



January 24 — February 21, 2021

## Instructions | January 24 — February 21, 2021

### §1 Test-taking instructions

1. There are six equally weighted problems, for which you will be allowed a total of nine hours split into two 4.5 hour intervals between January 24 and February 21, 2021. You will be allowed 4.5 hours for Problems 1, 2, and 3, and 4.5 hours for Problems 4, 5, and 6. During each session, carefully look over all the problems. Pay attention to the total time you allocate to each problem. **It is recommended to attempt the test in two contiguous 4.5-hour intervals over different days, but, there is no problem if you don't.**
2. You will be scored on your method of approach, clarity of reasoning, evidence of ingenuity, inventiveness, and general insight. In order to obtain full credit, all the claims in your solution must be proven. When in doubt, you should include details rather than omit them. Examination of special cases of generalizations may lead to fruitful ideas on how to begin a problem, and partial credit may be given for constructive progress toward a solution. An unusually elegant proof or a carefully stated non-trivial extension with proof may play a role in breaking an eventual tie.
3. Your solutions should have the 3 C's — CLARITY, CONCISENESS, and COMPLETENESS. Specifically, these include MATHEMATICAL CLARITY, GOOD ENGLISH, and LEGIBILITY. A submission having all the above mentioned features will be graded 7. Points will be deducted for inadequate or poorly written explanations, as well as incorrect Mathematics. Therefore, it is recommended to use scratch paper before writing the solutions you submit, and submit **ONLY** the final work you wish to have graded. **Solutions written in languages other than English won't be graded.**
4. Notes, headphones, cell phones, tablet, computers, books, graph paper, protractors, slide rules, mathematical tables, calculators, calculator watches, Wolfram Alpha, Desmos, GeoGebra or any other external resources are prohibited during the exam. The only instruments permitted are writing (pens, pencils, erasers, etc.) and drawing instruments (ruler and compass).
5. The OTJMO is graded more strictly than most school examinations. So it is definitely typical for students to over-estimate the scores they will receive. However, unlike the USAJMO, the decisions of the graders are NOT final and may be appealed within two days of your scores being returned. Appeals will only be considered in cases where a student believes his or her solution is essentially correct but received a low score. Before appealing, please review the comments on your solution the grader left. After a successful appeal, the graders may adjust the score for that problem, either higher, lower or even without any change, noting that the score after the process is final and cannot be further contested.

## §2 Submission instructions

After completing one of the two days, you should submit your solutions. If possible, use the same private message for submissions of both the days.

For submitting your solutions, you may use any one of the following formats:

1. **On Paper (Recommended)** You may write up your solutions on paper and scan/take a photo of them. Make sure your writing is LEGIBLE and written DARKLY, keeping in mind it is a scanned copy being graded, not the original. It is advised that you leave a sizeable margin (about 1 inch). After scanning, ensure that your writing is readable. A sharp #2 pencil or black ink pen would work best for scanning.

At the top of every submitted page, write your AoPS username, the test name and problem number, and the page number of the current answer sheet out of the total number of pages for its problem. For example, “ex. *username*, OTJMO 5, Page 2 of 3” is the correct label for the second page of ex. *username*’s three-page solution to problem five on the OTJMO.

Moreover, note that, for any geometry problem, the first page of the solution must be a large, in-scale, clearly labeled diagram made using geometry tools such as straightedges and compasses. Failure to meet this requirement will result in an automatic 1-point deduction.

Lastly, send your scanned copies via AoPS private message to **Emathmaster**, **kevinmathz**, and **NJOY**. If your scanned copies exceed the 500KB limit (of AoPS), you may upload them to a file-sharing site (Recommended: Google Drive) and share with us the link.

2. **Using  $\LaTeX$  Document** If it is really hard for you to scan or take photos of your solutions, you may compile your solution in a  $\LaTeX$  document. Solutions must be written out on paper during the testing window, and then directly transcribed (with no changes) to  $\LaTeX$  after the time is up. Required geometry diagrams can be created using software such as Asymptote or GeoGebra (or you can also take screenshots and include them in your file using `includegraphics`), but only after the time limit is up, during transcription.

After compilation of document, you need to upload the document to a file-sharing site (Recommended: Google Drive) and share the link through an AoPS Private Message to **Emathmaster**, **kevinmathz**, and **NJOY**.

3. **Transcription on AoPS** If due to some reasons, you could not employ any of the above two methods, then, you can also type your solutions (along with suitable diagrams for Geometry problems) in an AoPS Private Message to **Emathmaster**, **kevinmathz**, and **NJOY**.

Last, but, not the least, the OTSS Committee members wish you Good Luck!