

OPERATION APPROACHES ON SPECIFIC OPEN SETS

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(Received: Sep. 18, 2020 Accepted: Jul. 23, 2021 Published: Aug. 30, 2021)

Abstract: In this paper, we shall define the properties for arbitrary topological spaces such as $\alpha_{(\lambda, \lambda')}$ -connected spaces and μ_Ω -compact spaces and shall prove the appropriate theorems with counter examples. Also we established that, $\alpha_{(\lambda, \lambda')}$ -locally connectedness is an $\alpha_{(\lambda, \lambda')}$ -open hereditary and we conclude that γ -operation defined by Ogata is an restriction of λ -operation.

Keywords and Phrases: $\alpha_{(\lambda, \lambda')}$ -open sets, $\alpha_{(\lambda, \lambda')}$ -connected spaces, Ω -open sets, μ_Ω -open sets and μ_Ω -compact spaces.

2020 Mathematics Subject Classification: 54A05, 54A15, 54B17.

1. Introduction

In 1979, Kasahara [15] initiated the concept of an operator (α) associated to a topology and gave some definitions which are equivalent to the usual ones when the operator involved is the identity operator. In 1991, Ogata [24] called the operation α as γ -operation on τ and defined and investigated the concept of operation-open sets, that is γ -open sets. He defined the complement of a γ -open subset of a space X as γ -closed. He also proved that the union of any collection of γ -open sets is γ -open but the intersection of any two γ -open sets need not be γ -open. Therefore the collection of γ -open sets need not be a topology on X . Krishnan. et al. [17] and [18] defined two types of sets called γ -preopen and γ -semiopen sets of a topological space (X, τ) respectively. Kalaivani. et al. [14] defined the notion of α - γ -open sets. Basu. et al. [8] used the operation γ to introduce γ - β -open sets. Also Carpintero. et al. [10] defined the notation of γ -b-open sets of a topological