

## ASSIGNMENT 9 - MATH235, FALL 2009

**Submit by 16:00, Monday, November 16**

1. Let  $\mathbb{F}$  be a finite field. Prove that if  $A$  and  $B$  are two non-zero elements of  $F$  that are not squares then  $A/B$  is a square. (Suggestion: count the number of non-zero squares first.)

In addition, solve exercises (5), (6), (8), (10) and (11) from the course notes, pp. 86-87.