

ON THE NUMBER OF PERIODIC ORBITS OF CONTINUOUS
MAPPINGS OF THE INTERVAL

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Abstract. Let f be a continuous map of a closed interval into itself, and let $P(f)$ denote the set of positive integers k such that f has a periodic point of period k . Consider the following ordering of positive integers: $3, 5, 7, \dots, 2.3, 2.5, 2.7, \dots, 4.3, 4.5, 4.7, \dots, 8, 4, 2, 1$. Sarkovskii's theorem states that if $n \in P(f)$ and m is to the right of n in the above ordering then $m \in P(f)$. We may ask the following question: if $n \in P(f)$ and m is to the right of n in the above ordering what can be said about the number of periodic orbits of f of period m ? We give the answer to this question if n is either odd or a power of 2.