TRENTO, 2022/23
ADVANCED GROUP THEORY
EXERCISE SHEET # 11

Exercise 11.1. Show that a direct product of isomorphic simple groups is characteristically simple.

Exercise 11.2. Define soluble groups, state and prove the equivalent characterizations, and state and prove the properties with respect to subgroups, quotients and homomorphic images.

Exercise 11.3. Prove Burnside's theorem about the solubility of finite groups whose order is divisible by at most two primes, and the results leading to it.