
Appendix

Here we add some important results and calculations which were used in the main part of the work and which are important by themselves.

A.1. Integral symmetric bilinear forms. Elements of the discriminant forms technique

Here, for readers' convenience, we review results about integral symmetric bilinear forms (lattices) which we used. We follow [Nik80b].

A.1.1. Lattices

Everywhere in the sequel, by a **lattice** we mean a free \mathbb{Z} -module of finite rank, with a nondegenerate symmetric bilinear form with values in the ring \mathbb{Z} of rational integers (thus, "lattice" replaces the phrase "nondegenerate integral symmetric bilinear form").

A lattice M is called **even** if $x^2 = x \cdot x$ is even for each $x \in M$, and **odd** otherwise (here we denote by $x \cdot y$ the value of the bilinear form of M at the pair (x, y)). By $M_1 \oplus M_2$ we denote the orthogonal direct sum of lattices M_1 and M_2 . If M is a lattice, we denote by $M(a)$ the lattice obtained from M by multiplying the form of M by the rational number $a \neq 0$, assuming that $M(a)$ is also integral.

A.1.2. Finite symmetric bilinear and quadratic forms

By a **finite symmetric bilinear form** we mean a symmetric bilinear form $b : \mathfrak{A} \times \mathfrak{A} \rightarrow \mathbb{Q}/\mathbb{Z}$ defined on a finite Abelian group \mathfrak{A} .

By a **finite quadratic form** we mean a map $q : \mathfrak{A} \rightarrow \mathbb{Q}/2\mathbb{Z}$ satisfying the following conditions:

- 1) $q(na) = n^2q(a)$ for all $n \in \mathbb{Z}$ and $a \in \mathfrak{A}$.