MATH 473
WINTER 2019
HOMEWORK 14

1. Prove that the 5-cycle (1 2 3 4 5) does not commute with any odd permutation in S_5.

2. Prove that A_5 is a simple group.

3. Find all normal subgroups of the quaternion group Q of order 8.

4. Find a basis for the center of $\mathbb{C}G$, when G is the dihedral group of order 10.