

HOMEWORK 1

1. Let $1 \rightarrow R \rightarrow \Gamma_i \rightarrow \Gamma \rightarrow 1$, $i = 1, 2$, be two central extensions of Γ by R . Suppose that the group Γ_1 is isomorphic to Γ_2 . Would the two central extensions be equivalent? If yes, give a proof; If no, provide a counterexample.
2. Prove Proposition 2.8.