

Birch's theorem with shifts

SAM CHOW

Abstract. A famous result due to Birch (1961) provides an asymptotic formula for the number of integer points in an expanding box at which given rational forms of the same degree simultaneously vanish, subject to a geometric condition. We present the first inequalities analogue of Birch's theorem.

Mathematics Subject Classification (2010): 11D75 (primary); 11E76 (secondary).