

MASTER'S THESIS

Supermagic labeling, edge-graceful labeling and edge-magic index of graphs

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Supermagic Labeling, Edge-graceful Labeling and
Edge-magic Index of Graphs

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Abstract

In this thesis, we will show some results for supermagic, edge-graceful and edge-magic index sets. First we show that for $n \geq 2$, $sK_{n,n}$ is supermagic if and only if n is even or both s and n are odd. Then we investigate the edge-gracefulness of the composition of paths with null graphs $P_m \circ N_n$, where there are mn vertices and $(m - 1)n^2$ edges. We also show that $P_3 \circ N_n$ is edge-graceful if n is odd. In Chapter 4, we prove that the k -fold of $P_n \times P_n$ and $P_2 \times P_n$, $k \geq 2$, is edge-magic if n and k satisfy a necessary condition for edge-magicness.

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