On local antimagic chromatic number of cycle-related join graphs II

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An edge labeling of a graph $G = (V, E)$ is said to be local antimagic if it is a bijection $f : E \to \{1, \ldots, |E|\}$ such that for any pair of adjacent vertices x and y, $f^+(x) \neq f^+(y)$, where the induced vertex label of x is $f^+(x) = \sum_{e \in E(x)} f(e)$ ($E(x)$ is the set of edges incident to x). The local antimagic chromatic number of G, denoted by $\chi_{la}(G)$, is the minimum number of distinct induced vertex labels over all local antimagic labelings of G. In this paper, several sufficient conditions to determine the local antimagic chromatic number of the join of graphs are obtained. We then determine the exact value of the local antimagic chromatic number of many join graphs.

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