عنوان مقاله:
ON LOCAL ANTIMAGIC CHROMATIC NUMBER OF GRAPHS

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خلاصه مقاله:
A {it local antimagic labeling} of a connected graph G with at least three vertices, is a bijection $f:E(G) rightarrow {1,2,ldots , |E(G)|}$ such that for any two adjacent vertices u and v of G, the condition $omega _{f}(u) neq omega _{f}(v)$ holds; where $omega _{f}(u)=sum _{xin N(u)} f(xu)$. Assigning $omega _{f}(u)$ to u for each vertex u in $V(G)$, induces naturally a proper vertex coloring of G; and $|f|$ denotes the number of colors appearing in this proper vertex coloring. The {it local antimagic chromatic number} of G, denoted by $chi _{la}(G)$, is defined as the minimum of $|f|$, where f ranges over all local antimagic labelings of G. In this paper, we explicitly construct an infinite class of connected graphs G such that $chi _{la}(G)$ can be arbitrarily large while $chi _{la}(G vee bar{K_{2}})=3$, where $G vee bar{K_{2}}$ is the join graph of G and the complement graph of K_{2}. The aforementioned fact leads us to an infinite class of counterexamples to a result of [Local antimagic vertex coloring of a graph, Graphs and Combinatorics 33} (2017), 275-285].

کلمات کلیدی:
Antimagic labeling, Local antimagic labeling, Local antimagic chromatic number