

Turkish Journal of Mathematics

Turkish Journal

of

Mathematics

Normal Subgroups of hecke Groups on Sphere and

İsmail Naci CANGÜL

Uludağ University Art and Science Faculty

Dept. of Maths., Görükle 16059 Bursa-TURKEY

Osman BİZİM

Uludağ University Art and Science Faculty

Dept. of Maths., Görükle 16059 Bursa-TURKEY

 [Keywords](#)
 [Authors](#)



math@tubitak.gov.tr

[Scientific Journals Home](#)
[Page](#)

Abstract: We use regular map theory to obtain all normal subgroups of Hecke groups of genus 0 and 1. The existence of a regular map corresponding uniquely to every normal subgroup of Hecke groups $H(\bullet_q)$ is a result of Jones and Singerman, and it is frequently used here to obtain normal subgroups. It is found that when q is even, $H(\bullet_q)$ has infinitely many normal subgroups on the sphere, while for odd q , this number is finite. The total number of normal subgroups of $H(\bullet_q)$ on a torus is found to be either 0 or infinite. The latter case appears iff q is a multiple of 4. Finally, a result of Rosenberger and Kern-Isberner is reproved here.

Key Words: Hecke groups, genus, regular maps

Turk. J. Math., **22**, (1998), 369-378.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Math., vol.22, iss.4.](#)