

**ON THOMPSON'S CONJECTURE FOR ALTERNATING AND SYMMETRIC
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Let G be a finite group G , and let $N(G)$ be the set of sizes of its conjugacy classes. It is shown that if $N(G)$ equals $N(\text{Alt}_n)$ or $N(\text{Sym}_n)$, where $n > 1361$, then G has a composition factor isomorphic to an alternating group Alt_m with $m \leq n$ and the half-interval $(m, n]$ contains no primes.

Keywords: finite group, simple group, alternating group, symmetric group, conjugacy class, Thompson's conjecture.

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