CREATIVE MATH. 13 (2004), 01 - 04

On the rate of convergence of Archimedean double sequences

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ABSTRACT. Let M and N be two means. The pair of sequences $(a_n)_{n\geq 0}$ and $(b_n)_{n\geq 0}$ defined by

 $a_{n+1} = M(a_n, b_n), b_{n+1} = N(a_{n+1}, b_n), n \ge 0,$

is called an Archimedean double sequence. We study the rate of convergence of these sequences to a common limit.

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