

# Monotonic solutions of a higher order neutral difference systems

Barbara Łupińska

University of Białystok  
ul. Ciołkowskiego 1M  
15-245 Białystok  
bpietruczuk@math.uwb.edu.pl

There will be presented a some classification of non-oscillatory solutions of the non-linear  $k$ -dimensional difference system of equations with deviating argument, where the the first equation of the system is of a neutral type. Next, there will be formulated sufficient conditions for the non-oscillatory solutions to be bounded or unbounded. The obtained results will be illustrated by examples.

[1] Łupińska, B., Schmeidel, E., Zonenberg, J., Asymptotic properties of solutions of neutral type difference system with delays (submitted).

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[3] Migda, M., Migda, J., Asymptotic properties of solutions of second-order neutral difference equations, *Nonlinear Anal.* 63 (2005), e789-e799.

[4] Jankowski, R., Schmeidel, E., Zonenberg, J., Oscillatory properties of solutions of the fourth order difference equations with quasidifferences, *Opuscula Math.* 34(4) (2014), 789–797.