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**On the stability of functional equations.** (English) Zbl 1207.39044

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Summary: We give some theorems on the stability of the equation of homomorphism, of Lobachevski's equation, of almost Jensen's equation, of Jensen's equation, of Pexider's equation, of linear equations, of Schröder's equation, of Sincov's equation, of modified equations of homomorphism from a group (not necessarily commutative) into a  $\mathbb{Q}$ -topological sequentially complete vector space or into a Banach space, of the quadratic equation, of the equation of a generalized involution, of the equation of idempotency and of the translation equation. We prove that the different definitions of stability are equivalent for the majority of these equations. The boundedness stability and the stability of differential equations and the anomalies of stability are considered and open problems are formulated too.

**MSC:**

**39B82** Stability, separation, extension, and related topics for functional equations

**39B62** Functional inequalities, including subadditivity, convexity, etc.

**39B52** Functional equations for functions with more general domains and/or ranges

Cited in **1** Review  
Cited in **71** Documents

**Keywords:**

stability; equation of homomorphism; Lobachevski's equation; Jensen's equation; Pexider's equation; Schröder's equation; Sincov's equation; group; Banach space; quadratic equation; generalized involution; translation equation

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