## COMMUTATIVITY IN NORMAL SUBGROUPS - PRACTICE

<u>Theorem</u>: Let *G* be a group, let *M* and *N* be normal subgroups of *G* such that  $M \cap N = e$  (the identity), and let  $m \in M$  and  $n \in N$ . Then *m* and *n* commute with one another, or in other words, mn = nm.

Proof: