

MATH 473
WINTER 2019
HOMEWORK 10

1. Let G be a finite group. Prove that $Z(\mathbb{C}G)$ is a subspace of $\mathbb{C}G$.
2. Chapter 9, problem 4.
3. Let G be the subgroup of S_5 generated by the permutations $(1\ 2\ 3)$ and $(4\ 5)$. Determine all the irreducible representations of G over \mathbb{C} .
4. Compute the center of $D_8 = \langle a, b : a^4 = b^2 = e, bab^{-1} = a^{-1} \rangle$ and $C_2 \times D_8$.