Abstract. Let *L* be a number field and \mathfrak{a} be an ideal of some order of *L*. Given an algebraic number $a \mod \mathfrak{a}$ and some bounds we show how to effectively reconstruct a number *b* such that *b* is smaller then the given bound and $b \equiv a \mod \mathfrak{a}$.

The first application is an algorithm for the computation of n-th roots of algebraic numbers. Secondly, we get an algorithm to factor polynomials over number fields which generalises the Hensel-factoring method. Our method uses only integral LLL-reductions in contrast to the real LLL-reduced suggested by [6,8].