Polytopes with groups of type $PGL_2(q)$

Dimitri Leemans, Egon Schulte

Abstract

There exists just one regular polytope of rank larger than 3 whose full automorphism group is a projective general linear group $PGL_2(q)$, for some prime-power q. This polytope is the 4-simplex and the corresponding group is $PGL_2(5) \cong S_5$.

Politopi z grupami tipa $PGL_2(q)$

Povzetek

Obstaja en sam regularen politop ranga večjega od 3, katerega polna grupa avtomorfizmov je projektivna splošna linearna grupa $PGL_2(q)$ za neko potenco praštevila q. Ta politop je 4-simpleks in ustrezna grupa je $PGL_2(5) \cong S_5$.