

Generalised dihedral CI-groups

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Abstract

In this paper, we find a strong new restriction on the structure of CI-groups. We show that, if R is a generalised dihedral group and if R is a CI-group, then for every odd prime p the Sylow p -subgroup of R has order p , or 9. Consequently, any CI-group with quotient a generalised dihedral group has the same restriction, that for every odd prime p the Sylow p -subgroup of the group has order p , or 9.

Keywords: CI-group, DCI-group, generalised dihedral, Cayley isomorphism.

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Posplošene diedrske CI-grupe

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Povzetek

V tem članku poiščemo močne nove omejitve v zvezi s strukturo CI-grup. Pokažemo: če je R posplošena diedrska grupa, R pa CI-grupa, potem za vsako liho praštevilo p velja, da ima Sylowska p -podgrupa grupe R red p , ali pa 9. Posledično ima vsaka CI-grupa, ki ima za kvocient neko posplošeno diedrsko grupo, isto omejitev: za vsako liho praštevilo p velja, da ima Sylowska p -podgrupa te grupe red p , ali pa 9.

Ključne besede: CI-grupa, DCI-grupa, posplošen diedrski, Cayleyjev izomorfizem.

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