

MATH 440: Chapter 3 Write-Up Problems

Name:

1. Prove or disprove: Every group of order 6 is abelian.
2. Prove or disprove: If H and K are subgroups of a group G , then $H \cup K$ is a subgroup of G .
3. Fix an element $h \in G$ a group and consider the set

$$hG = \{hg \mid g \in G\}.$$

Prove or disprove: As sets, $hG = G$.