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Topological sequence entropy for maps of the circle

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Abstract: A continuous map f of the interval is chaotic iff there is an increasing sequence of nonnegative integers T such that the topological sequence entropy of f relative to T , $h_T(f)$, is positive ([FS]). On the other hand, for any increasing sequence of nonnegative integers T there is a chaotic map f of the interval such that $h_T(f) = 0$ ([H]). We prove that the same results hold for maps of the circle. We also prove some preliminary results concerning topological sequence entropy for maps of general compact metric spaces.

Keywords: chaotic map, circle map, topological sequence entropy

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