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Amicable pairs of primes for elliptic curves

A pair of primes p and q are called *amicable* for an elliptic curve if the order of reduction modulo p is q and the order of reduction modulo q is p . Such pairs are, not surprisingly, relatively rare for most elliptic curves. On curves with complex multiplication, however, such pairs are quite frequent and have interesting properties. We will present theorems, conjectures, and experimental data.

This is work in progress, jointly with Joseph H. Silverman.