



Международная астрономическая олимпиада The International Astronomy Olympiad

С 1996 г.

Since 1996.

Round

T, P, O

Group

α β γ

ЯЗЫК
language

English

Rules and Regulations for a participant of the Remote Olympiad

There is an obligation of team leaders to translate these rules and regulations, and also the instructions for every Round, to native language of participants in advance and to teach student to follow these rules.

The rules are slightly different from the rules of the Olympiad held in the traditional form.

From 2022, additional points "for compliance with the rules" (up to 5% of the maximum possible number of points for all rounds) have been introduced. The main points of the rules that are taken into account for this when checking the papers are marked in red.

General information for Theoretical and Practical rounds

General information and recommendations:

- The time available is from 3 to 4¼ hours (usually **4 hours**) for work at the round.
- **The work must be carried out independently.**
- **Don't write the conditions of problems** in rough copy or clean copy.
- **Languages.** All additional information for participants to be done in both official languages of the Olympiad: in Russian and in English. It is helpful to know basis of one of these languages for correct understanding the additional information.
- **Questions** to supervisors during of rounds. Pay the especially attention to what a question you wish ask. Take into consideration that your question may be repeated for all participants as well as answer. A question of the type "Whether some effect must be taken into account?" means, very often, that you understood the idea of task; or mentioned effect is must essential part of the task.
- **Clean and rough copies.** It is recommended to use the first part of copy-book as clean copy, and the second one – as draft. Clean and draft copies should be marked or in English by large print characters: «**CLEAN COPY**» и «**DRAFT**».
- **Rough copy.** If you haven't time to rewrite solution (or a part of solution) in your clean copy, please make a note "see rough copy" in English by accurate printed characters («**see rough copy**»). But the index number of the task must be indicated in clean copy, and also a reference to rough copy. **The rough copy will be not checked without such reference.** Considerations that you gave into account of rough copy are evaluated in such degree that they don't contradict to final solution in clean copy. In particular, if solutions in clean copy and in rough copy are different, then clean copy is evaluated only. As a rule, the draft is evaluated lower, especially if the volume of solutions not rewritten into the clean is too large.
- Pay attention **to understand the question** of the task. For example, if it is asked to find radius of a star then answer "Diameter of the star is equal..." is not completely right.
- Pay attention to use symbols as given in the task and (for constants) in the table of constants. For example, if it is written "Find distance **P** in perihelion" do not use **L_P** for this distance. Also do not use the same symbol for different value (do not use **P** also for power in the case above).
- The final answer should be expressed in the most appropriate units (maybe in SI, maybe other).
- Part of the marks available for the solution will be deducted for a correct answer without units (km, kg, au, etc.).
- Part of the marks available for the solution may be deducted for answers with wrong numerical accuracy (wrong number of significant figures).
- The **sheet with the conditions of the problems** you can take with yourself after 22 UT of the day of the round.

Requirements:

- **Personal indication.** Before starting the work it is necessary to indicate the surname, name, patronymic, town, school, class and other individual data of participant at answer sheet. All there data are indicated on cover of the answer sheet only.
- **You should write solutions of problems using only blue or violet pen. It is not allowed to write solutions by pencil or other colour pen.** Pencil may be used to draw pictures and graphs only. Red pen or pencil are not allowed at all.
- **Solution of every new problem you should start in a new page** (even in the case of only one word in the previous solution). The **index numbers** of tasks **should be distinguished** clearly in rough copy as well as in final version.
- **Numerical values.** All numerical values must be written using standard symbols but not symbols of National alphabet.
- **Corrections and strikethroughs.** **A large amount of corrections and strikeouts inside the finishing solution is not allowed.** (If the volume of corrective or crossed out information exceeds 20% of the volume of the solution, this solution is considered draft and must be rewritten into the clean copy).

What is forbidden:

- To talk with other participants of Olympiad and ask questions.
- To use reference books, textbooks, any other books, tables, catalogue etc., if such items were not given to participant together with task.
- To bring to the round portable computers, mobile phones, navigation devices and other electronic means, touch screen calculators, and also calculators, which ones on exterior resemble mobile phones or communication devices.
- To take calculations as well as write rough solutions and anything at all on own sheets or the sheets with problem conditions, i.e. on the sheets that differ from given by organizers just for solutions.
- To remove any page from the answer sheet copy-book.
- To use red colour pen or pencil anywhere in the solution.
- To write anything on the envelopes done with texts.
- To make changes in the work after time for solution is up.
- To ask questions connected with used formulae, constant values, and also questions of type: “Is it necessary to take into consideration certain effect?”
- To make any superfluous noise (for example, from unwrap chocolate etc.)
- To finish the work and leave classroom earlier than 2 hours after beginning of a round expire.
- To come out classroom temporarily more than one participant simultaneously.

What is permitted:

- To write solutions of the problems in clean copy in arbitrary sequence. However, **solution of each problem must have been written in one site from the beginning to the end, and not in pieces, between which there are solutions of other problems.**
- To use sliding rule, computational tables.
- To use calculator provided by organizers. If organizers do not provide participants with calculators, to use own non-programmable engineering button (not touch screen) calculator with arithmetical, algebraical and trigonometrical functions (except calculators, which ones on exterior resemble mobile phones or communication devices).
- To use pen, pencil, ruler, protractor, compasses, graph paper, tracing-paper (if it is necessary).

What is recommended:

- To make all intermediate calculations, transformation symbol aspect, and substitute by number values in end only – it will diminish a probability of an error in final answer, and also increase chances to get points for part of solution in the case of an error in the intermediate transformations.
- To avoid use facts (numerical values, formulae, etc.) known to you, which may be not evident for jury members. Better to receive them from more evident values and formulae.
- To use in solutions only the numerals as sub-indexes: it will be better for jury to understanding the differences in the designations.
- To **separate formulae** and explanation texts with intervals (about **1 cm**).

Additional instructions for Theoretical round (only)

Requirements:

- **Languages of the text of solutions.** It is permitted to write text of solutions in one of three languages: native language or one of two official languages. Nevertheless, numerical values must be written using standard symbols but not symbols of National alphabet.
- Most of the problems will be compiled in such a way that the use of any language would not be required from the student when writing solutions. **Writing texts** (in native language, or in one of the official languages of the IAO) **is allowed only in those few cases when to write something is directly prescribed in the problem conditions.** Also, when writing solutions of the problems, it is allowed to write a few keywords in English (for example, “Assume”, “Answer”, “Average”, etc.), as well as terms contained in the accompanying tables.

Recommendations:

- In any case, try not to write long texts, and pay more attention to drawings, graphs, formulas and numerical values.
- Don't omit any steps in your solution that look as obvious. Take into consideration that written solution is evaluated only. Your thoughts that don't reflected in writing will not be evaluated even they are very right.
- When you give **solution of qualitative task**, you must give the ground for your solution. Brief answer such as “yes”, “no”, “don't changed” are not solution. Please think what quantitative criteria can be used for the ground of your thoughts.

Take into account:

- Maybe not all problems have correct questions. Some questions (maybe the main question of the problem, maybe one of the subquestions) may make no real sense. In this case you have to write in your answer that the situation is impossible in English by accurate printed characters: «**impossible situation**». Of course, this answer has to be explained numerically or logically.
- **Data from the tables** (Planetary data, stars, constants, etc.) may be used for solving every problem.
- The answers “yes” or “no” have to be written by accurate printed characters in English («**Yes**» or «**No**» respectively).

Additional instructions for both Practical round and Round of Maps and Images

Requirements:

- **Languages of the solutions.** **No text in any language is permitted to use in solutions.** All the solution must be written using only drawing pictures, plotting graph, writing formulae, numerical values and standard international astronomy symbols (like $\♂$, $\frac{\alpha}{\beta}$, α UMa, M31, 5^m). Numerical values must be written using standard symbols but not symbols of National alphabet. Jury of the Practical round and Round of maps and images will ignore (in no way take into account) any text in any language in solution.

We wish you success !



Organizing committee, jury.

IAO 2001 Crimea, IAO 2002 SAO, IAO 2003 Stockholm, IAO 2004 Crimea, IAO 2005 Beijing, APAO 2005 Irkutsk, IAO 2006 Mumbai, APAO 2006 Vladivostok, IAO 2007 Crimea, APAO 2007 Xiamen, IAO 2008 Trieste, APAO 2008 Bishkek, APAO 2009 Damyang, IAO 2009 Hangzhou, IAO 2010 Crimea, APAO 2010 Papua, IAO 2011 Alma-Ata, APAO 2011 Aktobe, IAO 2012 Gwangju, APAO 2012 Cox's Bazar, IAO 2013 Vilnius, APAO 2013 Tomohon, IAO 2014 Bishkek, APAO 2014 Irkutsk, IAO 2015 Kazan, APAO 2015 Dhaka, IAO 2016 Pamporovo, APAO 2016 Goheung, IAO 2017 Weihai, APAO 2017 Novosibirsk, IAO 2018 Colombo, APAO 2018 Lijiang, IAO 2019 Piatra Neamt, APAO 2019 Tehran, IRAO 2021 Milan, IRAO 2022 Matera.