

Generalized Symmetry Classification of Discrete Equations in a Class Depending on 12 Parameters

***R.N. Garifullin**, R. Yamilov**

Institute of Mathematics with Computer Center of the Ufa Science Center RAS, Ufa, Russia

**e-mail address: rustem@matem.anrb.ru*

We carry out the generalized symmetry classification of polylinear autonomous discrete equations defined on the square, which belong to a twelve-parametric class. As a result we find a number of integrable examples pretending to be new. One of them has a nonstandard symmetry structure, the others are analogues of the Liouville equation in the sense that those are Darboux integrable. We also enumerate all equations of the class, which are linearizable via a two-point first integral, and specify the nature of integrability of some known equations.