1107-39-243 **Nika Lazaryan*** (`lazaryans@vcu.edu`), Richmond, VA , and **Hassan Sedaghat** (`hsedagha@vcu.edu`), Richmond, VA. *Global Stability and Periodic Solutions for a Second Order Rational Equation.*

We study a second order rational difference equation with quadratic terms. We investigate the global stability profile and the boundedness of solutions for positive parameters and nonnegative initial values. We establish that when the function defining the difference equation is monotone in its arguments, the equation does not have any periodic solutions of period greater than two. In addition, under the above assumptions, if the equation has no two-cycles, the solutions converge to the unique positive fixed point. (Received January 16, 2015)

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