due Monday, September 10

This is a simple problem intended to help gauge your ability to think logically and to write a proof. Work it entirely by yourself, and write as clear a solution as you can. Keep in mind that clear doesn’t mean long. I will read your solution, but it will not affect your grade.

Begin by reading the definition of order of an element of a group, on page 46 of the text.

The problem: Let $a$ and $b$ be elements of a group $G$. Prove that the products $ab$ and $ba$ in $G$ have the same order.

Hand your solution in on monday. Put it into the appropriate slot by room 4-174.