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Alexandru Buium* (buium@math.unm.edu), Department of Mathematics and Statistics,
University of New Mexico, 1 University of New Mexico, Albuquerque, NM 87131. *The Riemannian
geometry of the integers*. Preliminary report.

The spectrum of the integers can be viewed as an infinite dimensional manifold in which the directions are given by the primes and partial differentiation in the various directions is given by Fermat quotient operators. Then an arithmetic analogue of Riemannian geometry may be developed. The talk will offer a brief survey of this circle of ideas with special emphasis on open problems. (Received September 10, 2015)