

1086-11-1622

**Amir Akbary\*** ([amir.akbary@uleth.ca](mailto:amir.akbary@uleth.ca)), Department of Mathematics and CS, University of Lethbridge, Lethbridge, Alberta T1K 3M4, Canada. *Periods of orbits modulo primes.*

We review some classical results on the lower bounds (in terms of  $p$ ) for the order of an integer modulo primes  $p$  and describe their generalizations in the context of reduction mod  $p$  of points on elliptic curves. We also give a dynamical interpretation of such results, more precisely, for an endomorphism  $\varphi$  of a variety  $V$  defined over  $\mathbb{Q}$  we prove a lower bound for the size of the reduction modulo primes of the  $\varphi$ -orbit of any point  $\alpha \in V(\mathbb{Q})$ . Some of the results are joint work with Dragos Ghioca and Kumar Murty. (Received September 23, 2012)