# **General Regulations**

(Current version approved at the IMO 2019)



## 1. General

**1.1** The International Mathematical Olympiad (IMO) is governed by these General Regulations together with the Annual Regulations which specify details specific to each IMO or required by national law. The Annual Regulations take precedence over the General Regulations.

**1.2** An IMO takes place on dates and in a country or territory (the "Host Country") specified in the Annual Regulations.

**1.3** A "Host Organisation" specified in the Annual Regulations has overall responsibility for the organisation of an IMO. The Host Organisation is responsible for ensuring that the arrangements for that IMO support the aims of the IMO and competition in the spirit of fair play. The Host Organisation may approve extensions of the deadlines specified in the Annual Regulations.

1.4 The aims of the IMO are:

- to discover, encourage and challenge mathematically gifted young people in all countries;
- to foster friendly international relationships among mathematicians of all countries;
- to create an opportunity for the exchange of information on school syllabuses and practices throughout the world;
- to promote mathematics generally.

**1.5** The IMO Board is governed by the Regulations and Responsibilities of the IMO Board (IMOB) and the Rules Associated with the Election of Members to the IMO Board; those documents may be amended by resolution of the Jury (see clause 6). In particular, the IMO Board:

- makes recommendations to the Jury regarding future IMOs;
- acts on behalf of the Jury between IMOs.

**1.6** The General Regulations may be amended, for future IMOs, by resolution of the Jury.

**1.7** The Annual Regulations for an IMO must be approved by the IMO Board.

**1.8** The Host Country of an IMO must contribute at least USD 5000 to the IMO Foundation towards ongoing IMO infrastructure costs.

1.9 The official languages of the IMO are English, French, German, Russian and Spanish.

**1.10** The International Mathematical Olympiad must be free from bullying, sexual harassment and any other form of discrimination (for example on grounds of gender identity, nationality, physical abilities, religion or sexual preference). All participants (including volunteers and organisers) must conduct themselves with dignity and show respect to everyone. The IMO

Ethics Committee will investigate allegations of inappropriate conduct, and may sanction individuals who have violated this code of behaviour.

Sanctions may include being required to leave the IMO and not to attend future IMOs. Persons against whom the Ethics Committee recommends sanction may appeal against the decision to the elected members of the IMO Board. The decision of the elected IMO Board is final. This regulation is in addition to the laws of the Host Country. The laws of the Host Country take precedence over this regulation, and allegations of serious misconduct will be reported to the police.

### 2. Participation

**2.1** Participation in an IMO is by invitation only. Each invited country (or territory in some exceptional cases approved by the IMO Board) is entitled to send a team consisting of up to six contestants (the "Contestants"), a Leader, and a Deputy Leader, to be known collectively as the participants (the "Participants"). A team must have a Leader. If a team does not have a Deputy Leader, the Leader must follow the Official Programme for Deputy Leaders, and does not receive the Shortlist (see sub-clause 6.5) or form part of the Jury (see clause 6) until after the Contest. Countries and territories participating in an IMO are referred to below as "Countries". An invitation to participate in an IMO does not confer any form of political recognition by the IMO, the IMOB or the Host Country.

**2.2** A Country's Contestants should normally be citizens or residents of that Country, and should be selected through that Country's national Mathematical Olympiad or equivalent selection programme. Contestants must have been born less than twenty years before 1 July in the year of participation at the IMO. Contestants must have been normally enrolled in full-time primary or secondary education on or after 1 December in the year prior to the IMO, or, in the case of home-schooled students, must not have received a high-school diploma (or equivalent), and must be working toward such a credential on 1 December.

In special circumstances the IMOB can approve minor deviation from these rules for specific countries on request. Information on deviations must be available to other participating countries.

**2.3** Observers, including family members, (the "Observers") may apply to accompany the Participants. Observers may be:

- Observer A, accompanying the Leader and residing at or near the Leaders' sites;
- Observer B, accompanying the Deputy Leader and residing at or near the Deputy Leaders' sites;
- Observer C, accompanying the contestants and residing at their site.

The Annual Regulations specify the charges for Observers and the deadlines for payment of such charges. Since extra accommodation is limited, no guarantee is given that applications to accompany the Participants will be successful. Members of the IMO Board who are not Leaders may attend as Observers A; the Host Organisation may, but is not obliged to, waive the charges for them. The Host Organisation should waive the charges for one Observer A and one Observer B from the Host Country for the following year's IMO.

**2.4** The official programme (the "Official Programme") as referred to below is the programme and outline itinerary for an IMO and associated events. The Host Organisation reserves the right to amend or revise the Official Programme in whole or part. If it becomes necessary to make any significant changes, Participants and Observers of the invited Countries must be notified. Before the Host Organisation makes significant changes, the changes should be approved by the IMO Board.

• The Official Programme contains, among other things, details of accommodation arrangements (including food) for Participants and Observers and the venues for various official events associated with an IMO. The detailed Official Programme may not be disclosed until arrival.

**2.5** Each invited Country wishing to participate in an IMO must confirm their participation online (<u>www.imo-official.org/registration</u>) using the username and password provided by the Host Organisation, no later than the date specified in the Annual Regulations. This also confirms that the Leader agrees to abide by the General Regulations and the Annual Regulations for that IMO. Participants, Observers and their travel details must be registered by the dates specified in the Annual Regulations.

**2.6** Leaders and Deputy Leaders are responsible for the conduct of the Contestants, and for the avoidance of doubt the Leaders and Deputy Leaders are acting in loco parentis for their Contestants except where the Host Organisation has been notified in writing that an Observer has been nominated to act in loco parentis.

**2.7** Leaders and Deputy Leaders must ensure that their Contestants know and fully understand clause 5 of these Regulations. They must also make it clear that any Contestant who violates any of these Regulations may be liable to disqualification from an IMO. In order to avoid any trouble or accident, Leaders and Deputy Leaders must also fully inform their Contestants of the information for Contestants provided by the Host Organisation.

**2.8** The Host Organisation should invite a team from each Country that has participated in any of the three previous IMOs. In special cases the IMO Board should specify the Countries to be invited, taking into account financial and accommodation constraints and the following guidelines:

- where two or more Countries that have each participated in past IMOs unite to form one country or territory, one team from the united Country should be invited;
- where a Country that has participated in past IMOs breaks up to become a number of separate countries or territories, each of the new countries or territories should be invited to send a team to the IMO, but no invitation should be sent to the former Country that has now been divided (there should not be 'double representation').

**2.9** A country or territory that has not participated in any of the three previous IMOs may be invited to send a team, or to send an Observer with a view to sending a team to the following IMO, with the approval of the IMO Board and the Host Countries for the following two IMOs.

**2.10** The Leader should be sufficiently involved in mathematics to carry out the following responsibilities.

- 1. Inform the Contestants, the Deputy Leader and other persons involved, of the regulations for the Olympiad. In particular the Leader has to inform the Contestants that the use of notebooks, mathematical tables, calculators, computers, etc. is not allowed.
- 2. Ensure that her/his Country submits problems to the Problem Selection Committee of the Host Country. Ensure that the proposed problems and their solutions are kept secret.
- 3. Attend all the meetings of the Jury of the IMO and take part in its work.
- 4. Inform the Jury if any shortlisted problem is already known to her/him, her/his team or other people involved in the preparation of the team.
- 5. Ensure the preparation of an accurate translation of the chosen problems into the contestants' own languages for the use of her/his team.
- 6. Ensure that the deadlines set by the Host Country are met.
- 7. Ensure that the Contestants from her/his Country receive fair scores in coordination that are consistent with the marking schemes and fairly reward the quality of their work.
- 8. Keep her/his Country's contact details on www.imo-official.org up to date.
- 9. Inform her/his national committee of decisions taken by the Jury during the IMO.

**2.11** The Deputy Leader should be sufficiently involved in mathematics to help the Leader, and in case of an emergency to replace the Leader. In particular, the Deputy Leader should:

- 1. assist the Leader with the evaluation of the team's solutions to the problems;
- 2. assist the Leader during the coordination of the problems.

Additional responsibilities include:

- 3. Inform the Contestants of the regulations pertaining to the examination.
- 4. Supervise the conduct and welfare of the team during the activities of the IMO.

**2.12** Government officials and other non-mathematicians are welcome to attend the IMO and are encouraged to do so as Observers.

#### 3. Responsibility for Accommodation and Expenses

3.1 The official arrival and departure sites are specified in the Annual Regulations.

**3.2** The Host Organisation covers all official expenses for Participants and Observers, including accommodation, meals, transport between the official arrival and departure sites and the accommodation sites, as well as other necessary transport between the accommodation sites and other venues on the Official Programme for all the Participants and Observers.

**3.3** Other than in respect of the provision of accommodation, meals and transport during the Official Programme as detailed in sub-clause 3.1, the Host Organisation is not liable under any circumstances for any costs or expenses whatsoever or howsoever incurred by any Participant or Observer in connection with an IMO. In particular, the Host Organisation is not liable for any expenses derived from:

- spending extra days in the Host Country outside the periods specified in the Annual Regulations;
- travel to and from the Host Country incurred by Participants or Observers;
- travel within the Host Country prior to arrival at the chosen official arrival site or following departure from the chosen official departure site incurred by Participants or Observers.

**3.4** All Participants and Observers are responsible for obtaining full accident, health and travel insurance. It is the Leader's responsibility to confirm online (<u>www.imo-official.org/registration</u>) using the username and password provided by the Host Organisation that this condition has been met for all Participants and Observers of his or her team.

**3.5** The Host Organisation must offer opportunities to Participants and Observers for excursions and/or cultural trips but is under no obligation to organise specific activities.

**3.6** The Annual Regulations specify whether accommodation is in shared or single rooms. Where accommodation is in shared rooms, the Annual Regulations may permit application to be made for a single room, and specify the charges for accommodation in single rooms and the deadlines for payment of such charges. Since extra accommodation is limited, no guarantee is given that such applications will be successful. No charge is made for single rooms for members of the IMO Board who are Leaders.

#### 4. Proposals for Problems

**4.1** Each participating Country other than the Host Country is expected to submit up to six proposed problems, with solutions, to be received by the Problem Selection Committee no later than the date specified in the Annual Regulations. Only the Leader may submit the proposals, following a secure procedure.

**4.2** The proposals should, as far as possible, cover various fields of pre-university mathematics and be of varying degrees of difficulty. They should be new and may not have been suggested for or used in any other mathematics competition.

**4.3** The proposals must only be written in the official languages. The proposals and solutions should be accompanied by their English versions.

### 5. Contest Regulations

**5.1** The contest element of an IMO (the "Contest") takes place on two consecutive days specified in the Annual Regulations, neither of which should normally be a Friday, Saturday or Sunday, under the direction of the Chief Invigilator appointed by the Host Organisation. On each day of the Contest the examination starts in the morning and lasts for four and a half hours. Each of the two examination papers consists of three problems.

**5.2** Each Contestant may receive the problems in one or two or three languages, previously requested on the registration form, provided that the Jury (as defined in sub-clause 6.1) has approved the relevant translation. At least one of the requested languages must be an official language.

**5.3** Each Contestant must work independently and submit solutions in his/her own language. The solutions must be written on answer forms provided by the Host Organisation. Contestants must write on only one side of each answer form.

**5.4** The only instruments permitted in the Contest are writing and drawing instruments, such as rulers and compasses. In particular, books, papers, tables, calculators, protractors, computers and communication devices are not allowed into the examination room.

**5.5** The Jury, Observers and any others who have any knowledge of the problems and solutions before the examinations must do their utmost to ensure that no Contestant has any information, direct or indirect, about any proposed problem. They must also ensure that all Contest problems and solutions are kept strictly confidential until after the entire Contest has finished. They are barred, from the moment of their arrival at the Jury site until the conclusion of the second examination, from having any external communication with Contestants, Deputy Leaders and Observers B and C.

However, if such communication becomes necessary because of an emergency, the Host Organisation must provide proper assistance. Similarly, Contestants, Deputy Leaders and Observers B and C are barred from contacting Leaders and Observers A during the same period of time. Information about arrivals, delays and similar messages are to be directed exclusively to the published IMO office and may be forwarded by the office to the Leaders upon request.

**5.6** The total number of prizes (first, second and third) must be approved by the Jury and must not exceed half the total number of Contestants unless this is approved by at least two thirds of the members of the Jury. The numbers of first, second and third prizes must be approximately in the ratio 1:2:3.

**5.7** Special prizes may be awarded for solutions considered outstanding by the Jury. Proposals for such special prizes are put forward by the Chief Coordinator appointed by the Host Organisation.

**5.8** The prizes are awarded at the Closing Ceremony. Each Contestant who has not received a first, second or third prize receives a Certificate of Honourable Mention if he/she has received seven points for the solution of at least one problem.

5.9 Each Participant and Observer receives a Certificate of Participation.

**5.10** Participants and Observers consent to the publication of their names and photographs on the IMO website. Results may be anonymised and photographs removed on a request made by a Contestant at least two years after his or her final participation at the IMO. Such a request must be made through the registered IMO contact for that Contestant's Country.

#### 6. Jury Regulations

**6.1** The "Jury" consists of all Leaders, together with a Chair. A Leader may be replaced by his/her Deputy Leader in an emergency (subject to the prior approval and consent of the Chair

of the Jury). Members of the IMO Board who are not already members of the Jury, members of the Problem Selection Committee and the Coordinators (as defined in clause 7 below) may also attend meetings of the Jury as observers. Observers may attend meetings of the Jury only with the permission of the Chair of the Jury, but are not entitled to speak or vote. However, they may exceptionally speak at the explicit request of the Chair of the Jury. Deputy Leaders may attend, as observers, meetings of the Jury held after the Contest.

**6.2** Only Leaders may vote in the decisions of the Jury and each Leader has one vote. A motion is carried by a simple majority of those voting. In the event of a tie, the Chair has a casting vote.

6.3 The Jury may appoint sub-committees to consider specific matters.

**6.4** The meetings of the Jury are conducted principally in English. The Chair should request a translation into some of the official languages as needed.

**6.5** In reference to clause 4, the Problem Selection Committee appointed by the Host Organisation selects a number of submitted problem proposals to form the Problem Shortlist of an IMO ("Shortlist"). Each Leader receives the Shortlist for him/herself and his or her Observers A on the first day of the Official Programme for Leaders, or upon arrival at the Jury site if later.

**6.6** The Shortlist has to be kept strictly confidential until the conclusion of the following International Mathematical Olympiad.

**6.7** Before the Contest the Jury

- verifies that all Contestants comply with the prescribed conditions for participation;
- selects the Contest problems from the Shortlist;
- prepares and approves the official versions of the Contest problems in the official languages;
- approves the translations of the Contest problems into all required languages;
- approves the marking schemes that have been prepared under the direction of the Chief Coordinator.

**6.8** On each day of the Contest, the Jury considers written questions raised by Contestants during the first half hour of the Contest and decides on replies.

6.9 After the Contest, the Jury

- receives and approves a report made by the Chief Invigilator on the conduct of the examinations;
- receives a report from the Chief Coordinator on any unresolved disputes which may have arisen during coordination (as in sub-clause 7.5) and determines the appropriate scores;
- approves the scores of all Contestants;
- decides winners of first, second and third prizes;
- considers and makes decisions on all proposals to award special prizes;
- considers matters raised about future International Mathematical Olympiads.

**6.10** Any allegation or suspicion of a violation of the Regulations generally must be reported to the Chair of the Jury. If he/she considers there is a prima facie case, he/she must form a committee to investigate further. The committee must report its findings to the Jury. The Jury

must decide whether a violation has occurred and, if it decides that one has, then it must decide what sanction, if any, to apply. Possible sanctions include the disqualification of an individual Contestant or an entire team from the competition. The decision of the Jury is final.

## 7. Coordination

**7.1** Coordination is the process where the official scores of each Contestant are determined in a homogeneous, fair and transparent manner. Leaders of each country must submit the papers of their Contestants to a coordination group provided by the Host Organisation. The coordination group consists of a Chief Coordinator and, for each problem, a Problem Captain and a group of Coordinators for that problem.

**7.2** For each problem, each Contestant receives an integer score out of a maximum of seven points.

**7.3** Prior to coordination, Contestants' solutions are assessed by Leaders and Deputy Leaders, and, independently, by Coordinators, in accordance with the marking schemes approved by the Jury. Before the official approval of the results only Participants and Observers at the IMO and other people present at the IMO at the invitation of the Host Organisation may see Contestants' solutions. Leaders, Deputy Leaders, and Observers are encouraged to assist the Leaders and Deputy Leaders of other Countries in cases of difficult solutions.

**7.4** Each coordination session involves two Coordinators provided by the Host Organisation and representatives of the relevant Country. Two representatives, normally the Leader and Deputy Leader, are permitted to participate actively in any one session. With the approval of the Chief Coordinator, one further representative or Coordinator may be present to observe the coordination process but cannot take any active part in it.

**7.5** The Leader and the designated Coordinators should agree on the scores for each Contestant. These scores are recorded on official forms and signed by the Leader and the Coordinators. If the Leader and the Coordinators fail to agree on a score for a Contestant, the matter is first referred to the Problem Captain for that problem, provided by the Host Organisation. If there is still no agreement, the matter is referred to the Chief Coordinator. If the Leader and Chief Coordinator then fail to agree on a score, the Chief Coordinator reports the matter to the Jury with a recommendation as to what the score should be. The Jury then determines the score.

**7.6** If, during a coordination session, the designated Coordinators consider that an irregularity may have occurred, they must immediately refer the matter to the Chief Coordinator. Unless he/she is satisfied that there is no case to answer, he/she must report the situation to the Chair of the Jury (see sub-clause 6.10).

**7.7** For each problem, solutions by Contestants from the Host Country are coordinated by the Leader and Deputy Leader of the Country that submitted the problem, with the assistance of the Problem Captain for that problem.

### 8. Entire Agreement and Understanding

**8.1** The Participants and Observers acknowledge that these Regulations, and the documents referred to herein, constitute the full agreement and understanding of their parties and supersede any previous discussions or representations made by or on the behalf of the Host Organisation in respect of an IMO.

#### 9. Force Majeure

**9.1** In these Regulations, "force majeure" means any cause preventing the Host Organisation from performing any or all of its obligations that arises from or is attributable to acts, events, omissions or accidents beyond the reasonable control of the party so prevented, including without limitation strikes, lock-outs or other industrial disputes (whether involving the workforce of the party so prevented or of any other party), act of God, war, riot, civil commotion, malicious damage, compliance with any law or governmental order, rule, regulation or direction, accident, breakdown of plant or machinery, earthquake, typhoon, fire, flood, storm, or default of suppliers or sub-contractors.

**9.2** If the Host Organisation is prevented from or delayed in performing any of its obligations to the Participants and Observers under these Regulations by force majeure, it has no liability in respect of the performance of those obligations affected by the force majeure events, both during the continuation of such events and for such time after they cease as is necessary for the Host Organisation to recommence its affected operations in order for it to perform its obligations.