Math 331 Spring 2006
Assignment 6: Due by March 20

1. Find all the normal subgroups in S_3.
2. Show that every group of order ≤ 5 is abelian.
3. For a group G, $[G, G]$ is a subgroup generated by

$$\left\{aba^{-1}b^{-1} \mid a, b \in G\right\}.$$

Show that $[G, G]$ is a normal subgroup of G and $G/[G, G]$ is abelian.