Title:	Eliminating tame ramification: generalizations of Abhyankar's lemma
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Abstract:	A basic version of Abhyankar's lemma states that for two finite extensions L and F of a local field K, if L|K is tamely ramified and if the ramification index of L|K divides the ramification index of F|K, then the compositum L.F is an unramified extension of F. In this paper, we generalize the result to valued fields with value groups of rational rank 1, and show that the latter condition is necessary. Replacing the condition on the ramification indices by the condition that the value group of L be contained in that of F, we generalize the result further in order to give a necessary and sufficient condition for the elimination of tame ramification of an arbitrary extension F|K by a suitable algebraic extension of the base field K. In addition, we derive more precise ramification theoretical statements and give several examples.
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