

APPLICATIONS OF \hat{g}^{**} -CLOSED SETS IN
TOPOLOGICAL SPACES

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Abstract: Topology is the branch of Mathematics which was introduced by Johann Benedict Listing in 19th century and its purpose is to investigate the ideas of continuity, within the frame work of Mathematics. The authors introduces a new class of sets namely, \hat{g}^{**} -s-closed sets [1]. We define \hat{g}^{**} -s-closed sets by "A subset of a topological space (X, τ) is called a \hat{g}^{**} -s-closed sets if $scl(A) \subseteq U$, whenever $A \subseteq U$ and U is \hat{g}^{**} -open" [1]. In this paper using the concept of \hat{g}^{**} -closure, \hat{g}^{**} -s-interior, \hat{g}^{**} -s-border, \hat{g}^{**} -s-frontier and \hat{g}^{**} -s-exterior and studied some of its properties.

Keywords and Phrases: \hat{g}^{**} -s-closure, \hat{g}^{**} -s-interior, \hat{g}^{**} -s-border, \hat{g}^{**} -s-frontier, \hat{g}^{**} -s-exterior.

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1. Introduction

Topology was introduced by Listing in 19th century. In 1963 and 1970 Norman Levine introduced the classes of semi-open and g-closed sets respectively [4]. After these many researches on generalized closed sets have been going on. Crossley and Hildebrand defined semi-closure of sets and irresolute functions [2]. In 1973, Das defined semi-interior point of a subset [3]. In 2019, authors introduced the class of \hat{g}^{**} -s-closed sets by generalizing the semi-closed sets using \hat{g}^* -open [1].