ABSTRACT

Edge Maximal Graphs Having Cycles with Locating-Chromatic Number Three

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Let G be a connected graph and c be a proper k – coloring of connected graph G. Let $\Pi = \{S_1, S_2, \ldots, S_k\}$ be a partition of V(G) induced by c on V(G), where S_i is the set of vertices receiving color i. The color code $c_\Pi(v)$ of v is the ordered k-tuple $(d(v,S_1), d(v,S_2), \ldots, d(v,S_k))$ where $d(v,S_i) = \min\{d(v,x) | x \in S_i\}$ for any i. If all different vertices of G have different color codes, then c is called a locating-chromatic k-coloring of graph G, denoted by $\chi_L(G)$. We analyze graph G containing cycle with locating-chromatic number three consist of two cases, odd cycle and even cycle.