

NONDISTRIBUTIVE RINGS AND THEIR ÖRE LOCALIZATIONS

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Abstract

In the paper, we introduce the notion of a nondistributive ring N as a generalization of the notion of an associative ring with unit, in which the addition needs not be abelian and the distributive law is replaced by $n0 = 0n = 0$ for every element n of N . For a nondistributive ring N , we introduce the notion of a nondistributive ring of left quotients $S^{-1}N$ with respect to a multiplicatively closed set $S \subseteq N$, and determine necessary and sufficient conditions for the existence of $S^{-1}N$.

Keywords: semigroups, nearrings, nondistributive rings, nearrings of quotients, nondistributive rings of quotients, Öre localizations of nondistributive rings.

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