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Title: Solvability of normal subgroups and G -class sizes

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We study the solvability of a normal subgroup N of a finite group G having exactly three G -conjugacy class sizes. We show that if the set of G -class sizes of N is $\{1, m, mp^a\}$, with p a prime not dividing m , then N is solvable. Thus, we get a partial extension for normal subgroups on N . Itô's theorem on the solvability of groups having exactly three class sizes.

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