XXXX

1 Introduction

A graph is an ordered pair $G = (V, E)$ consisting of a finite nonempty set V of vertices and a set E of edges, where each edge is an unordered pair of vertices. A dominating set of a graph $G = (V, E)$ is a set $D \subseteq V$ such that each vertex not in D has at least one neighbor in D. A paired-dominating set is a dominating set whose induced subgraph contains at least one perfect matching [?].

Raz and Safra prove that the dominating set problem has no polynomial-time $O(\log |V|)$-approximation algorithms ~~for the dominating set problem in 1997 [?]~~.

References