

1074-05-256

**Michael D. Barrus\*** ([michael.barrus@bhsu.edu](mailto:michael.barrus@bhsu.edu)), 1200 University Street Unit #9110,  
Spearfish, SD 57783. *Residues and independence numbers of unigraphs.*

The residue  $r(G)$  of a graph  $G$  is the number of zeros left after fully reducing the degree sequence of  $G$  via the Havel-Hakimi algorithm. The residue is one of the best known lower bounds on the independence number of a graph in terms of the degree sequence. Though this bound may be arbitrarily weak for graphs in general, we show that if  $G$  is the unique realization of its degree sequence, then the independence number of  $G$  is either  $r(G)$  or  $r(G) + 1$ , and we determine which value it is. (Received August 22, 2011)