Non-polynomial Fourth Order Equations which Pass the Painlevé Test

Fahd Jrad^a and Uğurhan Muğan^b

Cankaya University, Department of Mathematics and Computer Sciences, 06530 Balgat, Ankara, Turkey
Bilkent University, Department of Mathematics, 06800 Bilkent, Ankara, Turkey

Reprint requests to U.M.; E-mail: mugan@fen.bilkent.edu.tr

Z. Naturforsch. **60a**, 387 – 400 (2005); received February 28, 2005

The singular point analysis of fourth order ordinary differential equations in the non-polynomial class are presented. Some new fourth order ordinary differential equations which pass the Painlevé test as well as the known ones are found. — PACS: 02.30.Hq, 02.30.Ik, 02.30.Gp

Key words: Painlevé Equations; Painlevé Test.