

18.704 Fall 2004 Homework 1

All references are to the textbook “Rational Points on Elliptic Curves” by Silverman and Tate, Springer Verlag, 1992. Problems marked (*) are more challenging exercises that are optional but not required.

1. Do Exercise A.3 from the textbook, parts (a) and (b).

2. Do Exercise A.8 part (b) from the text.

3. (a) Do Exercise A.16(a) from the textbook.
(b) (*) Do Exercise A.16(b) from the textbook.

4. Do Exercise 1.7 parts (b) and (c) from the text. Also, in case some rational point exists, find formulas which give all rational points in terms of a parameter t , and use the formula to write down some particular rational point on the curve that you would have never guessed by inspection.