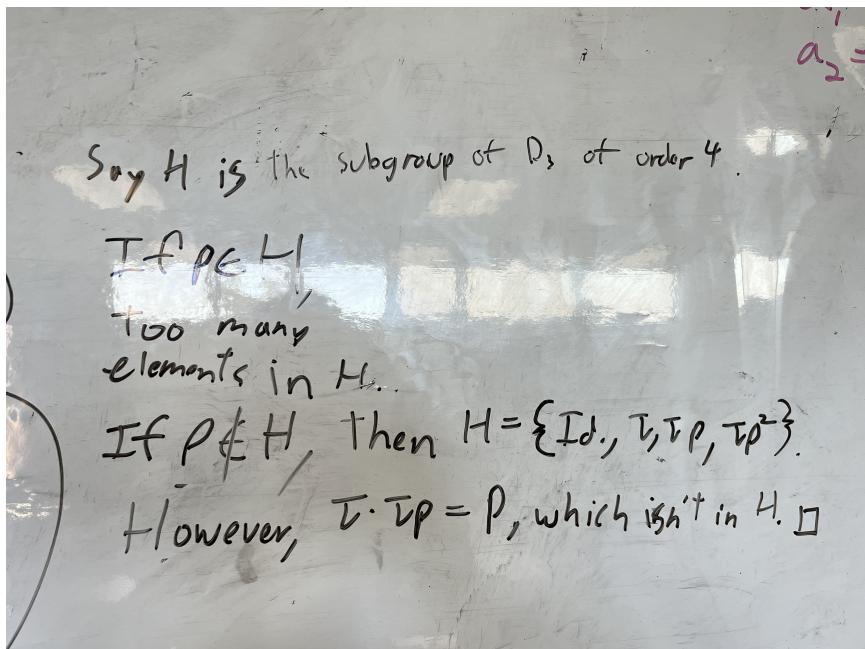
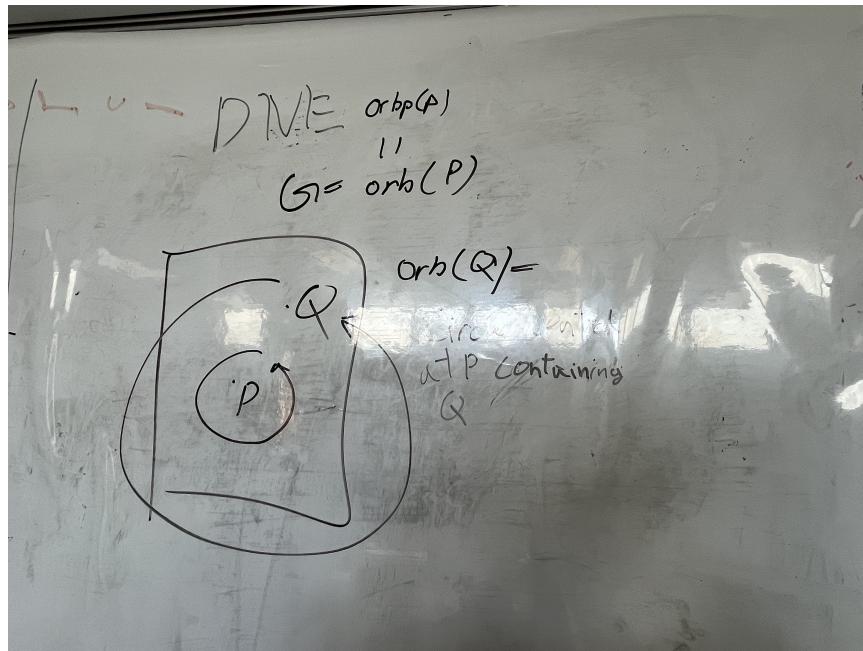


Latex Homework 10th Grade
Unit 3 - Abstract Algebra - Group Homomorphisms
Week 1 - Examples and Definitions

Dr. Chapman and Dr. Rupel

December 17, 2024





$D \cap H = \{ah \in bH \mid$
 $(b \in aH)$
 $(b = ah_2)$
 $(h_2 \in H)\}$

$\det(ah_2) = \det(b)$
Assume $\det(ah_2) = \det(b)$
 $\det(ah_2) = \det(a) \cdot \det(h_2) = \det(b)$
 $\det(h_2) = 1$
 $so \quad ah_2 = b$
 $h_2 = b^{-1}a$
 $b^{-1}aH = H$
 $aH = bH \quad \square$

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