

Taken from:

Rajna, G. (2014). "The secret of quantum entanglement." vixra.org/pdf/1406.0008v2.pdf; and
 Rajna, G. (2018). "Mathematical models of inventions". vixra.org/pdf/1801.0366v1.pdf
 Note: We attempted to contact George Rajna, the chess master and physicist, without address.

"The frequency dependence of mass: Since $E = hv$ and $E = mc^2$, $m = hv / c^2$ that is the m depends only on the v frequency." where $m =$ mass, $h =$ Planck's constant, $c =$ speed of light.

Remark: Planck's constant is arguably not exact, but rather a probabilistic estimation.

$$m = hv / c^2 \tag{1.1}$$

Remark: m is undefined if either hv or c^2 is zero. (Elsewhere we show $0/n$ is not 0.)

LET: $pqrs$ $cmhv$; \sim Not; $-$ Not Or; $\&$ And; \backslash Not And; $>$ Imply; $=$ Equivalence; $(p-p)$ Numeric zero

T is tautology as the designated *proof* value, with F as contradiction

The 16-valued truth tables are presented row-major and horizontally.

Using the Meth8/VL4 apparatus and method, we render Eq. 1.1 as

$$q=((r\&s)\(p\&p)) ; \qquad \text{F F T T} \quad \text{F F T T} \quad \text{F F T T} \quad \text{F F T T} \tag{1.2}$$

Eq. 1.2 is *not* tautologous which means the fractional equation cannot be a theorem.

We attempt to resuscitate Eq. 1.2 by changing the connective of the literal to $>$ Imply.

$$q>((r\&s)\(p\&p)) ; \qquad \text{T T T T} \quad \text{T T T T} \quad \text{T T T T} \quad \text{T T T F} \tag{1.2.1}$$

Eq. 1.2.1 is *not* tautologous, meaning that Eq. 1.2.1 is not an implication, although nearly so.

We attempt to resuscitate Eq. 1.2 by defining p as not numeric zero $\sim(p-p)$:

$$(p=\sim(p-p))>(q=((r\&s)\(p\&p))) ; \qquad \text{F F T T} \quad \text{F F T T} \quad \text{F F T T} \quad \text{F F T T} \tag{1.3}$$

Eq. 1.3 is *not* tautologous and results in the same truth table as Eq. 1.2.

We attempt to resuscitate Eq. 1.2 by defining p as numeric zero $(p-p)$:

$$(p= (p-p))>(q=((r\&s)\(p\&p))) ; \qquad \text{T T T T} \quad \text{T T T T} \quad \text{T T T T} \quad \text{T T T T} \tag{1.4}$$

Eq. 1.4 is tautologous, meaning that in the case of p as numeric zero then Eq. 1.2 is a theorem.

What follows is:

The frequency dependence of mass is *untenable*: Since $E = hv$ and $E = mc^2$, $m = hv / c^2$ that is the m depends only on the v frequency is *not* tautologous.

Hence, the frequency of mass is a suspicious statistic.