

In this thesis, we initially deal with the characterization of quadratic residue matrices associated to a set of prime elements, whose elements correspond to the Legendre symbols. Then we move to the cubic residue matrices, where the Legendre symbols are being replaced by cubic residue symbols. This work is based on the article by D. S. Dummit, E. P. Dummit and H. Kisilevsky, who introduced the concept of these matrices for primary primes to prove several of their basic properties, in particular to characterize the block form of these matrices. In the work we summarize the relevant theory and the results of this article and then extend these results to the more complicated case of matrices that correspond to nonprimary prime elements.