Zbl 171.26501
Erdős, Pál; Hajnal, András
On a problem of B. Jonsson (In English)
Bull. Acad. Pol. Sci., Sér. Sci. Math. Astron. Phys. 14, 19-23 (1966).

The problem of B. Jónsson which is dealt with is the following one: Does there exist an algebra of power α with no proper subalgebra of the same power? (An algebra has finitely many finitary operations.) The authors investigate also another problem: for which cardinals α is there an algebra without infinite independent subsets? An affirmative answer implies an affirmative answer to Jónsson's problem.

Results: The generalized continuum hypothesis implies that the answer to Jónsson's probles is "yes" for α non limit. The answer is "yes" for the second problem (thus also for Jónsson's one) for $\omega_n, n < \omega_0$. The answer is "yes" for Jónsson's problem for α measurable. For any α, there is an algebra with one ω-ary operation without a proper subalgebra. Almost all results proved here are consequences of the results of *P.Erdős, A.Hajnal* and *R.Rado* [Acta Math. Acad. Sci. Hung. 16, 93-196 (1965; Zbl 158.26603)].

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Classification:
03E50 Continuum hypothesis and generalizations (logic)
08A65 Infinitary algebras
04A30 Continuum hypothesis and generalizations