

Linear orderings and the sets of periods for star maps

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Abstract

We show that Baldwin's characterization of the set of periods of continuous self maps of the n -star can be expressed in terms of a finite number of linear orderings.

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1. Introduction

In an interesting paper [4], which extends Sharkovskii's theorem to the n -star, Baldwin has shown that the set of periods of a continuous map from an n -star into itself can be expressed as a union of “tails” of a finite set of partial orderings of the natural numbers. On the other hand, in [1] it was shown that for the class of continuous maps of the 3-star into itself which leave the branching point fixed, the set of periods can be expressed as “tails” of three *linear* orderings (one of which was Sharkovskii's ordering and the other two were called red and green orderings). In [2] it was noted that these three orderings can be thought of as certain orderings associated to the fractions $1/2$ and $1/3$. This suggests that this is

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