

Midterm for Putnam Problem Solving

- The goal of this midterm is three-fold: First, I'd like you to keep working on the assigned problems, without giving up too early. The second goal is to get some experience in "group work". I think that collaboration is one of the most important tools in math, although math is arguably the most individual game among all branches of science. In group work, a good communication skill is surely indispensable, and I hope you can get to learn to communicate mathematical ideas with each other during your group work. Lastly, the presentation skill. Try to improve your presentation during your group work. As you noticed in the lecture, the math problems we are doing are highly sophisticated, and it is sometimes very difficult to explain the solutions in an understandable way. Solving difficult problems is surely an important skill to have. However, in real life, communicating a difficult concept with each other in an easy way is also as important, if not more.
- Rules:
 - (1) Date: On both days of the first week of November (tentative).
 - (2) Each group consists of three members. On the day of exam, each group must have a *batting order*, which is the order of presentation.
 - (3) A presenter will be given a random problem, drawn from the past homework and supplementary problem sets. He or she will present the solution to that problem in 10 minutes, and will be graded by the referees.
 - (4) The referees will consist of myself, Zhi He (our grader) and possibly one or two other math graduate students. Grading will be based *equally on both* the completeness of mathematical idea and the clarity of the presentation. After the presentation, the audience and the referees can ask short questions.
 - (5) After all three presenters finish, the referees will decide the grade for the group, not for the individual presenters.
 - (6) If a presenter doesn't know the solution to the given problem, he or she may ask for a new problem once without penalty, and twice with a moderate penalty.
- Think of this as just some fun activities. The presentation is just the part of the whole game; the real thing is the group work you will be doing until the day of the exam.