Darafsheh, M. R.; **Pournaki, M. R.**

On the orthogonal basis of the symmetry classes of tensors associated with the dicyclic group. (English) Zbl 0964.20006

Linear Multilinear Algebra 47, No. 2, 137-149 (2000).

The authors give a necessary and sufficient condition for the existence of orthogonal bases of decomposable symmetrized tensors for the symmetry classes of tensors associated with the dicylic group. In particular, those conditions are applied to the generalized quaternion group, for which the dimensions of the symmetry classes of tensors are computed.

Reviewer: A.Khammash (Makkah)

MSC:

20C30 Representations of finite symmetric groups
15A69 Multilinear algebra, tensor calculus

Keywords:

orthogonal bases; decomposable symmetrized tensors; symmetry classes of tensors; dicylic groups; generalized quaternion groups

Full Text: DOI

References:

[1] Coxeter H. S. M., Generators and relations for discrete groups (1972) · Zbl 0239.20040
[2] DOI: 10.1016/S0024-3795(73)80004-7 · Zbl 0283.15004 · doi:10.1016/S0024-3795(73)80004-7
[3] DOI: 10.1080/03081089208818144 · Zbl 0762.15015 · doi:10.1080/03081089208818144
[4] James G., "Representations and Characters of Groups" (1993) · Zbl 0792.20006
[5] Marcus M., "Finite Dimensional Multilinear Algebra" (1973) · Zbl 0284.15024
[6] DOI: 10.1080/03081088608817710 · Zbl 0591.15020 · doi:10.1080/03081088608817710
[7] Merris R., "Multilinear Algebra" (1997) · Zbl 0892.15020
[8] Serre J. P., "A Course in Arithmetic" (1973) · Zbl 0256.12001
[9] DOI: 10.1080/03081089108818088 · Zbl 0735.15022 · doi:10.1080/03081089108818088
[10] DOI: 10.1080/03081089108818102 · Zbl 0751.15013 · doi:10.1080/03081089108818102