

DECOMPOSITIONS OF CONTINUITY VIA SIMPLY-OPEN SETS

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Abstract: In [7, 9, 13, 14], the class of simply –open sets was introduced and explored. In this paper, we introduce what we call SM– continuity and *SMM*–continuity and we give several characterizations and two decompositions of *SM*–continuity. Finally, new decompositions of continuity are provided.

Keywords and Phrases: Simply-open, M-continuity, continuity.

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1. Introduction

Let (X, \mathfrak{T}) be a topological space (or simply, a space). If $A \subseteq X$, then the closure of A and the interior of A will be denoted by $Cl_{\mathfrak{T}}(A)$ and $Int_{\mathfrak{T}}(A)$, respectively. If no ambiguity appears, we use \bar{A} and A° , respectively. By X, Y and Z we mean topological spaces with no separation axioms imposed. $\mathfrak{T}_{standard}$, $\mathfrak{T}_{indiscrete}$, $\mathfrak{T}_{left ray}$ and $\mathfrak{T}_{cocountable}$ will stand for the standard, indiscrete, left ray and the cocountable topologies, respectively. A space (X, \mathfrak{T}) is anti locally countable if all non-empty open subsets are uncountable.

In [7, 9, 13], a subset A of a space (X, \mathfrak{T}) is called simply –open if $A = O \cup N$, where O is open and N is nwd subset of X . The class of all simply–open sets in X