Algebras of binary formulas for compositions of theories.

Summary: We consider algebras of binary formulas for compositions of theories both in the general case and as applied to \(\aleph_0\)-categorical, strongly minimal, and stable theories, linear preorders, cyclic preorders, and series of finite structures. It is shown that definable compositions preserve isomorphisms and elementary equivalence and have basicity formed by basic formulas of the initial theories. We find criteria for definable compositions to preserve \(\aleph_0\)-categoricity, strong minimality, and stability. It is stated that definable compositions of theories specify compositions of algebras of binary formulas. A description of forms of these algebras is given relative to compositions with linear orders, cyclic orders, and series of finite structures.

MSC:

03-XX Mathematical logic and foundations
20-XX Group theory and generalizations

Keywords:
algebra of binary formulas; composition of theories; e-definable composition; \(\aleph_0\)-categorical theory; strongly minimal theory; stable theory; linear preorder; cyclic preorder

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References:


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