

1086-05-2975

T. R. Whitt* (trw0003@auburn.edu), Auburn University, Roosevelt Dr, Department of Mathematics Parker 221, Auburn University, AL 36849, and **C. A. Rodger** (rodgec1@auburn.edu). *Path Decompositions of the Kneser Graph.*

The Kneser Graph, $KG_{n,k}$, is the graph whose vertices correspond to the k -element subsets of n elements, and where two vertices are connected if and only if their corresponding sets are disjoint. A P_n -decomposition of a graph, G , is a partition of the edges of G into sets, each element of which induces an edge-disjoint copy of P_n , where P_n is a simple path of length n . Necessary and sufficient conditions for P_3 and P_4 decompositions of $KG_{n,2}$ are discussed, along with generalizations of the results. (Received September 26, 2012)