Taylor is prime

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A variety is Taylor if it admits a non-trivial idempotent Maltsev condition. Taylor varieties play a crucial role in the theory of general algebras [3], in tame congruence theory [5], and in the theory of constraint satisfaction problems [4]. In all of these areas, the Taylor varieties are considered the well-behaved varieties from many points of view. We study Taylor varieties and obtain a new characterizations of them via compatible reflexive digraphs. Based on our findings, we prove that in the lattice of interpretability types of varieties [1], the filter of the types of all Taylor varieties is prime. This result was known among idempotent varieties, but open in general.

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