

ON RINGS ASYMPTOTICALLY CLOSE TO ASSOCIATIVE RINGS

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The subject of this work is an extension of A. R. Kemer's results to a rather broad class of rings close to associative rings, over a field of characteristic 0 (in particular, this class includes the varieties generated by finite-dimensional alternative and Jordan rings). We prove the finite-basedness of systems of identities (the Specht property), the representability of finitely-generated relatively free algebras, and the rationality of their Hilbert series. For this purpose, we extend the Razmyslov–Zubrilin theory to Kemer polynomials. For a rather broad class of varieties, we prove Shirshov's theorem on height.

Key words and phrases: PI-algebra, representable algebra, universal algebra, nonassociative algebra, alternative algebra, Jordan algebra, signature, polynomial identity, Hilbert series, Specht problem.

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