Meth8/VŁ4 on complex numbers (ℂ)

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Complex numbers (ℂ) are generally defined by a component of the imaginary number as $i^2 = -1$, where $i = \sqrt{-1}$ as $i = (1+i)/\sqrt{2}$ and $i = (-1-i)/\sqrt{2}$  

(0.0.1)

**Remark:** We note that the roots of $i$ are axioms described in terms of itself, normally not allowed, and the cause of the skepticism of Euler and others.

We assume the method and apparatus of Meth8/VŁ4 with tautology as the designated proof value, $\mathcal{F}$ as contradiction, $\mathcal{N}$ as truthity (non-contingency), and $\mathcal{C}$ as falsity (contingency). The 16-valued truth table is row-major and horizontal.

LET: $p, q$: $i, \sqrt{2}$;  
~ Not;  & And; + Or; - Not Or; = Equivalent to; > Imply;  
% possibility, for one or some; # necessity, for all or every;  
($\%r>\#r$) ordinal one, 1.

$p=(((\%r>\#r)+p)\ q)+((~(\%r>\#r)-p)\ q))$; FTNT FTNT FTNT FTNT  

(0.0.2)

Because Eq. 0.0.2 is not tautologous, not a theorem, that is cause to reject the imaginary number as a bivalent entity.

We attempt to weaken the expression in Eq. 0.1 to obtain a tautologous result by replacing the Equivalent connective with the Imply connective.

(0.1.1)

$p>(((\%r>\#r)+p)\ q)+((~(\%r>\#r)-p)\ q))$; TTTT TTTT TTTT TTTT  

(0.1.2)

Eq. 0.1.2 is tautologous, as based on the canonical pattern in VŁ4 of $\text{FTFT} > \text{TTCT} = \text{TTTT}$.

This means that imaginary numbers in Meth8/ VŁ4 are rendered as implications and not equivalences, which serves to reason since complex numbers are imaginary and literally not real.

Hence the complex number space (ℂ) is arguably a probabilistic vector space and never exact. Quantum field theory as based on ℂ is probabilistic, not bivalent, and hence suspicious.