Assignment 6

due date: Tuesday, July 13th, 2010.

Assignment:

1. Find all possible subgroups of the group $\mathbb{Z}_{12}$.

2. Find orders of all elements of the group $\mathbb{Z}_{36}^*$.

3. Check that the function $f : \mathbb{R}^* \to \mathbb{R}^*$ given by $f(x) = x^2$ is a homomorphism. Is it an isomorphism?