1023-05-77 Doug Bauer and Nathan Kahl* (kahlnath@shu. edu), Dept. of Mathematics and Computer Science, Seton Hall University, 400 S. Orange Ave., South Orange, NJ 07079, and Linda McGuire and Edward Schmeichel. On Long Cycles in Triangle-Free Graphs.
We prove that a 2 -connected, triangle-free graph $G$ of order $n$ having minimum degree $\delta$ has either circumference at least $\min \{n, 4 \delta-4\}$ or every longest cycle in $G$ is a dominating cycle. This result is best possible in the sense that there exist bipartite graphs with minimum degree $\delta$ whose longest cycle has length $4 \delta-4$. In addition, longest cycles in these graphs are not dominating cycles. (Received July 27, 2006)

