Refutation of the quantifier Most

Abstract: We evaluate two equivalent semantics for "Most A are B" which while logically equivalent are neither tautologous. Hence the quantifier Most is refuted.

We assume the method and apparatus of Meth8/VŁ4 with Tautology as the designated *proof* value, **F** as contradiction, N as truthity (non-contingency), and C as falsity (contingency). For results, the 16-valued truth table is row-major and horizontal, or repeating fragments of 128-tables, sometimes with table counts, for more variables. Reproducible transcripts for results are available. (See ersatz-systems.com.)

LET p, q, r, s: A, B, C, s;
~ Not, ¬ ; + Or, ∨, ∪; - Not Or; & And, ∧, ∩; \ Not And;
> Imply, greater than, →, ↦, ≻, ⊃, ⊢, ⊨; < Not Imply, less than, ∈, ≺, ⊂;
= Equivalent, ≡, :=, ⟺, ↔, ≙; @ Not Equivalent, ≠;
% possibility, for one or some, ∃, ◊, M; # necessity, for every or all, ∀, □, L;
(z=z) T as tautology, ⊤, ordinal 3; (z@z) **F** as contradiction, ∅, Null, ⊥, zero;
(%z>#z) N as non-contingency, ∇, ordinal 1; (%z<#z) C as contingency, Δ, ordinal 2;
~(y < x) (x ≤ y), (x ⊆y); (A=B) (A~B).

From: Topal, S. (2019). Natural density and the quantifier most.
arxiv.org/pdf/1901.10394.pdf s.topal@beu.edu.tr

Two different but equivalent semantics are for Most A are B as

(i) C(A ∩ B) > C(A \ B) and (1.1)

((r&(p&q))>(r&(p\q)))>((r&p)=q) ; TT**FF** T**FF**T TT**FF** T**FF**T (1.2)

(ii) C(A ∩ B) > C(A)/2 (2.1)

((r&(p&q))>((r&p)\(%s<#s)))>((r&p)=q) ; TT**FF** T**FF**T TT**FF** T**FF**T (2.2)

While Eqs. 1.2 and 2.2 as rendered share the same truth table result, being logically equivalent, neither is tautologous. The means the quantifier Most is refuted.