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**Carl Erickson\*** (cerickson@stanford.edu), PO Box 11934, Stanford, CA 94309, and **Alison Miller** and **Aaron Pixton**. *Orders at Infinity of Modular Forms with Heegner Divisors*.

Borchers described the exponents  $a(n)$  in product expansions  $f = q^h \prod_{n=1}^{\infty} (1 - q^n)^{a(n)}$  of meromorphic modular forms with a Heegner divisor. His description gives the order of vanishing at infinity  $h$  of  $f$  as a generalized class number. We give  $p$ -adic formulas for  $h$  in terms of generalized traces over the zeros and poles of  $f$ . Specializing to the case of the Hilbert class polynomial  $f = \mathcal{H}_d(j(z))$  yields  $p$ -adic formulas for class numbers that generalize past results of Bruinier, Kohlen, and Ono. (Received July 28, 2006)