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Nearly ternary derivations. (English) Zbl 1141.39024

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Authors' abstract: Let A be a normed algebra and X a normed A -bimodule. By a ternary derivation we mean a triple (D_1, D_2, D_3) of linear mappings $D_1, D_2, D_3 : A \rightarrow X$ such that $D_1(ab) = D_2(a)b + aD_3(b)$ for all $a, b \in A$. Our aim is to establish the stability of ternary derivation associated with the extended Jensen functional equation

$$qf\left(\frac{\sum_{k=1}^q x_k}{q}\right) = \sum_{k=1}^q f(x_k)$$

for all $x_1, \dots, x_q \in A$, where $q > 1$ is a fixed positive integer.

Reviewer: [Claudi Alsina \(Barcelona\)](#)

MSC:

[39B82](#) Stability, separation, extension, and related topics for functional equations

Cited in **14** Documents

[39B52](#) Functional equations for functions with more general domains and/or ranges

[47B47](#) Commutators, derivations, elementary operators, etc.

[46H25](#) Normed modules and Banach modules, topological modules (if not placed in 13-XX or 16-XX)

Keywords:

[Hyers-Ulam-Rassias stability](#); [ternary derivations](#); [extended Jensen equation](#); [normed algebra](#); [normed \$A\$ -bimodule](#)

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