

MASTER'S THESIS

Full friendly index sets of Cartesian products of cycles and paths

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Date of Award:
2010

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Full Friendly Index Sets of Cartesian Products of Cycles and Paths

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A thesis submitted in partial fulfillment of the requirements
for the degree of
Master of Philosophy

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Hong Kong Baptist University

December 2010

Abstract

Let $G = (V, E)$ be a simple connected (p, q) -graph. A labeling $f : V \rightarrow \mathbb{Z}_2$ induces an edge labeling $f^* : E \rightarrow \mathbb{Z}_2$ defined by $f^*(xy) = f(x) + f(y)$ for each $xy \in E$. For $i \in \mathbb{Z}_2$, let $v_f(i) = |f^{-1}(i)|$ and $e_f(i) = |f^{*-1}(i)|$. If $|v_f(1) - v_f(0)| \leq 1$, we call it a friendly labeling. For a friendly labeling f of a graph G , we define the friendly index of G under f by $i_f(G) = e_f(1) - e_f(0)$. The set $\{i_f(G) | f \text{ is a friendly labeling of } G\}$ is called the full friendly index set of G . In this thesis, we will present the full friendly index sets of Cartesian products of cycles and paths.

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