac{\partial}{\partial y} & \frac{\partial}{\partial z} \\ P & Q & R \end{vmatrix} dS = \oint_{\Gamma} P dx + Q dy + R dz$$

$$\langle 2.2 \rangle \quad \int_M d\omega = \int_{\partial M} \omega = \oint_{\partial M} \omega$$

⟨Cauchy′s theorem⟩

$$\langle 3 \rangle \quad \oint_{\gamma} f(z) dz = 0$$

⟨Cauchy′s integral theorem⟩

$$\langle 4 \rangle \quad f(a) = \frac{1}{2\pi i} \oint_{\gamma} \frac{f(z)}{z - a} dz$$

⟨Residuetheorem⟩

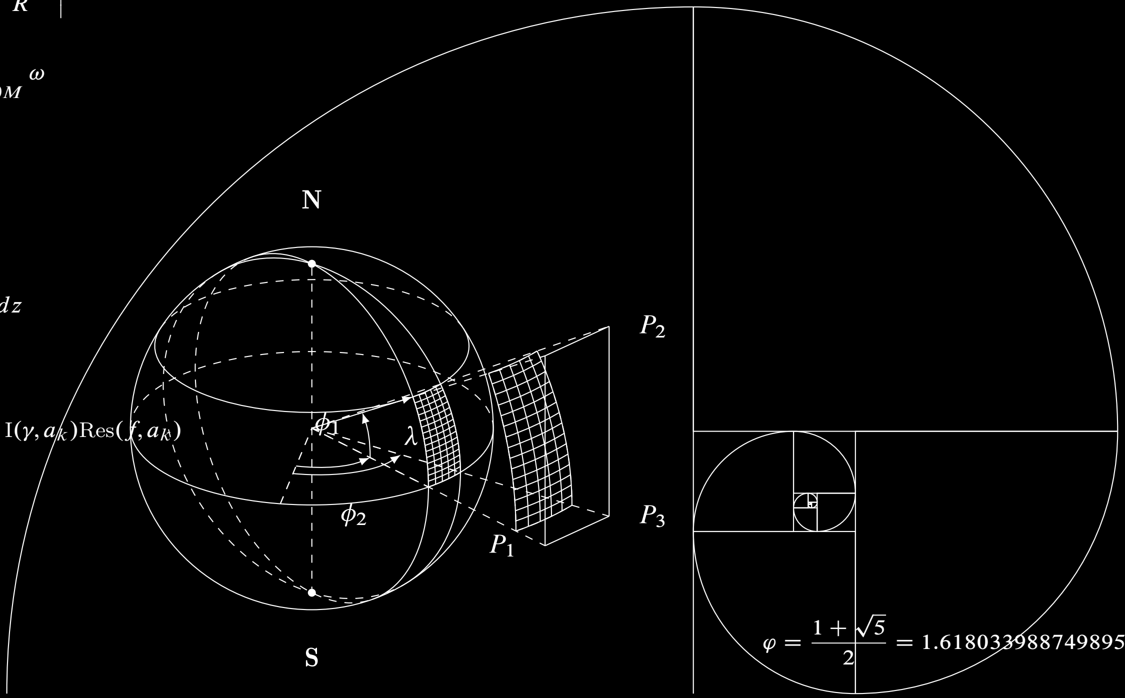
$$\langle 5 \rangle \quad \oint_{\gamma} f(z) dz = 2\pi i \sum_{k=1}^{n} \mathrm{I}(\gamma, a_k) \mathrm{Res}(f, a_k)$$

$$\langle 1 \rangle \quad y = \mathrm{Exp}\{-\int p(x)\mathrm{d}x\} \cdot \int \left(\mathrm{Exp}\{\int p(x) dx\} \cdot q(x) + C \right) \mathrm{d}x$$

$$\langle 2.1 \rangle \quad \left[\sum_{i=1}^{n} a_i^2 \right] \cdot \left[\sum_{i=1}^{n} b_i^2 \right] = \left[\sum_{i=1}^{n} a_i b_i \right]^2 + \sum_{1 \le i \le j \le n} (a_i b_j - a_j b_i)^2$$

$$\langle 2.2 \rangle \quad \sum_{i=m}^{n} a_i b_i = \sum_{i=m}^{n-1} A_i \left(b_i - b_{i+1} \right) + A_n b_n - A_{m-1} b_m$$

$$\langle 3 \rangle \quad \lim_{n \to \infty} \frac{n!}{\sqrt{2\pi n} \left(\frac{n}{e} \right)^n} = 1$$



$$\varphi = \frac{1 + \sqrt{5}}{2} = 1.618033988749895$$