Instructions on 2013 NMSC Math Competition

Two main differences between NMC 2013 and previous years are:
  (1) Time: **50 minutes for Grade 4 – Grade 8** and **75 minutes for Grade 9 – Grade 11**, and
  (2) Number of problems: **25 problems** (17 multiple choice problems and 8 free response problems)

Please instruct students to write their "**English Name**", "**School Grade**" and "**School Name**".

Spaces for "Registration number", "KSEA chapter name" and "Korean Name" are prepared. However, **they can be optional depending on the local chapter policies**.

Chapters may provide students scrap papers…but they need to be collected at the end of the exam. **No calculator** is allowed during the exam!

For each **multiple choice problem**, a student must **select exactly one choice**. If two or more choices are selected, then it should be treated as incorrect answer.

For **free response problems, student's answers must be exactly same as suggested answers** except really small variations. For examples,

  <Grade 4> #23: "175 DEG" and "175°" also can be considered as correct answers.

  <Grade 5-6> #20: "7.5 h", "15/2 hours" and "15/2 h" can be considered as correct answers. However, just "7.5" without time measurement cannot be considered as correct answer.

  <Grade 7-8> #19: "$\frac{4a}{9}$" can be considered as correct answer.

  <Grade 7-8> #21: "$27\sqrt{3} - 9\pi$" can be considered as correct answer.

  <Grade 7-8> #22 and #24: If the order of the answer is different, then it is not correct.

  <Grade 9-10> #25: "$-2 \pm \sqrt{3}$" can be considered as correct answer.

So, please instruct students to **include measurement units,** if there is any, especially angle measurement unit for Grade 4 and time measurement unit for Grades 5-6.

Tie Break Rules:
Ties will be broken using the following factors in the given order:
  (A) Most scores on the test,
  (B) Most scores on free response problems,
  (C) Score on problem #25, and
  (D) Score on problem #24.
The rules are also noted in **the instructions on answer sheet.**

The score recording section on the Answer sheet (the last table on the answer sheet) can be completed as follows:

    (1) Record numbers of correct answers on the first line.

        a. [N1] is for the number of correct multiple choice problems.

        b. [N2] is for the number of correct free response problems.

        c. [N3] is for the problem #25. If it is correct, [N3] is 1. If it is not correct, [N3] is 0.

        d. [N4] is for the problem #24. If it is correct, [N4] is 1. If it is not correct, [N4] is 0.

    (2) Record the second line using the numbers in the first line.

        a. First column in the second line is for the total score that can be calculated by "3x[N1]+6x[N2]+[N3]".

        b. Second column in the second line is for the total score on free response problems that can be calculated by "6x[N2]+[N3]".

        c. The third column and the last column in the second line are same as the third and last columns in the first line, respectively.

    (3) Tie-breaking rules are

        a. Most scores on the test (greatest number on the first column in the second line).

        b. Most scores on free response problems (greatest number on the second column in the second line).

        c. Scores on problem #25 (greatest number on the third column in the second line).

        d. Scores on problem #24 (greatest number on the last column in the second line).

Hence, the four numbers in the last row are the scores and they can be used for tie breaking. Please see the attached "answer sheet – example.PDF" to understand how they can be used. The example #3 is the highest score winner, and the examples #1 and #2 tied at 60 but the example #2 is the 2nd place based on the tie break rule b.

Please note that all scores can be calculated using the attached Excel file "Scores.xls." In order to use the spreadsheet, please type in ONLY the numbers [N1], [N2], [N3] and [N4]. Then it will calculate the scores (the last line) and then one additional numbers, named "Tie-breaking." Whoever has the greatest number for "Tie-breaking" wins and if they are the same, we consider them tied. Please test it with dummy numbers before use it.