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On the cardinality of Hausdorff spaces and Pol-Šapirovskii technique

Comment.Math.Univ.Carolinae 46,1 (2005) 131-135.

Abstract: In this paper we make use of the Pol-Šapirovskii technique to prove three cardinal inequalities. The first two results are due to Fedeli [2] and the third theorem of this paper is a common generalization to: (a) (Arhangel'skii [1]) If X is a T_1 space such that (i) $L(X)t(X) \leq \kappa$, (ii) $\psi(X) \leq 2^\kappa$, and (iii) for all $A \in [X]^{\leq 2^\kappa}$, $\left|\overline{A}\right| \leq 2^\kappa$, then $|X| \leq 2^\kappa$; and (b) (Fedeli [2]) If X is a T_2-space then $|X| \leq 2^{aql(X)t(X)\psi_c(X)}$.

Keywords: cardinal functions, cardinal inequalities, Hausdorff space
AMS Subject Classification: 54A25