FROM SYMMETRY TO GROUPS, HOMEWORK 1

Problem 1. (1) Show that the identity element in a group G is unique. That is, if e, e' are two elements both satisfying the identity element axiom then $e = e'$.
(2) Show that the inverse a^{-1} to $a \in G$ is unique.

Problem 2. Find all groups of order:
(1) 3, (2) 4, (3) 5, (4) 6, (5) 7, (6) 8, (7) 17
(do as many as you can).