

The thesis is concerned with the theory of binary quadratic forms with coefficients in the ring of algebraic integers of a number field. Under the assumption that the number field is of narrow class number one, there is developed a theory of composition of such quadratic forms. For a given discriminant, the composition is determined by a bijection between classes of quadratic forms and a so-called relative oriented class group (a group closely related to the class group). Furthermore, Bhargava cubes are generalized to cubes with entries from the ring of algebraic integers; by using the composition of quadratic forms, the composition of Bhargava cubes is proved in the generalized case.