

Suborbital Graphs of the Congruence Subgroup $\Gamma^0(N)$

Khuanchanok Chaichana*, Wanchalerm Promduang, Pradthana Jaipong,
Chiang Mai University

In this paper, for any positive integer N , we determine the edge conditions of suborbital graphs for the congruence subgroup $\Gamma^0(N)$, $G_{p,q}$, and the suborbital graph of the block $[\infty]$, $F_{p,q}$, which is a subgraph of $G_{p,q}$. Then we give the necessary and sufficient conditions for graphs to contain a triangle, which eventually leads to the conditions for it to be a forest.

Keywords: suborbital graph, congruence subgroup, forest