

QUIZ 9

- (1) **(8 points)** Let G be a group and let H and K be subgroups of a group G . If the orders of H and K are relatively prime, show that $H \cap K = \{1_G\}$.
- (2) **(2 points)** T or F (if T state the theorem, if F provide a counter example). If m divides the order of a group G , then there exists a subgroup of order m in G .