

Euclidean number fields and finite extensions of local fields

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Abstract

In a 1975 paper, F. Faltin, N. Metropolis, B. Ross and G.-C. Rota gave a construction of the real numbers based on the euclidean algorithm over the euclidean ring $\mathbb{Z}((X))$. Following their work, we consider (norm) euclidean number fields and construct finite extensions of local nonarchimedean fields.