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Samuel Connolly* (samuelc@sas.upenn.edu), **Zachary Gabor** (zgabor@haverford.edu), **Anant Godbole** and **Bill Kay**. *Bounds on the Maximum Number of Minimum Dominating Sets.*

We use probabilistic methods to find lower bounds on the maximum number, in a graph with domination number γ , of dominating sets of size γ . We find that we can randomly generate a graph that, w.h.p. is dominated by almost all sets of size γ . At the same time, we use a modified version of the adjacency matrix to obtain lower bounds on the number of sets of a given size that do not dominate a graph on n vertices. (Received September 16, 2013)