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ON $\beta - T_{1/2}, \beta - T^*_{1/2}, \beta -^* T_{1/2}$ SPACES AND THE NATURAL INTERCONNECTIVITY

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Abstract

In this paper, we introduce and study a new class of closed sets called g^*-semi-pre-closed sets (briefly $g^*\beta$-closed sets), using generalized-semi-pre-closed sets due to Dontchev [2]. The generalized closed sets are mainly used to define new weaker separation axioms. The aim of this communication is to introduce the concepts of the concept of $\beta - T_{1/2}, \beta - T^*_{1/2}, \beta -^* T_{1/2}$ spaces and framed to establish the natural inter connectivity among these spaces. The connections between these separation axioms and other existing well-known related generalized separation axioms are also investigated. It also contains the behaviour of $\beta - T^*_{1/2}$ spaces under $g^*\beta$-irresolute and β-closed mapping. The connectivity of $\beta - T_{1/2}$space is with $\beta - T_2, \beta - T_1$ and $\beta - T_0$ space is mentioned. We, here, introduced the class of g^*-semi-pre-closed sets (briefly $g^*\beta$-closed sets). This new class property fits between the class of β-closed sets and the class of $g\beta$-closed sets.

Key Words : $\beta - T_{1/2}, \beta - T^*_{1/2}, \beta -^* T_{1/2}$ *spaces.*