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Heidi Berger* (heidi.berger@simpson.edu), Simpson College, Department of Mathematics,
701 N. C Street, Indianola, IA 50125. *Homoclinic Orbits for a $2n^{\text{th}}$ Order Nonlinear Difference
Equation.*

We will use the Mountain Pass Theorem and related results from critical point theory to find nontrivial doubly asymptotic solutions to a $2n^{\text{th}}$ order nonlinear difference equation that generalizes a Sturm-Liouville problem. It will be assumed that our nonlinear term grows superlinearly both at the origin and at infinity. An example of our results will be given. (Received September 15, 2008)