Abstract

In this thesis, as an extension of the class of (pre)-Schreier domains introduced by P.M. Cohn and M. Zafrullah, we introduce and study a class of integral domains D characterized by the property that whenever $a, b_1, b_2 \in D - \{0\}$ and $a|b_1b_2$, there exist an integer $k \geq 1$ and $a_1, a_2 \in D - \{0\}$ such that $a^k = a_1a_2$ and $a_i|b_i^k$, $i = 1, 2$. We call them almost-Schreier domains. We show that an almost-Schreier domain has torsion t-class group, that a local (Noetherian) one-dimensional domain is almost-Schreier and that the polynomial ring with coefficients in an integrally closed almost-Schreier domain is almost-Schreier. Then we convert a great part of the material about almost-Schreier domains in the language of monoids, that is, we introduce and study the cancellative monoids H characterized by the same property as above.