

## ALGEBRAIC CURVES W4045

### 1. HOMEWORK, WEEK 3, DUE SEPTEMBER 29

In what follows,  $k$  is a field. If necessary, you may assume  $k$  is algebraically closed.

1. Find a change of variable that transforms the curve  $y^2 = 4 - x^3$  into Legendre normal form

$$v^2 = u(u - 1)(u - \lambda).$$

2. Exercises 2.1, 2.2, 2.3 in the Reid book.