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Department of Mathematics, Michigan State University, East Lansing, MI 48824-1027, and
Vincent R. Vatter. *Maximal and Maximum Independent Vertex Sets in Graphs.*

Let $m(G)$ be the number of maximal (with respect to containment) independent vertex sets in a graph G . Erdős and Moser posed the problem of finding $\max_G m(G)$ and a characterization of the extremal graphs as G runs over all graphs with n vertices. Since the solution was given by Moon and Moser, there have been a host of papers addressing the same question as G runs over various families of graphs. We solve the problem for the family of graphs with n vertices and a bounded number of cycles as well as the family of such graphs which are also connected. In addition, we consider the analogous question for maximum (cardinality) independent sets. (Received June 19, 2005)