



## 2007 OSU HIGH SCHOOL MATH CONTEST

### Grading and Scholarship Procedures

Notes on procedures for awarding scholarships from the OSU High School Math Contest.

1. On the day of the contest, students are told that seniors will be considered for a scholarship prize if they fill out and turn in the scholarship application, attached. Typically we allow these applications to be returned up to a couple of weeks after the contest, but the application form is available on our web site and at the contest.
2. Initial grading of the contest is done based on answers only, in first column of answer sheet (front page of exam). Typically undergraduate graders do this, based on an answer key provided by a faculty member, and this grading is done on the day or two following the exam. Graders sort exams by score and provide data on distribution of scores.
3. Roughly the top 40–50% of the papers, based on the student grading, are regraded by several faculty members, typically the Saturday following the contest. One faculty member grades each problem. Faculty graders read the student's work and assign partial credit, as appropriate. These scores are written in the second column of the answer sheet on the front of the exam, then are totalled and used in re-sorting the papers.
4. The top 10-30 papers are regraded by one or two additional faculty members before scores are recorded. These grades, if different from the faculty grades, are recorded in the third column of the answer sheet. One purpose of this grading is to “break” ties, if possible, and to ensure that those who are announced as “winners” (Outstanding Achievement Award winners) are really the top papers.
5. A staff member from the Math Department records the scores into a spread sheet, along with the student's other data from the answer sheet on the front of the exam book (address, high school, grade, and so on).
6. After all scores and information are entered and carefully proofread (this takes several weeks), the scores are sorted in rank order and all ranks are computed and entered into an additional column in the spreadsheet. When there are ties, the rank assigned is the average of all the ranks of the people who are tied. For example, if the 4th, 5th, 6th, and 7th papers are tied, the rank assigned to all four contestants is 5.5, the average of the four numbers 4, 5, 6, and 7 (this is the procedure used by the Putnam exam).
7. A faculty committee decides the cutoffs for the various award designations, based on scores and ranks of contestants:
  - Outstanding Achievement: typically no more than 5% of contestants
  - Meritorious Achievement: usually about the next 10% of contestants

- Honorable Mention: usually about the next 15% of contestants.
8. The staff member prints out Certificates for the three categories of award winners (samples should be in binder). Spelling of names, high schools, etc., are carefully proofread before this is done.
  9. The results of the Team Competition are computed at this point. All high schools with three or more contestants may participate in the Team Competition. Teachers designate three students to serve on the High School's "Team." For these three students, their *ranks* are added, *not* their scores. The reason for this is to reward consistent performance by all three students on the team, rather than one superstar performance only, and to give smaller schools a better chance, since teachers at the larger schools may not be sure who to designate as team members. (Also, this is the procedure used by the Putnam Exam.) We usually list the top 10 teams on our Results summary and list the rankings of all teams on our web page, <http://www.math.okstate.edu/~hsmc>.
  10. At this point a handout of Results is prepared and sent, along with solutions and certificates for student award winners and winning teams, to the teachers from each school who had students participating and to students who participated as individuals. The sheet typically lists the top 10 winning teams, the top 10 participants, and the winners of Outstanding, Meritorious, and Honorable Mention. The top 10 contestants are listed in rank order, but the other groups are sorted by town. A sample is attached.
  11. Scholarship winners are typically selected in ranked order, based on contest score only, from the list of Senior winners of Outstanding and Meritorious Achievement Awards (not Honorable Mention) who have turned in the Scholarship Application. After printing out a list of those senior contestants in rank order, we check the on-line SIS system to see which of those seniors have applied to OSU. Then we start calling students to offer scholarships to those who are considering OSU. We typically write a letter to those students stating the offer in writing and enclosing a response form. But the initial conversation was on the phone. In the past we have offered \$1500 to Outstanding Achievement Award winners whose ranks were in the top 15 or so, and \$1000 to other Outstanding Achievement winners and to Meritorious Achievement Award winners. One could decide to offer \$1500 to all Outstanding Achievement award winners and/or to offer \$500 to Honorable Mention winners, if sufficient funds are available, but we have not done either of those things in the past.
  12. We also wrote to the next few seniors on the list, to notify them of their status as an alternate for winning the scholarship and to determine their interest in being made an offer if an existing offer is declined. In the past several offers have been made each year to students from the list of scholarship alternates.
  13. Our list of winners, with amounts offered, is reported to our contact in the Scholarship Office. Official letters of offer come from the Scholarship Office.
  14. Note that scholarship winners have typically not been announced on the Results flyer that is sent to teachers, because those negotiations take too long to complete. In some past years we have posted the names of Scholarship winners on the web page.