1146-05-334        **Jeff Kahn** and **Jinyoung Park\*** (`jp1324@math.rutgers.edu`), Department of Mathematics, Rutgers University, Hill Center for the Mathematical Sciences, 110 Frelinghuysen Rd., Piscataway, NJ 08854. *The number of maximal independent sets in the Hamming cube.*

Let $Q_n$ be the $n$-dimensional Hamming cube (hypercube) and $N = 2^n$. We prove that the number of maximal independent sets in $Q_n$ is asymptotically $2n2^{N/4}$, as was conjectured by Ilinca and Kahn in connection with a question of Duffus, Frankl and Rödl. The value is a natural lower bound derived from a connection between maximal independent sets and induced matchings. The proof of the upper bound draws on various tools, among them "stability" results for maximal independent set counts and old and new results on isoperimetric behavior in $Q_n$. (Received January 26, 2019)

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