

**Migda, Małgorzata; Schmeidel, Ewa; Zbąszyniak, Małgorzata**

**On the existence of solutions of some second order nonlinear difference equations.** (English)

Zbl 1122.39001

Arch. Math., Brno 41, No. 4, 379-388 (2005).

The authors study the second order difference equation

$$\Delta^2 y_n = a_n y_{n+1} + f(n, y_n, y_{n+1}), \quad n \in N. \quad (\text{E})$$

They give two theorems ensuring the existence of a solution  $y$  of equation (E) such that  $y_{n+1} = \alpha_n u_n + \beta_n v_n$ , where  $\lim \alpha_n = \alpha$ ,  $\lim \beta_n = \beta$ ,  $\alpha, \beta \in \mathbb{R}$  and  $u, v$  are solutions of the equation  $\Delta^2 z_n = a_{n+1} z_{n+1}$ .

Reviewer: [Zuzana Došlá \(Brno\)](#)

**MSC:**

**39A10** Additive difference equations

Cited in **1** Reviews  
Cited in **2** Documents

**Keywords:**

nonoscillatory solution

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