ABSTRACT

In this paper, we investigate the boundedness character, the periodic character and the global behavior of positive solutions of the difference equation

$$x_{n+1} = p_n + \frac{x_{n-1}^p}{x_n^p}, \quad n = 0, 1, \cdots,$$

where $p \in (0, \infty)$ and $\{p_n\}$ is a two periodic sequence of nonnegative real numbers and the initial conditions x_{-1}, x_0 are arbitrary positive real numbers. Morever, this paper gives an answer to Open Problem posed by Papaschinopoulos et al.

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