



Second SBU Combinatorics Day

Shahid Beheshti University, May 11, 2016

Honoring 50th anniversary of Behzad's Conjecture

Behzad's Conjecture and Graph Fractional Powers

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For any $k \in \mathbb{N}$, the k -subdivision of graph G is a simple graph $G_k^{\frac{1}{k}}$, which is constructed by replacing each edge of G with a path of length k . In [Moharram N. Iradmusa, On colorings of graph fractional powers, *Discrete Math.*, (310) 2010, No. 10-11, 1551-1556] the m th power of the n -subdivision of G has been introduced as a fractional power of G , denoted by $G_n^{\frac{m}{n}}$. In this talk, I will show some connections between vertex, edge, total and incidence colorings of a graph and vertex coloring of its fractional powers.