MTH 361
Quiz 7
Spring 2010

20 points possible.

1. (5 pts.) Let $(G, \square)$ and $(K, \clubsuit)$ be groups. Define what it means for β to be a **homomorphism from** $(G, \square)$ **to** $(K, \clubsuit)$.

2. (5 pts.) Find all abelian groups, up to isomorphism, of order 32. How many abelian groups of order 32 are there, up to isomorphism?

3. (5 pts.) Find all abelian groups, up to isomorphism, of order 324. How many abelian groups of order 324 are there, up to isomorphism?

4. (5 pts.) List (by stating all their elements) all subgroups of order 4 of the group $\mathbb{Z}_2 \times \mathbb{Z}_4$.