ABEL'S EQUATION AND REGULAR GROWTH: VARIATIONS ON A THEME BY ABEL

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ABSTRACT. Following a 70-year old suggestion of Paul Lévy, a condition is formulated for the regularity of growth of real functions. The condition, which is quite explicit, makes use of the iterates of the function and solutions of Abel's functional equation, and is well adapted to a computer testing.

Numerous computer experiments reveal interesting properties of the proposed regularity criterion.