

Math 331 Spring 2006
Assignment 8: Due by April 3

1. Let G be a group with even number of elements. Show there is an element whose order is 2.
2. Let G be a group and H and K be subgroups in G . Prove or disprove that if H is a normal subgroup of G and K is a normal subgroup of H , then K is a normal subgroup of G .
3. Prove that there are two conjugacy classes of 5-cycles in A_5 , each of which has 12 elements.