Alexandru Buium* (buium@math.unm.edu), Department of Mathematics and Stat, University of New Mexico, Albuquerque, NM 87131, and Bjorn Poonen. Modular forms mod p and relations among Heegner points. Preliminary report.

Given a modular parametrization of an elliptic curve A it is shown that there exists a formal function F on the modular curve such that the linear dependence relations among the values of F at CM points are the same as the linear dependence relations among the corresponding Heegner points. A similar result is obtained for non CM isogeny classes. Finally an explicit computation of F mod p is given in terms of modular forms mod p. (Received January 12, 2007)