$$\Delta \Phi = 0 \qquad \Delta \Phi = f(x, y, z)$$

$$\Delta \Phi = \frac{1}{\alpha^2} \frac{\partial \Phi}{\partial t}$$

$$\Delta \Phi = \frac{1}{\alpha^2} \frac{\partial^2 \Phi}{\partial t^2} \qquad \Delta \Phi + k^2 \Phi = 0$$

$$\frac{-\hbar^2}{2m} \Delta \Phi + V \Phi = i \hbar \frac{\partial \Phi}{\partial t}$$

$$\int_S E \cdot dS = \frac{Q}{\epsilon_0} \qquad \nabla \cdot E = \frac{\rho}{\epsilon}$$

$$\int_S B \cdot dS = 0 \qquad \nabla \cdot B = 0$$

$$\int_C E \cdot dl = \frac{d \Phi}{dt} \qquad \nabla \times E = \frac{-\partial B}{\partial t}$$

$$\int_C B \cdot dl = \mu \left[I + \epsilon_0 \frac{d}{dt} \int_S E \cdot dS \right] \quad \nabla \times B = \mu \left[J + \frac{\partial \epsilon E}{\partial t} \right]$$

$$\Delta = \nabla^2 \qquad \nabla = i \frac{\partial}{\partial x} + j \frac{\partial}{\partial y} + k \frac{\partial}{\partial z}$$

$$t' = \gamma\left(t - \frac{vz}{c^2}\right)$$

$$z' = \gamma(z - vt)$$
$$y' = y$$
$$x' = x$$

$$\gamma = \frac{1}{\sqrt{1 - \frac{v^2}{c^2}}}$$

$$R_{\mu\nu} - ½ R g_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi G}{c^4} T_{\mu\nu}$$

$$\bar{F} = q \cdot \bar{E} + q \bar{v} \times \bar{B}$$

$$\nabla \times \bar{E} = -\frac{\partial \bar{B}}{\partial t}$$

$$\bar{F} = -G \frac{m_1 m_2}{r^2} \hat{r}$$

$$G = 6.7^{-11} \frac{\mathrm{Nm}^2}{\mathrm{kg}^2}$$

$$\bar{F} = -K_e \frac{q_1 q_2}{r^2} \hat{r}$$

$$K_e = 9.0^9 \frac{\mathrm{Nm}^2}{\mathrm{C}^2}$$

$$\bar{F} = -K_m \frac{p_1 p_2}{r^2} \hat{r}$$

$$K_m = 1.0^{-7} \frac{\mathrm{Ns}^2}{\mathrm{C}^2}$$