

**Kwong, Harris; Lee, Sin-Min****On friendly index sets and product-cordial index sets of subdivided Möbius ladders.** (English)

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Summary: Let  $G$  be a simple graph, and let  $\mathbb{Z}_2$  be the field with two elements. Any vertex labeling  $f : V(G) \rightarrow \mathbb{Z}_2$  induces an edge labeling  $f^+ : E(G) \rightarrow \mathbb{Z}_2$  defined by  $f^+(uv) = f(u) + f(v)$  for each edge  $uv \in E(G)$ . For each  $i \in \mathbb{Z}_2$ , define  $v_f(i) = |f^{-1}(i)|$ , and  $e_f^{\pm} = |(ff^+)^{-1}(i)|$ . The friendly index set of a graph  $G$  is defined as the set of possible values of  $|e_f^+(1) - e_f^+(0)|$  taken over all vertex labelings  $f$  with the property that  $|v_f(1) - v_f(0)| \leq 1$ .

The corresponding multiplicative version is called the product-cordial index set. In this paper, we determine the friendly index sets and the product-cordial index sets of subdivided Möbius ladders.

**MSC:**

05C78 Graph labelling (graceful graphs, bandwidth, etc.)

05C25 Graphs and abstract algebra (groups, rings, fields, etc.)

**Keywords:**

cordial graphs