

1043-05-101

Ping Zhang*, Department of Mathematics, Western Michigan University, Kalamazoo, MI 49008.

Rainbow Connectivities of Graphs.

A path P in an edge-colored graph is a rainbow path if no two edges of P are assigned the same color. For a connected graph G with connectivity $\kappa(G)$ and an integer k with $1 \leq k \leq \kappa(G)$, the rainbow k -connectivity of G is the minimum number of colors needed in an edge-coloring of G such that every two distinct vertices u and v of G are connected by at least k internally disjoint $u - v$ rainbow paths. We present some results and open questions in this area of research. (Received August 21, 2008)