

Bartsch, R.; Pazderski, G.

On groups all of whose irreducible characters are quasiprimitive. (Über Gruppen, deren irreduzible Charaktere sämtlich quasiprimitiv sind.) (German) [Zbl 0874.20005](#)
Sitz.ber. Math.-Nat.wiss. Kl., Akad. Gem.nütz. Wiss. Erfurt 7, 1-17 (1996).

A finite group G is called quasi-primitive (characteristically quasi-primitive) if, for every irreducible character χ of G and every normal (characteristic) subgroup N of G , the restriction χ_N is a multiple of an irreducible character of N . The authors show that a finite group G is quasi-primitive if and only if $G/Z(G)$ is a direct product of nonabelian finite simple groups. Their proof involves the classification of finite simple groups. They also show that a characteristically quasi-primitive finite solvable group G is nilpotent of class at most 2, with G' a direct product of elementary abelian groups of prime power order.

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MSC:

[20C15](#) Ordinary representations and characters

Keywords:

quasi-primitive characters; finite groups; irreducible characters; characteristically quasi-primitive finite solvable groups