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Background

From the competition literature: "The competition began in 1938, and was designed to stimulate a healthy rivalry in mathematical studies in the colleges and universities of the United States and Canada. It is open to regularly enrolled undergraduates who have not yet received a degree, and who have not participated already *four times* in the competition. Each college and university with at least three participants names a team of three individuals *before* the competition. The team's rank is determined by the sum of the ranks (not scores) of the team members. No collaboration or outside assistance is allowed. Each contestant, even if designated as a team member, must work independently on the examination questions."

Description of the examination

"The questions test originality and technical competence. It is assumed that contestants have some training which includes more sophisticated mathematical concepts than those in minimal courses." The problems are difficult, and the grading is strict: partial credit is rarely given. Consequently, it is better to solve a single problem perfectly than to have partial ideas for several problems. There are 12 problems worth 10 points each. In 1999 and 2000 the median score was 0 points (and the highest scores were 74 and 96 points respectively). However, **do not be intimidated**: recent exams have featured one or two lengthy but almost routine multivariable calculus questions.

Examination Schedule

The examination will be held on **Saturday 1 December 2012**. There are actually two exams of exactly 3 hours each, with a 2 hour break. The first exam will start at **8:00 am** and the second will start at **1:00 pm**.

The questions in the Putnam often cut across many disciplines: moreover it is not possible to tell in advance what type of questions will be on the exam. However, I have drawn up a short list of topics and themes which will probably prove useful not only for the exam but also for your general mathematical culture. Some of these topics are not covered at all in the standard courses: others are covered but from a different point of view. The best way to really master them is through **problem solving**, which you will be doing a lot of, both individually and together. (I encourage you to discuss the material and problems with each other, even though you will not be allowed to do this in the exam!) I will post homework and announcements on my webpage

$$\mathtt{http://myweb.facstaff.wwu.edu/sarkara}$$