Toufik Khyat* (toufik.khyat@trincoll.edu). A Difference Equation with Neimark-Sacker Bifurcation.

We compute the direction of the Naimark-Sacker bifurcation for the difference equation $x_{n+1} = \frac{x_n}{Cx_{n-1}^2 + Dx_n + F}$ where C, D and F are positive numbers and the initial conditions x_{-1} and x_0 are positive numbers. Moreover, we give the asymptotic approximation of the invariant curve. (Received September 26, 2017)