

An analogue of the Erdős-Ko-Rado theorem for multisets

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(joint work with Zoltán Füredi and Dániel Gerbner)

We verify a conjecture of Meagher and Purdy [2] by proving that if $1 \leq t \leq k$, $2k - t \leq n$ and \mathcal{F} is a family of t -intersecting k -multisets of $[n]$, then

$$|\mathcal{F}| \leq AK(n + k - 1, k, t),$$

where $AK(n, k, t) := \max_i |\{A : A \subseteq [n], |A| = k, |A \cap [t + 2i]| \geq t + i\}|$.

REFERENCES

- [1] Z. Füredi, D. Gerbner, M. Vizer, An analogue of the Erdős-Ko-Rado theorem for multisets, arXiv.1212.1071.
- [2] K. Meagher, A. Purdy, An Erdős-Ko-Rado theorem for multisets, Electron. J. Combin. 18 (2011), P220.