

PREP 6

Due: 10/03/2016

Reading. (BB) Make sure you understand all the reasoning in the proofs of Kronecker's theorem, Corollary 4.3.9, and Example 4.3.3. Also read page 214 and understand it.

Exercises. Work out the following problems.

- (1) Problem 11, page 210.
- (2) The polynomial $p(x) = x^5 + 2x^4 - 2x^3 + 2x^2 - 2x + 2 \in \mathbb{Q}[x]$ is irreducible. Find the inverse of $[x]$ in $\mathbb{Q}[x]/\langle p(x) \rangle$.
- (3) Problem 4(a) on page 219.