1014-11-1180 Michael I Rosen* (mrosen@math.brown.edu), Box 1917, Brown University, Providence, RI 02912, and Joseph H Silverman. Independence of Heegner Points.

A discussion of the following theorem will be presented. Let E be an elliptic curve defined over \mathbb{Q} with conductor N. It is known that there is a non-trivial morphism $\Phi: X_0(N) \to E$ which is defined over \mathbb{Q} . Let $\{K_i | i = 1, 2, ..., t\}$ be distinct imaginary quadratic number fields and y_i a Heegner point on $X_0(N)$ attached to the maximal order in K_i (we assume that every prime dividing N is either split or ramified in K_i). Let $P_i = \Phi(y_i)$. There is a constant $C = C(E, \Phi)$ such that whenever the odd part of the class group of each K_i exceeds C, the points $\{P_1, P_2, ..., P_t\}$ are linearly independent in $E(\overline{\mathbb{Q}})/E(\overline{\mathbb{Q}})_{tors}$. (Received September 28, 2005)