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## Mean value on the difference between a quadratic residue and its inverse modulo $p$

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摘要

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分类号

## Mean Value on the Difference Between a Quadratic Residue and its Inverse Modulo $p$

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**Abstract** The main purpose of this paper is to use the generalized Bernoulli numbers, Gauss sums and the mean value theorems of Dirichlet  $L$ -functions to study the asymptotic property of the difference between a quadratic residue and its inverse modulo  $p$  ( $p$  a prime), and to give an interesting hybrid mean value formula.

**Key words** [An integer and its inverse](#) [Bernoulli numbers](#) [Cochrane sums](#)

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