Cup product computations in the Galois cohomology of number fields

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Abstract. Let p be a prime. We describe cup product computations in the cohomology of the Galois group of the maximal p-ramified extension of a number field with coefficients in μ_p, the group of p-th roots of unity. For number fields containing μ_p such computations are known to yield information on the structure of the relations in the Galois group.