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Shahed Sharif* (sharif@math.duke.edu), Mathematics Department, Duke University, Box 90320, Durham, NC 27708-0320. *The period-index problem for genus 1 curves over number fields.*

The period of a curve is the smallest positive degree of Galois-invariant divisor classes. The index is the smallest positive degree of rational divisors. We construct examples of genus one curves with prescribed period and index over a given number field. (Received September 07, 2009)