Maximal Orders

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Abstract

This thesis summarizes basic properties of lattices and orders over Dedekind domain in separable algebras. The concepts of reduced norm and reduced trace are introduced and applied to few examples of rational algebras. By that the maximal orders are found. The properties of maximal orders are stated and used to explore new types of ideals: normal ideals and Λ-ideals. At the end of this thesis the isomorphisms of lattices are examined and the Jordan-Zassenhaus theorem is proved.