APPORXIMATE PEXIDERIZED CAUCHY’S ADDITIVE TYPE MAPPINGS

YOUNG WHAN LEE

Abstract. We prove the stability of the Pexiderized Cauchy’s additive functional equation with a general form;

$$f(x + y) = g(x) + h(y) + \lambda(x, y)$$

where \( \lambda(x, y) \) is a logarithm of a pseudo exponential function. From this result, we obtain the stability with the following form;

$$\frac{1}{1 + \phi(x, y)} \leq \frac{f(x + y)}{e(x, y)g(x)h(y)} \leq 1 + \phi(x, y),$$

where \( e(x, y) \) is a pseudo exponential function. It is a generalized result for the stability of the Pexiderized Cauchy’s functional equation.


Keywords and phrases: Functional equation, stability, superstability, gamma and beta functional equation, Cauchy functional equation, exponential functional equation.

REFERENCES

