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*Reduction mod  $p$  of subgroups of the Mordell–Weil group of an elliptic curve*

We investigate that for a free subgroup of the Mordell–Weil group of an elliptic curve defined over rationals, how the order of the reduction of this subgroup mod  $p$  varies as  $p$  goes to infinity. We discuss some results regarding the lower bounds on the size of the reduced subgroup.

This is a joint work with Kumar Murty.