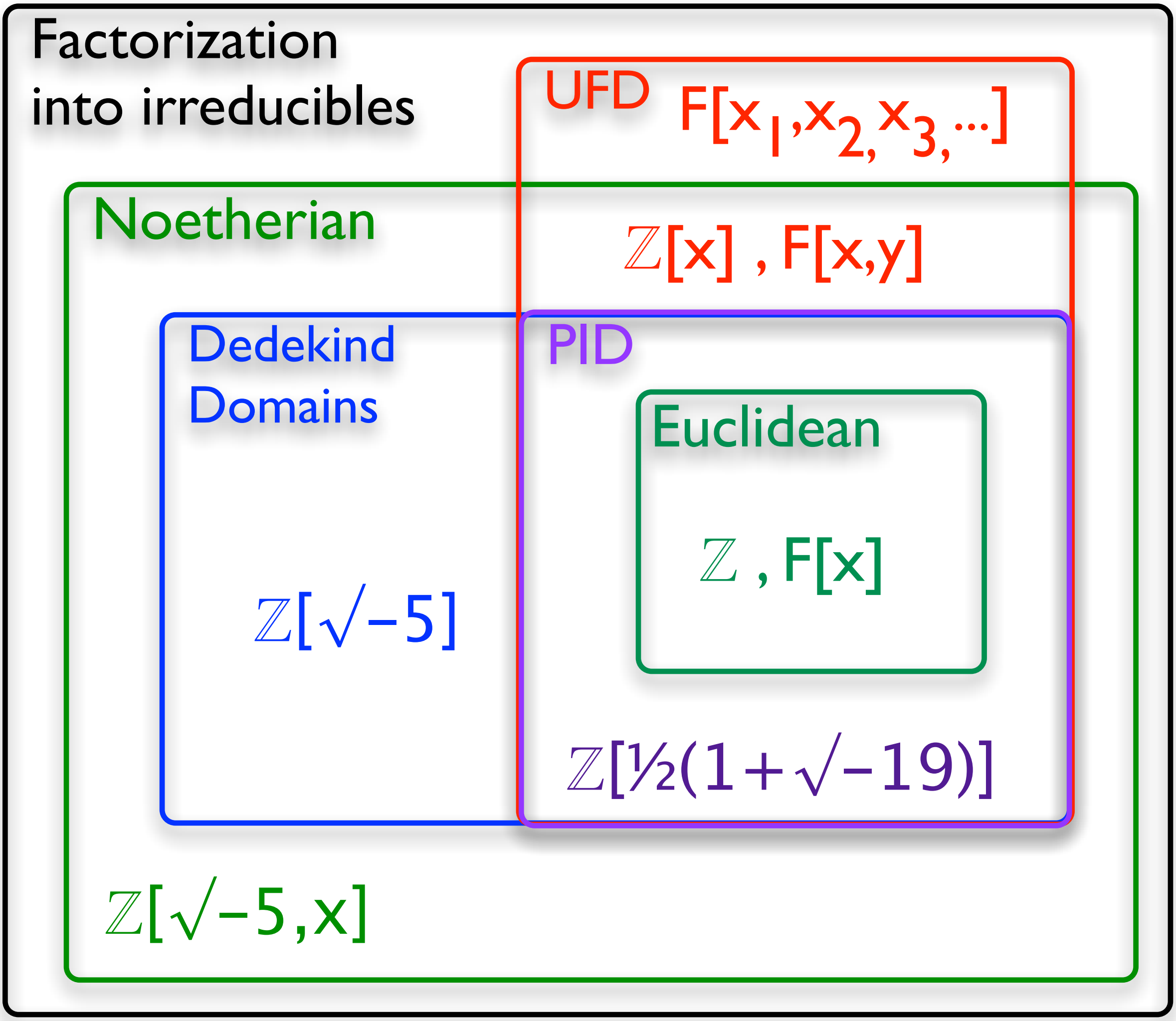
Classes of Integral Domains



F is a field

UFD: irreducibles are prime, gcd exists
PID: gcd can be expressed in the form xa+yb
Euclidean: gcd can be computed with the euclidean algorithm
Dedekind Domain: Every Ideal is a product of prime ideals (Rings of algebraic integers in a field extension are Dedekind domains)