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Barry Mazur*, Department of Mathematics, Harvard University, 1 Oxford Street, Cambridge, MA 02138. *Arithmetic statistics: elliptic curves and other mathematical objects.*

Arithmetic statistics: elliptic curves and other mathematical objects

Barry Mazur

Abstract for the Erdős Memorial Lecture—Saturday, October 12, 2013

Paul Erdős would surely be delighted by the current interest in the statistics of diophantine phenomena both in terms of what has been recently proved—e.g., by the marvelous work of Manjul Bhargava and his associates—and in terms of the rich assortment of important conjectures that pave the way to future work. This talk will focus on elliptic curves, Markov processes related to their arithmetic, and some 'minimalist' conjectures regarding their rational points. (Received August 16, 2013)