

Abstract

Let R be a ring. A *prime ring* is a ring in which 0 is a prime ideal, equivalently R is called a prime ring if there are no nonzero two-sided ideals I and J of R such that $IJ = 0$. A *semi-prime ring* is any ring in which 0 is a semi-prime ideal. In this research, we study the notions of prime ring and semiprime ring. Also we give many properties about these concepts. Finally we study the relation between prime ideals and some kinds of ideals under the class of prime and semiprime ring.