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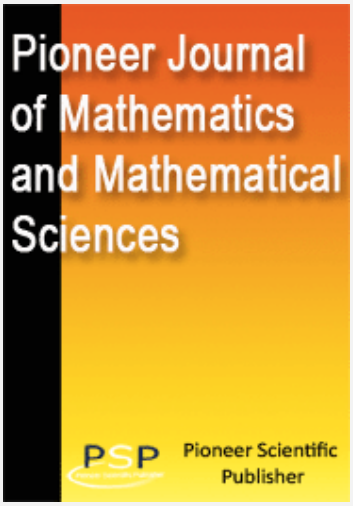

CHARACTERIZATIONS OF FINITE AND COUNTABLE SETS USING EQUIVALENCES OF NON-T_0 SEPARATION AXIOMS AND ALEXANDROFF AND STRONG ALEXANDROFF SPACES

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Abstract

Within this paper characterizations of nonempty finite and countable sets using equivalences of classical separation axioms are extended to generalized, non-T_0 separation axioms, nonempty finite sets a further characterized using Alexandroff and strong Alexandroff spaces, and the results are used to determine the number of topologies on a finite set satisfying certain separation axioms.

Keywords and phrases: finiteness, countable, Alexandroff spaces, generalized separation axioms.