## Problem

Prove that there does not exist a doubly-infinite sequence $\left(x_{k}\right)$ of positive reals satisfying

$$
2 x_{k-1} x_{k+1}>x_{k-1} x_{k}+x_{k} x_{k+1}
$$

for all $k \in \mathbb{Z}$.
(Math Problem of the Week, 6/8/97) Carl Miller

