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# Four Variable Predicate Calculus for Boolean Valued Functions. Part II

Shunichi Kobayashi
Ueda Multimedia Information Center
Nagano

**Summary.** In this paper, we proved some elementary predicate calculus formulae containing the quantifiers of Boolean valued functions with respect to partitions. Such a theory is an analogy of ordinary predicate logic.

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The articles [5], [4], [7], [6], [3], [1], and [2] provide the notation and terminology for this paper.

For simplicity, we adopt the following rules: $Y$ is a non empty set, $a$ is an element of $Boolean^Y$, $G$ is a subset of PARTITIONS$(Y)$, and $A$, $B$ are partitions of $Y$.

Next we state the proposition

(4)[1] $\forall_{\neg\exists_{a,A}G,B}G \Subset \neg\exists_{\forall_{a,B}G,A}G$.

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[5] Zinaida Trybulec. Properties of subsets. *Journal of Formalized Mathematics*, 1, 1989. http://mizar.org/JFM/Vol1/subset_1.html.

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[1] The propositions (1)–(3) have been removed.



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