Logic not tautologous in neutrosophic sets

From: Wang, H; et al. Single valued neutrosophic sets. vixra.org/pdf/1004.0051v1.pdf [raj@cs.gsu.edu]

We test a theorem and two properties from above.

We assume the apparatus of the Meth8 modal logic model checker implementing variant system VŁ4. Meth8 allows to mix four logical values with four analytical values. The designated *proo*f value is T.

Definition	Axiom	Symbol	Name	Meaning	2-tuple	Ordinal
1	p=p	T	Tautology	proof	11	3
2	p@p	F	Contradiction	absurdum	00	0
3	%p>#p	N	Non-contingency	truth	01	1
4	%p<#p	C	Contingency	falsity	10	2

LET: + Or; & And; \ Not and; > Imply; < Not imply; = Equivalent to;
@ Not equivalent to; # all; % some; (p@p) zero ; (p=p) one

Results are the proof table of 16-values in row major horizontally.

Theorem 3 [sic]; read Theorem 1. $A \subseteq B \leftrightarrow c(B) \subseteq c(A)$

~(A>B)=~((C&B)>(C&A)) ; `TFTT TFFT TFTT TFFT` (1.1)

Property 5. $A \cup X = X$, where ...

(((((t&q)=(u&q))=(p@p))&((s&q)=(p=p)))&((((t&r)=(u&r))=(p=p))&((s&r)=(p@p))))
> ((p+r)=r) ; `TTTT TTTT TTTF TTTT` (5.2)

Property 6. $A \cup \varphi = A$, where ...

(((((t&q)=(u&q))=(p@p))&((s&q)=(p=p)))&((((t&r)=(u&r))=(p=p))&((s&r)=(p@p))))
> ((p+q)=p) ; `TTTT TTTT TTFT TTTT` (6.1)

Eqs. 1.1, 5.2, and 6.1 should be tautologous, but are not.