

Chapter 10B Random Group Quiz. Math 430-01 (Ellis) S'11

Instructions. Write all answers clearly on one piece of paper, and put all group members' names on the top of the paper. If you talk, you must do so **very quietly!**

1. Elaborate: what does “kernels are normal” mean?
2. Elaborate: what does “normal subgroups are kernels” mean?
3. Let $\phi : G \rightarrow \overline{G}$ be a group homomorphism. What group does the First Isomorphism Theorem say that the group $\phi(G)$ is isomorphic to?
4. Write down a subgroup H which makes the following isomorphism statement correct: $\mathbb{Z}/H \approx \mathbb{Z}_n$.