

Explicit Lower Bounds for Heights Related to Elliptic Curves

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After shortly introducing heights and elliptic curves we will look at the torsion points E_{tor} of an elliptic curve E over \mathbb{Q} and adjoin their coordinates to \mathbb{Q} . What we get is $\mathbb{Q}(E_{\text{tor}})$ which is a Bogomolov field. In a Bogomolov field, the height of a nonzero number which is not a root of unity is bounded from below by a positive constant. We will compute this bound explicitly.