E Grove, G Ladas, E Lapierre* (evelina@cox.net) and W Tikjha. The Global Characteristics of a Family of Systems of Piecewise Linear Difference Equations.

We give a detailed analysis, complete with open problems and conjectures, of the global character of the solutions of the piecewise linear difference equations

\[
\begin{align*}
    x_{n+1} &= |x_n| + ay_n + b \\
    y_{n+1} &= x_n + c|y_n| + d
\end{align*}
\]

where the initial condition \((x_0, y_0) \in \mathbb{R}^2\) and the parameters \(a, b, c, d \in \{-1, 0, 1\}\). (Received September 12, 2011)