

Math 31: Quiz 5

Name: _____

Instructions: Answer the following questions without consulting any outside source (such as notes or the textbook).

1. Let $\phi : G \rightarrow \overline{G}$ be a homomorphism. Complete the following statements:

(a) The kernel of ϕ is defined as $\ker \phi = \{ \quad \quad \quad \}$.

(b) The First Isomorphism Theorem: $G/\ker \phi \cong$

2. We know that for $N \trianglelefteq G$, N is the kernel of a surjective homomorphism $\psi : G \rightarrow \overline{G}$ where \overline{G} is a particular factor group. What factor group is \overline{G} ?

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