Mathematical
Inequalities
& Applications
Volume 7, Number 2 (2004), 161–164

COUNTING SETS WITH EXCEPTIONS

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Abstract. Let $S \subseteq \mathbb{N}$ be a set of integers, $S_x \stackrel{\text{def}}{=} S \cap [0,x]$, $X \stackrel{\text{def}}{=} \sharp S_x$ and let $\tilde{S} \subseteq S$ be the "expectional" set, $\tilde{S}_x \stackrel{\text{def}}{=} \tilde{S} \cap [0,x]$, $E \stackrel{\text{def}}{=} \sharp \tilde{S}_x$. An upper bound for the fraction of subsets of S_x having N elements and intersecting K times at least the set $\tilde{S}$ is proved when $N, E, X \to \infty$.

Mathematics subject classification (2000): 05A20.
Key words and phrases: exceptional set.

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Paper MIA-07-17