

Burnside-type algebras

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This talk is devoted to the construction of axial algebras and their connection with Burnside groups $B(n, p)$, where p is a prime. For a group $G = B(n, p). \langle t \rangle$, where t is an automorphism of order 2, an algebra $A(G, T, \eta)$ is constructed whose Miyamoto group is isomorphic to $G/Z(G)$, with G being finite if and only if the algebra itself is finite-dimensional which provides an algebraic criterion for the finiteness of Burnside groups. General properties of such algebras and their connection to the classical theory of axial algebras are also discussed.

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