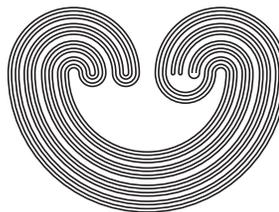


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FORCING AMONG PATTERNS WITH NO BLOCK STRUCTURE

by

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FORCING AMONG PATTERNS WITH NO BLOCK STRUCTURE

ALEXANDER BLOKH AND MICHAŁ MISIUREWICZ

Dedicated to the memory of our colleague and dear friend Sergiy Kolyada

ABSTRACT. Define the following order among all natural numbers except for 2 and 1:

$$4 \gg 6 \gg 3 \gg \dots \gg 4n \gg 4n + 2 \gg 2n + 1 \gg 4n + 4 \gg \dots$$

Let f be a continuous interval map. We show that if $m \gg s$ and f has a cycle with no division (no block structure) of period m , then f has also a cycle with no division (no block structure) of period s . We describe possible sets of periods of cycles of f with no division and no block structure.

1. INTRODUCTION AND STATEMENT OF THE RESULTS

The simplest type of limit behavior of a trajectory is periodic; studying periodic orbits (cycles) is one of the central topics in one-dimensional dynamics. To some extent this can be explained by a remarkable result, the Sharkovsky Theorem, proved by A. N. Sharkovsky in the 1960s ([13]; see [14] for its English translation). To state it, let us first recall the

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