Department of Math

Math337, Quiz #2

Q#1

Which of the following is true and which is false

___ (1) if G is a group and $ax = ya$ then $x = y$

___ (2) if G is a group, then $\{e\}$ is a subgroup of G.

___ (3) Any subgroup of an abelian group is abelian

___ (4) the union of two subgroups of G is a subgroup.

___ (5) Any subgroup of non abelian group is non abelian

Q#2 Let G be abelian group

show that $H = \{x^2 \mid x \in G\}$ is a subgroup of G.

1152452,1152520,1190392,1191211,1191266,1193003,1193265,1193296,1200675,1200971,1211653,
1212571,1212782,1213047

Department of Mathematics

Quiz # 2

Math 337

Q1

Which of the following is true and which is false.

1. every Group is a subgroup of itself.
2. Every group has at least two subgroups.
3. Any subset of a group is a subgroup.
4. Any infinite group is abelian
5. In any group G the equation $xa=b$, $a,b \in G$ has a unique solution

Q#2: Let G be an abelian Let $H=\{x \in G / x^2=e\}$ prove that $H \leq G$ (a subgroup).

1201574,1201598,1202262,1202992,1203283,1210222,1210265,1210495,1210573,1210680,1210702,

1210713, 1210860,1211546