Further results on Local Inclusive Distance Antimagic Chromatic number for some families of Graphs

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Abstract

Let $\mathcal{G} = (\mathcal{V}, \mathcal{E})$ be a simple and undirected graph with $|\mathcal{V}| = n$, where $n \geq 1$. A function $\phi : \mathcal{V}(\mathcal{G}) \rightarrow \{1, 2, ..., |\mathcal{V}(\mathcal{G})|\}$ is called a local inclusive distance antimagic labeling (LIDAL) if $w_\phi(u) \neq w_\phi(v)$ for every $uv \in \mathcal{E}(\mathcal{G})$ where $w_\phi(v) = \phi(v) + \sum_{x \in N(v)} \phi(x)$. The function ϕ induces a weight map w_ϕ which is a proper vertex coloring. The local inclusive distance antimagic chromatic number $(\chi_{lida}(\mathcal{G}))$ is the least number k such that there exists LIDAL of $\mathcal{G}$ which induces k weights (colors). In this paper, we obtain the $\chi_{lida}(\mathcal{G})$ of corona product with $\mathcal{O}_m$, where $\mathcal{O}_m$ is the m number of pendants and the base graph $\mathcal{G}$ is not admiting LIDAL.

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