

27. Tables of Ideal Class Groups of Purely Cubic Fields

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(Communicated by Shokichi IYANAGA, M. J. A., May 12, 1992)

1. Introduction. A table of fundamental units of purely cubic fields $\mathbf{Q}(\sqrt[3]{m})$ for $1 < m < 250$ was given in [1]. In this note we shall give two tables of ideal class groups of $\mathbf{Q}(\sqrt[3]{m})$ for $1 < m < 1002$.

We use the expression (a, b, \dots, c) to denote the type of finite abelian group which is the direct product of cyclic groups of order a, b, \dots, c $a\mathbf{Z} \subset b\mathbf{Z} \subset \dots \subset c\mathbf{Z}$. The method of our calculation is based on [2] chapter 4. It was done by micro computer PC-386 and PC-9801DA. The program was written in U-BASIC.

2. Tables. Table 1 contains ideal class numbers h of $\mathbf{Q}(\sqrt[3]{m})$ for $1 < m < 1002$ whose ideal class groups are cyclic. There are 202 non-cyclic ideal class groups in this range which are listed in Table 2.

References

- [1] H. Wada: A table of fundamental units of purely cubic fields. Proc. Japan Acad., **46**, 1135–1140 (1970).
- [2] —: Application of computer to number theory. Sophia Kokyuroku in Mathematics, **7** (1980) (in Japanese).