Chris D. Lynd* (clynd@bloomu.edu) and Devyn A. Lesher. Convergence Results for the Class of Periodic Left Nested Radicals.

We will begin by providing a variety of examples of left and right nested radicals as we present a brief history of this topic and illustrate its connection to difference equations. Then, we will present four new theorems about left nested radicals. In one theorem, we give the necessary and sufficient conditions for the convergence of a periodic left nested radical of a general form. In another theorem, we demonstrate how to construct a sequence of left nested radicals that converges to a predetermined periodic sequence. We conclude the presentation by constructing a sequence of left nested radicals whose limiting sequence repeats the digits in the phone number 867-5309. (Received September 06, 2014)