Covering numbers for characters of symmetric groups

ALEXANDER ROSSI MILLER

Abstract. If $n > 4$ and $c(\theta)$ denotes the set of irreducible constituents of a character θ, then $c(\chi^k) = \mathrm{Irr}(S_n)$ for all nonlinear $\chi \in \mathrm{Irr}(S_n)$ if and only if $k \geq n - 1$.

Mathematics Subject Classification (2020): 20C30 (primary).