

STABILITY OF A 3-VARIABLE QUADRATIC FUNCTIONAL EQUATION

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ABSTRACT

In this paper, the authors discuss the general solution and the stability of a 3-variable quadratic functional equation

$$f(x+y, z+w, u+v) + f(x-y, z-w, u-v) = 2f(x, z, u) + 2f(y, w, v).$$

The quadratic form $f(x, y, z) = ax^2 + by^2 + cz^2 + dxy + eyz + fzx$ is found to be the solution of the above functional equation.

Keywords: Solution; stability; 3-variable quadratic equation

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