

## MATH 111 HOMEWORK 5, WINTER 2004

DUE FRIDAY, FEBRUARY 27

- (1) CLO 2.9 #12
- (2) CLO 2.9 #13
- (3) CLO 3.1 #1
- (4) CLO 3.1 #5
- (5) CLO 3.1 #6
- (6) CLO 3.5 #1
- (7) **Bonus Question.** (Not compulsory). Let  $S = \mathbb{C}[x]$ , and let  $f \in S$  have all coefficients rational. Let  $f_{red}$  be the generator of  $I(V(f))$  (with  $LC(f_{red}) = 1$ ). Show that all coefficients of  $f_{red}$  are rational. Hint: Think about the related previous homework question.