

Oral Exam Questions

1. Explain the relation between three or four different characterizations of a *group*.
2. Discuss the hierarchy of commutative rings formed by the following concepts: domain, Euclidean domain, field, principal ideal domain, unique factorization domain.
3. Describe the structure theorem of finitely generated modules over a principal ideal domain and specialize it to abelian groups and linear operators on a finite-dimensional vector space over an algebraically closed field.