

The Weak! Mordell-Weil Theorem

PROP Let K be a number field, $S \subseteq M_K$ a finite set of places containing M_K^∞ , and let $m \geq 2$ be an integer. Let L/K ($L = K_{S,m}^{ab}$) be the maximal abelian extension of K having exponent m which is unramified outside of S . Then, L/K is a finite extension.

