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Title: Solubility of additive sextic forms over ramified quadratic extensions of $\mathbb{Q}_2$

Author(s): Michael P. Knapp

In this article, we study the equation $a_1x_1^6 + a_2x_2^6 + \cdots + a_sx_s^6 = 0$ over the six ramified quadratic extensions of the p -adic field $\mathbb{Q}_2$. For all of these extensions, we show that if $s \geq 9$, then this equation has a nontrivial solution regardless of the values of the coefficients. For four of the extensions, we show that 9 is the smallest number of variables that guarantees that the equation will have a nontrivial solution.

Address:

Michael P. Knapp
Department of Mathematics
and Statistics
Loyola University Maryland
4501 North Charles Street
Baltimore, MD 21210-2699
USA