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SOME CLASSICAL THEOREMS IN SMARANDACHE SEMIGROUPS

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Florentine Smarandache first introduced the concept of Smarandache semigroups in the year 1998. Several researchers have been studying these notions. Here we give some of the analogues of the classical theorems on Smarandache semigroups like Lagrange's theorem, Sylow's theory, Cayley's theorem etc. For this, one has to define the concepts of Smarandache Lagrange's semigroup, Smarandache non-Lagrange's semigroup, Smarandache p-Sylow subgroup and so on.

We mainly prove that if S is a finite Smarandache Lagrange's semigroup.

- If m / o(S), S need not in general contain a subgroup of order m.
- If S is a finite Smarandache Lagrange's semigroup. If H is a subgroup of S then o(H) / o(S)
- Every Smarandache semigroup is isomorphic to a Smarandache semigroup S(N) of mappings of a set N to itself for some appropriate set N.
- Let S be a finite Smarandache semigroup, if p is a prime such that p/o(S) it does not imply S has a Smarandache p-sylow subgroup.

Several other results in this direction are dealt with.

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