

Confirmation of a trivial vector conjecture

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We assume the method and apparatus of Meth8/VL4 with τ 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.

LET p, q, r : point p , point q , point s ;
~ Not; & And; + Or; - Not Or; > Imply, greater than; = Equivalent;
necessity, for all or every; % possibility, for one or some;
 $((p-q)=(q-p))$ The absolute value of the distance p to q is equivalent to that of q to p ;
 $((p-r)=(r-p))$ The absolute value of the distance p to r is equivalent to that of r to p ;
 $((q-r)=(r-q))$ The absolute value of the distance q to r is equivalent to that of r to q .

"From the distance between two points, a third point always has the same distance to the other points." (1.0)

We rewrite Eq. 1.0 as:

"If two points imply the necessity of a third point, then the respective distances are possibly the same." (1.1)

$((p\&q)\>\#r)\>\%(((p-q)=(q-p))=(((p-r)=(r-p))=(((q-r)=(r-q)))));$
TTTT TTTT TTTT TTTT (1.2)

Eq. 1.2 is tautologous, hence confirming the conjecture.

Remark: This exercise indirectly speaks to the fact that the vector space is *not* bivalent.