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8.4 Normal Subgroups and Factor GroupsExercise Set 8.4; 8.5 Homomorphisms of Groups; Exercise Set 8.5; CHAPTER 9 ARITHMETIC PROPERTIES OF RINGS; 9.1 Extending Arithmetic to Commutative Rings; Exercise Set 9.1; 9.2 Euclidean Rings; Exercise Set 9.2; 9.3 Irreducible Polynomials; Exercise Set 9.3; 9.4 Arithmetic Functions; Exercise Set 9.4; 9.5 Congruences; Exercise Set 9.5; CHAPTER 10 THE REAL NUMBER SYSTEM; 10.1 The Natural Numbers; 10.2 The Integers; 10.3 The Rationals; 10.4 The Real Numbers; ANSWERS TO SELECTED EXERCISES; INDEX

Sommario/riassunto

Explore the main algebraic structures and number systems that play a central role across the field of mathematics Algebra and number theory are two powerful branches of modern mathematics at the forefront of current mathematical research, and each plays an increasingly significant role in different branches of mathematics, from geometry and topology to computing and communications. Based on the authors' extensive experience within the field, Algebra and Number Theory has an innovative approach that integrates three disciplines-linear algebra, abstract algebra, and number the