1016-60-226 **Oliver Schirokauer*** (oliver.schirokauer@oberlin.edu), Department of Mathematics, Oberlin College, Oberlin, OH 44074, and **Joseph B. Kadane** (kadane@stat.cmu.edu), Department of Statistics, Carnegie Mellon University, Pittsburgh, PA 15213. *Uniform Distributions on the Natural Numbers.*

We compare three notions of uniformity for a finitely additive probability measure on the set of natural numbers. In particular, we prove that the set D of measures which extend asymptotic density is a proper subset of the set S of shift invariant measures, which in turn is a proper subset of the set R of measures which map every residue class mod m to $1/m$. In addition, we show that there are subsets G of the natural numbers for which the range of possible values $\mu(G)$ for $\mu \in D$ is properly contained in the set of values obtained when μ ranges over S, and that there are subsets G which distinguish S and R analogously. (Received February 13, 2006)