Sets of Periods for Maps on Connected Graphs with Zero Euler Characteristic Having All Branching Points Fixed

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We characterize all possible sets for all continuous self-maps on a connected topological graph with zero Euler characteristic having all branching points fixed. © 1999 Academic Press

1. INTRODUCTION AND STATEMENT OF THE RESULTS

Let $f: X \to X$ be a continuous map on the topological space X. A point x of X will be called *periodic with respect to* f (or just *periodic*, if f is obvious from the context) if $f^n(x) = x$ for some integer n > 0, where f^n is f composed with itself n times. The least n satisfying the above equality is called the *period* of x. The *orbit* of x is the set $\{f^n(x) : n \ge 0\}$, where f^0 is the identity map. We denote by Per(f) the set $\{n : f$ has a point of period $n\}$.

