

MID TEST

COURSE : ABSTRACT ALGEBRA DURATION : 100 MINUTES

CLASS : PMAT INTER 09 LECTURER : MUSTHOFA,M.Sc

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1. Find the number of generator of cyclic group $(\mathbb{Z}_{2013}, +)$
2. Let G be a cyclic group and H be a subgroup of G . Prove that G/H is also cyclic group.
3. Let G be a group and $f: G \rightarrow G$ defined by $f(a) = a^{-1}$ is an automorphism. Prove that G is abelian.
4. Determine all automorphisms of $\mathbb{Z}_6 \rightarrow \mathbb{Z}_6$ (under addition).

Good Luck!!