1018-11-239   **Ben Levitt** and **William McCallum*** (`wmc@math.arizona.edu`), Department of Mathematics, University of Arizona, Tucson, AZ 85721. *Yet more nontrivial elements in Shafarevich-Tate groups of Fermat curves.*

Using a cohomological pairing on number fields studied by Sharifi and the second author, we find new nontrivial elements in the Shafarevich-Tate group of the jacobian of a quotient of the p-th Fermat curve, for certain irregular primes p. Nontriviality of these elements depends on a computation of Sharifi showing nontriviality of the pairing for irregular primes less than 25,000. (Received March 07, 2006)

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