1078-28-148   **Karel Hrbacek*** (`khrbacek@sci.ccny.cuny.edu`). *A nonstandard approach to length and area.* Preliminary report.

In 1975, P. Loeb famously gave a nonstandard construction of the Lebesgue measure in $\mathbb{R}^n$. I consider a generalization of this construction to k-dimensional, translation and rotation invariant (outer) measures in $\mathbb{R}^n$, for $k \leq n$. The procedure requires (at least) two "levels of standardness." (Received December 04, 2011)