

**Zbl 361.28013**

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*The nonexistence of certain invariant measures.* (In English)

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It is proved that on an uncountable group  $G$  there does not exist a non-zero,  $\sigma$ -finite countably additive measure which is left-invariant and defined on all subsets of  $G$ . There is an earlier proof of this result due to F. Terpe which, however, as was observed by J. C. Oxtoby, presupposes (a certain consequence of) the continuum hypothesis. The present proof is independent of the continuum hypothesis.

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Classification:

28C10 Set functions and measures on topological groups

04A10 Ordinal and cardinal numbers; generalizations

28A25 Integration with respect to measures and other set functions