

A note on power integral bases in pure quartic number fields

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Abstract. We describe an approach which differs to that of [GaalRem14] for computing power integral bases of pure quartic number fields. This approach requires the computation of units in quadratic fields. We also relate an effective form of the abc conjecture to this problem, and produce a table of positive integers d up to 10^{10} for which the pure quartic number field $\mathbb{Q}(\sqrt[4]{d})$ contains a nontrivial power integral basis.

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