

A. *Einstein mass/energy:*

$$E = mc^2$$

B. *Maxwell's Equations in Vacuum:*

$$\begin{aligned}\nabla \cdot \mathbf{B} &= 0 & \nabla \cdot \mathbf{E} &= 0 \\ \nabla \times \mathbf{B} &= \frac{1}{c} \frac{\partial \mathbf{E}}{\partial t} & \nabla \times \mathbf{E} &= -\frac{1}{c} \frac{\partial \mathbf{B}}{\partial t}\end{aligned}$$

C. *Stokes' Theorem*

$$\int_M d\omega = \int_{\partial M} \omega$$

D. *The boundary of a boundary is zero*

$$\partial\partial = 0$$

E. *Heisenberg Uncertainty Principle:*

$$\Delta x \Delta p \geq \hbar/2$$

F. *Primes and the zeta function:*

$$\prod_p \frac{1}{1 - \frac{1}{p^s}} = \sum_{n=1}^{\infty} \frac{1}{n^s}$$

G. *Kepler's Second Law*

$$\frac{d\theta}{dt} \propto \frac{1}{r^2}$$

H. *Newton's mass-acceleration law:*

$$\mathbf{F} = m \mathbf{a}$$

I. *Kepler's Third Law*

$$T \propto a^{\frac{3}{2}}$$

J. *Newton's Law of Gravitation:*

$$F = \frac{Gm_1m_2}{r^2}$$

K. *Einstein's General Relativity Equation:*

$$R_{\mu\nu} - \frac{1}{2}Rg_{\mu\nu} = 8\pi GT_{\mu\nu}$$

L. *Schrödinger's Equation, Dirac Equation*

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

$$(i\not{D} - m)\psi = 0$$

M. *Atiyah-Singer Theorem for Twisted Dirac Operator:*

$$\dim\ker\not{D}_E - \dim\operatorname{coker}\not{D}_E = \int_M \hat{A}(M) \cdot ch(E)$$

N. *Yang-Mills equations:*

$$F = dA + A \wedge A$$

$$D_A^*F = 0$$

O.

$$\{\overline{\mathbb{Q}}, \mathbb{Q}\} = \mathbb{P}$$