Abstract

A square difference 3-equitable labeling of a graph $G$ with vertex set $V$ is a bijection $f$ from $V$ to $\{1, 2, ..., |V|\}$ such that if each edge $uv$ is assigned the label -1 if $|[f(u)]^2 - [f(v)]^2 | \equiv -1 (mod\ 4)$, the label 0 if $|[f(u)]^2 - [f(v)]^2 | \equiv 0 (mod\ 4$) and the label 1 if $|[f(u)]^2 - [f(v)]^2 | \equiv 1 (mod\ 4)$. 
\[ \left\lfloor \frac{1}{2} \left( 1 \mod 4 \right) \right\rfloor \], then the number of edges labeled with \( i \) and the number of edges labeled with \( j \) differ by at most 1 for \(-1 \leq i, j \leq 1\). If a graph has a square difference 3-equitable labeling, then it is called square difference 3-equitable graph. In this paper, we investigate the square difference 3-equitable labeling behaviour of middle graph of paths, fan graphs, \( P_{2n} \), \( S_1 \), \( mK_3 \), triangular snake graphs and friendship graphs.

References


Index Terms

Computer Science

Applied Mathematics

Keywords
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