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 |. 
If \( f(v) \equiv 1 \pmod{4} \), 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 behavior 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
Square difference 3-equitable labeling, square difference 3-equitable graphs