1038-05-160   **Anthony B. Evans** and **Dan Pritikin*** (`pritikd@muohio.edu`), Miami University, Department of Math and Stat, Oxford, OH. *Modulo n Representations of Graphs.*

Let G_n denote the graph with vertex set $0, 1, ..., n - 1$, where vertices u, v with $u > v$ are adjacent if and only if $gcd(u - v, n) = 1$. The representation number $rep(G)$ is the least n such that G is isomorphic to some induced subgraph of G_n. This concept is closely related to the product dimension of a graph. We improve upon bounds for $rep(G)$ for various classes of graphs, and introduce an eigenvalue context to the problem. (Received February 11, 2008)