

NEAR REGULARLY-PRÜFER RINGS

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In the present article, we construct the theory of near Boolean families of valuation rings which extends the corresponding theory for Boolean families. We establish the fact that the local-global principle (LGP) for such families is effectively elementary. We indicate sufficient conditions for 1-embeddability of holomorphy rings of near Boolean families that possess the LGP property. By way of application, we prove that the elementary theory of the ring of integrally totally p -adic integers and the elementary theory of the class of all closed subrings of almost all algebraic numbers are decidable.

Key words and phrases: (near) Boolean family of valuation rings, (near) regularly-Prüfer ring, local-global principle.

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Received

February 26, 1998

Translated into English:

Siberian Advances in Mathematics, V. 9, N 1, 1–45 (1999).