

ON SOME CLASSES OF SETS VIA  $\theta$ -GENERALIZED OPEN SETS

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**Abstract.** In this paper, we introduce and study the notions of  $\theta$ - $g$ -derived,  $\theta$ - $g$ -border,  $\theta$ - $g$ -frontier and  $\theta$ - $g$ -exterior of a set via the notion of  $\theta$ - $g$ -open sets. Nakaoka and Oda ([9] and [10]) introduced the notion of maximal open sets and minimal closed sets. By the same token, we introduce new classes of sets called maximal  $\theta$ - $g$ -open sets, minimal  $\theta$ - $g$ -closed sets,  $\theta$ - $g$ -semi maximal open sets and  $\theta$ - $g$ -semi minimal closed sets and investigate some of their fundamental properties.

**MSC 2000.** Primary: 54B05, 54C08; Secondary: 54D05.

**Key words.** Topological space,  $\theta$ - $g$ -border,  $\theta$ - $g$ -frontier, maximal open sets, minimal closed sets,  $\theta$ -open sets, maximal  $\theta$ - $g$ -open sets.

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