



MODERN ALGEBRA 1
SPRING 2010

HOMEWORK 9.1
DUE MARCH 31

Exercise 1. Let G be a group. Prove that $[G : Z(G)]$ is never prime.

Exercise 2. Let G be a group, H a subgroup, and N a normal subgroup. Prove that if G/N is abelian then $H/(H \cap N)$ is abelian.