**Handel, Michael**

**There are no minimal homeomorphisms of the multipunctured plane.** (English)

Zbl 0769.58037
Ergodic Theory Dyn. Syst. 12, No. 1, 75-83 (1992).

The author proves the following theorem and its corollary.

Theorem. Suppose that $f : S^2 \to S^2$ is an orientation-preserving homeomorphism of the two-dimensional sphere and that $\mathrm{Fix}(f)$ is a finite set containing at least three points. If $f$ has a dense orbit then the number of periodic points of period $n$ for some iterate of $f$ grows exponentially in $n$.

Corollary. There are no minimal homeomorphisms of the multipunctured plane $\mathbb{R}^2 \setminus K$ where $K$ is a finite set with at least two points.

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