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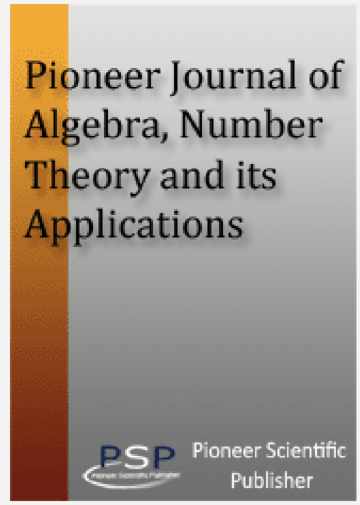

PRESENTATION FOR GROUP M_4 (PPG)

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Abstract

In many practical situations we know that a primitive group contains a given permutation and we want to know which group it can be; in some other practical situations we know the group and would like to know if it contains a permutation of some given type. For example, a group $G \leq S_n$ is said to be non-synchronizing if it is contained in the automorphism group of a non-trivial primitive graph with complete core, that is, with clique number equal to chromatic number. When trying to check if some group is synchronizing, typically, we have only partial information about the graph but enough to say that it has an automorphism of some type, and the goal would be to have in hand a classification of the primitive groups containing permutations of that type. As an illustration of this, the key ingredient in some of the results in [2] was the observation that the primitive graph understudy has a 2-cycle automorphism and hence the automorphism group of the graph is the symmetric group. For many more examples of the importance of kn wing the groups that contain permutations of a given type. This type of investigation is certainly very natural since it appears on the eve of group theory, with Jordan, Burnside, Marggraff, but the difficulty of the problem is well illustrated by the very slow progress throughout the twentieth century. Given the new tools available (chiefly the classification of finite simple groups), the topic seems to have new momentum. Let S_n denote the symmetric group on n points; a permutation $g \in S_n$ is said to be imprimitive if there exists an imprimitive group contain in gg. An imprimitive group is said to be minimally imprimitive if it contains no transitive proper subgroup. An imprimitive group $G \leq S_n$ is said to be maximally imprimitive if for all $g \in S_n \backslash G$, the group $\langle g, G \rangle$ is primitive. The next result, whose proof is straightforward, provides some alternative characterizations of imprimitive permutations. Now in this paper we discuses Presentation for imprimitive second Subgroup of general linear group in dimention 2 over the field of pk-elements.

Keywords and phrases: general linear group, irredundant, primitive, soluble.