

An Application on Suborbital Graphs

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Abstract

In this paper, we investigate suborbital graphs for the action of the normalizer of $\Gamma_0(N)$ in $PSL(2, \mathbb{R})$, where N will be of the form $2^8 p^2$, $p > 3$ and p is a prime. In addition we give the conditions to be a forest for normalizer in the suborbital graph $F\left(\infty, \frac{u}{2^8 p^2}\right)$.

References

- [1] Akbas M. and Singerman D., The Signature of the Normalizer of $\Gamma_0(N)$, London Math. Soc. Lecture Note Ser., 77-78, 1992.
- [2] Akbas M., On Suborbital Graphs for the Modular Group, Bull. Lond. Math. Soc., 647-652, 2001.
- [3] Biggs N.L. and White A.T., Permutation Groups and Combinatorial Structures, London Math. Soc. Lecture Note Ser., Cambridge, 33. CUP, Cambridge, 1982.
- [4] Keskin R., Suborbital Graphs for the Normalizer of $\Gamma_0(m)$, European J. Combinatorics, 193-206, 2006.
- [5] Keskin R. and Demirtürk B., On Suborbital Graphs for the Normalizer of $\Gamma_0(N)$, Electronic J. Combinatorics, 1-18, 2009.
- [6] Sims C.C., Graphs and Finite Permutation Groups, Math. Zeitschr., 76-86, 1967.
- [7] Conway J.H. and Norton S.P., Monstrous Moonshine, Bull. London Math. Soc., 308-339, 1979.
- [8] Jones G.A., Singerman D. and Wicks K., The Modular Group and Generalized Farey Graphs, London Math. Soc. Lecture Note Ser., 316-338, 1991.
- [9] Schoeneberg B., Elliptic Modular Functions, Springer, Berlin, 1974.
- [10] Tsukuzu T., Finite Groups and Finite Geometries, Cambridge University Press, Cambridge, 1982.