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Title:	The discriminant of compositum of algebraic number fields
Authors:	Khanduja, S.K. (/jspui/browse?type=author&value=Khanduja%2C+S.K.)
Keywords:	Rings of algebraic integers Discriminant Relative extensions
Issue Date:	2019
Publisher:	World Scientific
Citation:	International Journal of Number Theory, 15(2), pp.353-360.
Abstract:	For an algebraic number field K , let dK denote the discriminant of an algebraic number field K . It is well known that if K_1, K_2 are algebraic number fields with coprime discriminants, then K_1, K_2 are linearly disjoint over the field \mathbb{Q} of rational numbers and $dK_1K_2 = dK_1 dK_2$, n_i being the degree of K_i over \mathbb{Q} . In this paper, we prove that the converse of this result holds in relative extensions of algebraic number fields. We also give some more necessary and sufficient conditions for the analogue of the above equality to hold for algebraic number fields K_1, K_2 linearly disjoint over $K_1 \cap K_2$.
URI:	https://www.worldscientific.com/doi/abs/10.1142/S1793042119500167 (https://www.worldscientific.com/doi/abs/10.1142/S1793042119500167) http://hdl.handle.net/123456789/2195 (http://hdl.handle.net/123456789/2195)
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