

String C-group representations of alternating groups*

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Abstract

We prove that for any integer $n \geq 12$, and for every r in the interval $[3, \dots, \lfloor \frac{n-1}{2} \rfloor]$, the group A_n has a string C-group representation of rank r , and hence that the only alternating group whose set of such ranks is not an interval is A_{11} .

Keywords: Abstract regular polytopes, Coxeter groups, alternating groups, string C-groups.

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Predstavitve alternirajočih grup z verižnimi C-grupami*

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Povzetek

Pokažemo, da ima za poljubno celo število $n \geq 12$ in za vsak r z intervala $[3, \dots, \lfloor \frac{n-1}{2} \rfloor]$ grupa A_n predstavitev z verižno C-grupo ranga r in da je torej edina alternirajoča grupa, katere množica takih rangov ni interval, grupa A_{11} .

Ključne besede: Abstraktni regularni politopi, Coxeterjeve grupe, alternirajoče grupe, verižne C-grupe.

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