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COMMENT ON A PAPER BY TAHARA ON THE FINITE SUBGROUPS OF $GL(3, Z)$

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Tahara [1] has concretely determined the conjugate classes of finite subgroups of $GL(3, Z)$. The group W_5 in his list of groups of order 24 is in fact of order 12 and consists of the same matrices as the group W_6 in his list of groups order 12. Hence, there are only 10 conjugate classes of subgroups of order 24 in $GL(3, Z)$ and the total number of conjugate classes of finite subgroups is reduced to 73.

Zassenhaus [2] proved that there is a one-to-one correspondence between conjugate classes of finite subgroups of $GL(n, Z)$ and arithmetic equivalence classes of point groups of crystals in n dimensions. The 73 arithmetic equivalence classes of point groups of crystals in 3 dimensions were first determined by Niggli and Nowacki [3]. Wondratschek, Bülow, and Neubüser [4] solved the analogous problem for $n = 4$ and found that there are 710 classes in this case.

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