

# S-SPECIAL ELEMENTS IN GROUPS

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A study of Smarandache special elements in groups is carried out in this dissertation. Smarandache inverse elements in a group is an interesting feature; for every Smarandache inverse (S-inverse) element has an inverse but every inverse in general need not have S-inverse. Every element other than unit in a cyclic group has a S-inverse. The notion of S-inverse group leads to the fact that  $S_n$  and  $D_{2n}$  are not S-inverse groups.

This dissertation has three chapters. First chapter is introductory in nature. Smarandache special elements in groups are studied in chapter two. Chapter three studies Smarandache direct products in S-semigroups.