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**Michael J Griffin\*** (mjgriffin@math.byu.edu), 320 TMCB, Brigham Young University, Provo, UT 84602, and **Ken Ono**. *Elliptic curves and lower bounds for class numbers*.

Ideal class pairings map the rational points of rank  $r \geq 1$  elliptic curves  $E/\mathbb{Q}$  to the ideal class groups  $\text{CL}(-D)$  of certain imaginary quadratic fields. These pairings imply that

$$h(-D) \geq (c(E) - \varepsilon)(\log D)^{\frac{r}{2}}$$

for sufficiently large discriminants  $-D$  in certain families. These bounds are effective, and they offer improvements to known lower bounds for many discriminants. (Received January 19, 2020)