

Refutation of the conjecture for Heisenberg's principle

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Abstract: The conjecture for Heisenberg's principle is that for a particle/wave at an exact time, the location, and momentum is impossible to know, that is: the variables as together cannot be true. We show this is *not* tautologous and hence refute it in the shortest demonstration of its kind.

We assume the method and apparatus of Meth8/VL4 with \mathbb{T} tautology as the designated *proof* value, \mathbb{F} as contradiction, \mathbb{N} as truthity (non-contingency), and \mathbb{C} as falsity (contingency). Results are a 16-valued truth table in row-major and horizontal, or repeating fragments of 128-tables for more variables.

The conjecture for Heisenberg's principle is that for a particle/wave at an exact time, the location, and momentum is impossible to know, that is: the variables as together cannot be true. (1.1)

LET p, q, r, s : particle/wave, time, location,
momentum [alternatively velocity or speed serve the same logical purpose here];
 \sim Not; $\&$ And; $=$ Equivalent; \mathbb{T} ($p=p$); \mathbb{F} $\sim(p=p)$.

$$(p\&(q\&(r\&s))) = \sim(p=p) ; \quad \mathbb{T}\mathbb{T}\mathbb{T}\mathbb{T} \mathbb{T}\mathbb{T}\mathbb{T}\mathbb{T} \mathbb{T}\mathbb{T}\mathbb{T}\mathbb{T} \mathbb{T}\mathbb{T}\mathbb{T}\mathbb{F} \quad (1.2)$$

Eq. 1.2 as rendered is *not* tautologous and hence the shortest refutation of the conjecture for Heisenberg's principle.