

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. Suppose $|G| = n$ and $|H| = m$. How many elements are in the external direct product $G \oplus H$?
2. (True/False) If G is Abelian, then $G \oplus H$ is Abelian regardless of whether H is Abelian or not.
3. Let $g_1 \in G_1$ and $g_2 \in G_2$ be elements of finite order. What is the order of (g_1, g_2) in $G_1 \oplus G_2$?
4. How many groups of order 4 are there up to isomorphism?
5. Name or give the Cayley table for an acyclic group of order 4.