

Weak-Painlevé Property and Integrability of General Dynamical Systems

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The purpose of this paper is to investigate the connection between singular property and integrability for general dynamical systems. We will firstly present some methods to test the Painlevé property and weak-Painlevé property, then we will show the equivalence between the weak-Painlevé property and certain formal integrability for general dynamical systems.

Keywords: Painlevé property, weak-Painlevé property, integrability, first integrals, Kowalevskaya exponents