

Homework 37, due December 4

- (1) (Problem 2, page 370)
  - List the points on the elliptic curve  $E : y^2 \equiv x^3 - 2 \pmod{7}$ .
  - Find the sum  $(3, 2) + (5, 5)$  on  $E$ .
  - Find the sum  $(3, 2) + (3, 2)$  on  $E$ .
- (2) Write down the addition table for the elliptic curve in the previous problem.
- (3) (Problem 5, page 375) Compute the difference  $(5, 9) - (1, 1)$  on the elliptic curve  $y^2 \equiv x^3 - 11x + 11 \pmod{593899}$ .