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The $L(3,2,1)$-labelings of bipartite permutation graphs. (Chinese. English summary)


Summary: An $L(3,2,1)$-labeling of a graph $G$ is a function $f$ from the vertex set of $G$ to the set of all non negative integers such that for any two vertices $u$, $v$ of $G$, $|f(u) - f(v)| \geq 4 - \text{dist}(u,v)$, where $\text{dist}(u,v)$ denotes the distance between $u$ and $v$. A $k - L(3,2,1)$-labeling of $G$ is one that no label is greater than $k$. The $L(3,2,1)$-labeling number of $G$, denoted by $\lambda_{3,2,1}(G)$, is the smallest $k$, such that $G$ has a $k - L(3,2,1)$-labeling. In this paper we give bounds for the $L(3,2,1)$-labeling number of the bipartite permutation graph.

MSC:

05C78 Graph labelling (graceful graphs, bandwidth, etc.)

Keywords:

bipartite permutation graph; labeling problem