

## ASSIGNMENT 6

*September 18, 2015*

**Problem 1.** Write down the proof of fact that the Galois group of the splitting field a polynomial, which is solvable by radicals, is a solvable group. Check every detail.

**Problem 2.** Is  $U\left(\frac{\mathbb{Z}}{n\mathbb{Z}}\right)$  a cyclic group? Prove or give a counterexample.