

Edge Irregular Reflexive Labeling in Graphs

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A graph G is define a vertex labeling $\varphi_v(x) \rightarrow \{0, 2, \dots, 2k_v\}$ and an edge labeling $\varphi_e(x) \rightarrow \{1, 2, \dots, k_e\}$ that are both onto. A total k -labeling φ given by $\varphi(x) = \varphi_v(x)$ if $x \in V(G)$ and $\varphi(x) = \varphi_e(x)$ if $x \in E(G)$, where $k = \max \{k_e, 2k_v\}$, is called an edge irregular reflexive k -labeling of G if for every two different edges $xy, x'y'$ of G , one has $wt(xy) \neq wt(x'y')$, where $wt(xy) = \varphi_v(x) + \varphi_e(xy) + \varphi_v(y)$. The smallest value of k for which such labeling exists is called the *reflexive edge strength* of G . In this paper, we study the edge irregular reflexive labeling for some classes of corona product of graphs with a path, and determine their reflexive edge strength.

Keywords: Edge irregular reflexive labeling, reflexive edge strength, corona produc, path