

TRENTO, 2022/23
ADVANCED GROUP THEORY
EXERCISE SHEET # 12

Exercise 12.1. Define Frobenius groups as permutation groups, and give the abstract reformulation.

Exercise 12.2. State and prove Frobenius' theorem about the existence of the Frobenius kernel.

Exercise 12.3. Construct the character tables of S_5 and A_5 .

Exercise 12.4. Prove that the only real character of a group of odd order is the trivial character.