MATHEMATICS 2001
GROUPWORK DUE SEPTEMBER 2

Tasks

Note: The scribe must upload the group's work to my D2L dropbox as a PDF by Friday before class, as we will use these PDFs for the group presentations. They must be typeset.

(1) Familiarize yourself with the Groupwork Report. You will hand in two things from your work today: the Groupwork Report, handwritten; and your Group Homework, which is required to be **typeset**.
(2) Elect a leader for the meeting who will make sure the tasks below are accomplished. Elect a scribe who will record/typset everthing to be handed in. Elect a presenter who will present your work in class on Friday if needed. The scribe should record who has each role.
(3) For the rest of the meeting, the scribe has two tasks. First, he or she should record any questions for me (things that you need help with) on the Groupwork Report. Second, he or she should record a basic narrative description of events on the Groupwork Report. See the example there.
(4) **Main Task 1: Take up homework done so far.** Note: done right, this will take a long time, perhaps an hour. Open up the website and go through all the days since you last met, and pull out everyone's homework. For **each** assigned homework task, **each** person shares their answers with the group. Ask each other questions until everyone has understood everyone else's answers and any disagreement have been resolved.
(5) **Main Task 2: Group Homework.** Work together to write your best proofs of the following theorems:
   (a) If x is an even integer, then $-x$ is even.
   (b) If x is an odd integer, then x^3 is odd.
   (c) If x is an even integer and y is an odd integer, then xy is even.
   (d) If x is an even integer and y is an odd integer, then $x + y$ is odd.
   (e) If w is an odd integer, then $w + 1$ is an even integer.

   You must work together on these and **not** show up at the group meeting having done them ahead of time. Do **not** divide up the work. Instead, spend 1-2 minutes each thinking silently, and then begin to contruct the proof on a single sheet of paper collaboratively, discussing as you go. You will need to change things as you go, so feel free to do multiple drafts. Do not move on to the next until you all feel satisfied with the one you are working on. If you find yourself ahead of the group, take on a socratic role, guiding your classmates through questions. If you find yourself getting lost in the group, tell your groupmates you are feeling lost and ask questions.
(6) Fill out your groupwork report and have everyone sign. **This is due in class.**
(7) The scribe will prepare a PDF of your proofs to hand in on D2L. **This is due before class.**