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ON THE STABILIZER OF CERTAIN DECOMPOSABLE
SYMMETRIZED TENSORS

Abstract

Let V be an n -dimensional complex inner product space and let $\{e_1, \dots, e_n\}$ be an orthonormal basis of V . Suppose G is a permutation group of degree m and χ is an irreducible character of G . We denote by $V_\chi(G)$ the symmetry class of tensors associated with G and χ . In this article we consider the decomposable symmetrized tensors e_α^ , in which α is a certain sequence $\alpha = (\alpha_1, \dots, \alpha_m)$ with $1 \leq \alpha_i \leq n$. Then we obtain the stabilizers of such tensors under the action of G .*