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Title:	Discriminant and integral basis of sextic fields defined by x(6) + ax plus b
Authors:	Khanduja, Sudesh K. (/jspui/browse?type=author&value=Khanduja%2C+Sudesh+K.)
Keywords:	Discriminant p-integral basis Integral basis
Issue Date:	2022
Publisher:	Taylor and Francis
Citation:	Communications in Algebra, 50(10), 4401-4436.
Abstract:	Let K=Q(θ) be an algebraic number field with θ a root of an irreducible trinomial $f(x)=x^6+ax+b$ belonging to Z[x]. In this paper, for each prime number p we compute the highest power of p dividing the discriminant of K in terms of the prime powers dividing a, b and discriminant of f(x). An explicit p-integral basis of K is also given for each prime p and a method is described to obtain an integral basis of K from these p-integral bases which is illustrated with examples.
Description:	Only IISER Mohali authors are available in the record.
URI:	https://doi.org/10.1080/00927872.2022.2061984 (https://doi.org/10.1080/00927872.2022.2061984) http://hdl.handle.net/123456789/4405 (http://hdl.handle.net/123456789/4405)
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