

Refutation of Gleason's theorem

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We assume the method and apparatus of Meth8/VL4 with \top as the designated *proof* value, \bot as contradiction, \top as truthity (non-contingency), and \bot as falsity (contingency). The 16-valued truth table is row-major and horizontal.

LET: $\&$ And; $>$ Imply, greater than, believes, knows; $<$ Not Imply, less than;
= Equivalent, is; # necessity, for all or any; % possibility, for one or some;
p probability measure; q quantum state; r measurement outcomes; s space;
(p=p) tautology, legitimate.

From: en.wikipedia.org/wiki/Gleason%27s_theorem

"Effectively, the theorem says that any legitimate probability measure on the space of measurement outcomes is generated by some quantum state." (1.1)

%q>((#p>(p=p))<(r<s)) ; TTTT NFFF TTTT TTTT (1.2)

Eq. 1.2 as rendered is *not* tautologous. This means Gleason's theorem is *not logically* "a mathematical result which shows that the rule one uses to calculate probabilities in quantum physics follows logically [*sic*] from particular assumptions about how measurements are represented mathematically".