

A total norm of τ -adic non-adjacent form occurring among all element of $\mathbb{Z}(\tau)$: an alternative formula

ABSTRACT

In this paper, we give an alternative formula of total norms for τ -Adic Non-adjacent Forms (τ -NAF) expansion for an integer n element of $\mathbb{Z}(\tau)$ in Koblitz curve. We apply the geometric series formula to simplify some series involving floor functions in total norms formula. With this approach, we can evaluate the total norm by using the length of τ -NAF expansion.

Keyword: τ -adic non-adjacent; $\mathbb{Z}(\tau)$