## HOMEWORK 7, DUE TUESDAY FEBRUARY 23RD

1. Are the following true or false? If true prove them; if false give counterexamples.

- (i) Every prime ideal is maximal.
- (ii) Every ring is a PID.
- (iii) Every UFD is a PID.
- 2. Chapter 4, §6. 1-14.
- 3. Chapter 5, §1. 3, 4.