

*Indonesia International Mathematics Competition
2021 (Virtual)
(IIMC 2021)*

Indonesia, 27th July to 1st August 2021



“International young, critical, and analytical thinkers compete in friendly rivalry to solve Mathematical Challenges.”

Information



Klinik Pendidikan MIPA

KLINIK PENDIDIKAN MIPA

MATHEMATICS EDUCATION CLINIC - INDONESIA

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1 Rationale

It has generally acknowledged that mathematics is a primary tool needed in the study of every subject. The upper primary level of the Basic Education system provides students with skills in reading, writing, and arithmetic. A program of mathematics learning should stimulate creativity and develop critical and analytical thinking. Providing children with these higher order thinking skills at the primary level, the “Golden Period of learning”, contributes significantly to their learning development in the secondary level.

2 IIMC 2021 Objectives

- a) To organize an international mathematics competition for Key-Stage II (Upper Primary Level) and Key-Stage III (Lower Secondary Level) students;
- b) To create an academic atmosphere to motivate teachers and students to improve the teaching and learning of mathematics with an emphasis on developing higher-order thinking skills;
- c) To establish networks with international educational organizations for the development of teaching and learning of mathematics;
- d) To provide young mathematicians from participating countries with opportunities to interact with each other in a friendly environment while sharing both mathematics knowledge and cultural experiences;
- e) To provide ideas on how to upgrade the school mathematics curriculum to be on par with international standards;
- f) To provide mathematics teachers and parents of gifted students an international forum to exchange best practice ideas for the improvement of the teaching of mathematics.
- g) To develop teachers and empower them with the confidence and skills needed to teach problem-solving in their daily mathematics lessons.

3 Activities

- a) International Mathematics Competition.
 - Key-stage II - Elementary Mathematics International Competition 2021 (IMC: EMIC 2021)
 - Key-stage III - Invitational World Youth Mathematics Intercity Competition 2021 (IMC: IWYMIC 2021)
- b) *International Mathematics Educators Conference.*
- c) *Local Mathematics Educators Problem Solving Workshop.*
- d) International Cultural Performance.

4 Proposed Itinerary

Indonesia International Mathematics Competition 2021 (IIMC 2021) will be held from 27th July to 1st August 2021 by virtual (online).

Proposed Date and activities

Date	Time	Activity
Tuesday, July, 27, 2021	07:30 – 08:30 (UTC)	Web and Camera Connection Test by each Participating Countries
	09:00 – 10:00 (UTC)	Opening Ceremony Program
	10:00 – End (UTC)	Zoom Meeting of Team Leader + Translation of Problems Paper
Wednesday, July, 28, 2021		Continue Translation of Problems Paper
	07:30 – 08:30 (UTC)	<i>International Math Seminar (Online)</i>
Thursday, July, 29, 2021	07:30 – 09:00 (UTC) (Key stage 2)	Individual Contest (Key stage 2 and Key Stage 3)
	07:30 – 09:30 (UTC) (Key Stage 3)	
	10:30 – 11:45 (UTC)	Team Contest (Key stage 2 and Key Stage 3)
Friday, July, 30, 2021	07:30 – 11:00 (UTC)	Moderation Key Stage 2 (Team Contest)
	11:00 – 12:00 (UTC)	Cut off for Key Stage 2
Saturday, July, 31, 2021	07:30 – 11:00 (UTC)	Moderation Key Stage 3 (Essay and Team Contest)
	11:00 – 12:00 (UTC)	Cut off for Key Stage 3
Sunday, August, 1, 2021	10:00 - 13:00 (UTC)	Cultural Presentation
	13:30 - 15:30 (UTC)	Prize Giving Ceremony

Proposed Time Table

Date	Activity
Friday, February 26, 2021	Finalize the rules and guidelines for IIMC 2021
Monday, March 8, 2021	Promotion and Sending The Official Invitation and Guidelines for IIMC 2021
Tuesday, June 8, 2021	Dateline for Confirmation of Participation (Send back the participation form to the organizer)
Tuesday, June 8, 2021	Dateline for Submission of Contest Proposed Contest Problems
Monday, July 19, 2021	Dateline for Registration of Team Leaders, Deputy Leaders, and Participants
Friday, July 23, 2021	Dateline for sending the Opening and Cultural Video

Each participating city or country has to send confirmation of its participation through these e-mails: ccmp@seed.net.tw, prmipa@yahoo.com, and indonesiaimc2021@gmail.com.

5 IIMC 2021 Information

5.1 Participation and Application

- Each participating team will compete in their own country (or region).
- Each participating country is allowed to nominate
 - two teams for the Key-Stage II
 - two teams for the Key-Stage III
 - The following countries may apply to send up to four teams to participate in each division of the IMC Executive Board organized math contests due to their status as former hosts of IMC activities: Bulgaria, China, Hong Kong, India, Indonesia, Macau, Philippines, South Africa, Korea, Taiwan and Thailand. If there is application from more than 150 teams the IMC Executive Board reserves the right to invite fewer teams from some countries in order to manage the total number of teams in the competition.
- Each participating country is led by a team leader who is in charge of communicating with the organizing committee, managing and creating an online platform, and attending virtual conferences.
- The Team Leader can appoint a deputy leader and invigilators to help him manage the competition in their own country.
- All costs associated with renting buildings and other facilities are the responsibility of each participating country. The team leader must ensure that the selected contest venue is conducive and safe.

5.2 Divisions of Competition

IMC is composed of 2 divisions:

- a) Key-Stage II Division (Upper Primary Level) (EMIC)
- b) Key-Stage III Division (Lower Secondary Level) (IWYMIC)

5.3 Participant conditions

a) Key Stage II:

- Participants are not students at secondary schools or any equivalent institutions;
- Participants must have been born on or after **27th July 2007**.
- Participants born between **26th July 2007** to **27th July 2008** must submit a school certificate as proof that they are students of a primary school.

Each participant has to fulfill both conditions. Otherwise, he will get disqualification.

b) Key Stage III:

- Participants are not students at the upper secondary level or any equivalent institutions;
- Participants must have been born on or after **27th July 2004**.
- Participants born between **26th July 2004** to **27th July 2005** must submit a school certificate as proof that they are students of a lower secondary school.

Each participant has to fulfill both conditions. Otherwise, he will get disqualification.

5.4 IIMC 2021 Contest Paper Official Languages

English and Chinese will be the official languages of IIMC 2021 contest papers and the countries not adopting English will translate the contest papers into their own language.

5.5 Competition papers

Each participating country must send ten proposal questions for each Key-Stage II contest and Key-Stage III contest and send them with format Word file written in English. The ten questions consist of five questions for the individual contest and another five questions for the team contest. Proposals question must have received by the IMC Academic Committee on or before May 7, 2021, to allow sufficient time to select questions and prepare competition papers. The team leaders must avoid using the proposed problems they submit to the organizers when training their contestants.

5.6 IIMC 2021 Technical Committee

- Mathematics experts from Indonesia.
- Members of The IMC Executive Board and Academic committee.

5.7 Structure of the Contest Papers

● Individual Contest

a) KEYSTAGE II (EMIC):

The Individual Contest consists of 15 short answer questions that require only the answers and only need ARAB NUMERIC answers to fill in on a blank answer sheet. Each question is worth 10 points with a maximum total of 150 points.

b) KEYSTAGE III (IWYMIC)

The Individual Contest consists of 12 short answer questions that require only the answers to be written in the blanks, and 3 essay questions require full solutions. The short answer question is worth 5 points each while the essay question is 20 points each, with a maximum total of 120 points.

● Team Contest

There are ten problems in the Team Contest, arranged in increasing order of difficulty. Each question should print on a separate sheet of paper. The four team members are allowed 10 minutes to discuss and distribute the first 8 questions among themselves; each student solves at least one question. ***Team members are not allowed to use a pencil or pen during the ten minutes discussion period.*** Each will then have 35 minutes to write the solutions to allotted questions independently without further discussion or changing the questions. The four team members have 25 minutes to solve the last two questions together. Each question is worth 40 points and question 2, 4, 6, 8, and 10 require complete solutions for full credits. Partial credits may award.

Rules for the online version of team contest:

- *The team contest can be granted to the country which can conduct the competition in one place.*
- *For participating countries that can hold the team contest, the team leader can inform the head of the jury or the organizing committee at least one week before the competition.*
- *Country which can conduct the team contest should select at least one local proctor to invigilate the team contest and responsible for sending the answer to the jury*
- *The local proctor should attend the leader meeting to get a briefing from the jury about the guidelines of the team contest*
- *The rules of team contest can be the same as the rules when offline*

Rules for the online version of team contest (if the participants are taking the exam at home, i.e. country restrictions doesn't allow students to go to one venue or school):

- *The team contest can be granted to the country using this scenario.*
- *For participating countries that can't hold the team contest on one place, the team leader can inform the head of the jury or the organizing committee at least one week before the competition.*

- *Country which can't conduct the team contest on-site should prepare one invigilator per team to invigilate the team contest and will be responsible for sending the answer to the jury. So, for example, if you have four teams in this scenario, you need to provide four persons to be invigilators. It is required that the selected invigilators able to converse in English.*
- *We will be using the break-out room function in Zoom for this case.*
- *Once, the number of teams are finalized that will be under this scenario, we will be holding a virtual meeting on the final procedures.*

5.8 Translation of Contest Paper

The proposal in translation of contest problems:

- *The country that needs to do translation to the contest paper must send their intention to the head of the jury no more than five days before the leader meeting.*
- *After confirmation, you will be receiving a declaration of confidentiality from the head jury. All of the persons that will be doing the translation must sign it and send it back to the jury no more than two days before the leader meeting. So for example, if there are three persons that will be translating from your country, all of them must sign and submit the forms. Digital signatures are not allowed, it should be signed physically and must be scanned and sent to us afterward.*
- *Jury member will provide the final contest papers after the leader meeting, the translation starts after the team leader meeting.*
- *Team Leaders of Participating Countries who needs to perform translation of contest questions in their own native language will start their papers works on 10:30(UTC) of 27th July and must finished before 10:30 (UTC) of 28th July.*
- *The problems can be download for printing by the team leader 6 hours before the contest and the team leader send to the contestants who write paper at home 10 minutes before the contest start.*

5.9 General Guideline for conducting online IIMC

- Each participating team will compete in their own country (or region).
- The day of competitions for both Key-Stage II and Key-Stage III divisions shall be held on 29th July, 2021.
- Team leaders and deputy leaders must arrange webcams during the competitions to provide a live feed of the examinations to the organizing committee.

All contest problems for both Key-Stage II and Key-Stage III divisions can be downloaded by the team leaders 6 hours before the start of each contest on the IIMC website by using the Team Leader account.

Note:

- The team leader prints out the question and then put the question papers with two sketch papers in the sealed envelope. The student will allow open the problems after the contest start.
- After each contest, the team leader must scan all contest papers and send the scanned copies to the jury members for checking.

Rules in scanning the papers:

- At the end of the test, the team leader allows all participants to leave the room and put the paper and answer sheets on the table. The supervisor scans the answers after all the participants have left the room.
- the scanning process should do inside the range of the camera
- Save the scanned files in pdf or jpg format. For those scans into a jpg file format, please compress it with .zip or .rar format
- Named the file in this format: **Test Code + ID Code + Name** for Individual Contest and **Test Code + Country Code + Team name** for Team Contest.
For example:
 - Indi_INA2A01_Andy for Key Stage II Individual Contest.
 - Indi_INA3A01_Bety for Key Stage III Individual Contest.
 - Team_INA_Team 2A for Key Stage II Team Contest.
 - Team_INA_Team 3A for Key Stage III Team Contest.
- Team Leader or Tutor must send the scanned answer no more than 30 minutes after each contest.
- Thing to be a concern for the participant during the test:
 - Participants are not allowed to bring books, scientific dictionaries, calculators, and other electronic devices during the contest.
 - Participant must use a black pen or HB, B or 2B pencil to write.
 - Participant must write his ID, name, the country on each page of Answer Sheet.
 - Key stage III part B and Team Contest problem 2, 4, 6, 8, 10 of both Key stage II and III must write out the detail process in the blank space of the test paper. If it is not enough, you can continue on the back, but please indicate "Continue on the next page" in the last line.
- After the contest is over, every team leader, marking the student paper and writing the scores on the form provided by the jury. The results from team leaders will compare with the results of the Juries. If there are differences, the jury will actively coordinate with the team leader through WhatsApp or moderation sessions. After the moderation session is over, the judges will upload the participant score and make a cutoff.

5.10 Awards and Prizes

(1) Individual Prizes:

Approximately two-thirds of the contestants will receive Individual Awards, in the form of Gold, Silver and Bronze Medals as well as Merit, in the approximate ratio of 1 : 2 : 3 : 4.

(2) Team Prizes:

There are two Team Prizes, one based on the Individual Contest and another on the Team Contest. Teams divide into six groups of approximately equal sizes.

(3) Team Prizes based on the Individual Contest:

The sum of the highest three scores among the four members of each team for the Individual Contest will be computed. In each group, prizes will be given to the three teams achieving the highest three sums. In case of ties, precedence is given to the team with the highest score of the fourth team member. If teams still remain in a tie, the IIMC 2021 Adjudicating Committee will make a ruling.

(4) Team Prizes based on the Team Contest:

The total score of all ten problems is considered the team score. In each group, prizes will be given to one Champion, two First runners-up, and three Second runners-up. The teams are first ranked by their total scores. Ties are broken according to the scores of individual problems, starting with the most difficult one. Further ties will be ruled on by the IIMC 2021 Adjudicating Committee.

(5) Grand Prize:

The Grand Prize is awarded according to the sum of the four-team members' score in the Individual Contest and of the team's score in the Team Contest. The maximum score is $4 \times 150 + 400 = 1000$ (for EMIC) and $4 \times 120 + 400 = 880$ (for IWYMIC). The second and Third Prizes are also awarded. Ties are broken according to the scores of the Team Contest. If teams remain in a tie, it will be broken according to the scores of individual problems, starting with the most difficult one. Further ties will be ruled on by the IIMC 2021 Adjudicating Committee.

Proposal: how to award the prize?

- *The organizer will host the awarding ceremony by an online platform and announce the winner by country like the rules in IIMC*
- *The organizer will provide the e-certificate for each winner and all delegation of the country*
- *The organizer will send medals after the opening of inter-country shipping services. Each participating country can regulate the method of awarding medals on its own.*

(6) Special Prizes:

In addition, Awards will also be presented at the Closing Ceremony:

The six teams that present the best performances, in terms of coordination, creativity and overall impression, in the Cultural Night will receive awards as determined by the IIMC 2021 Organizing Committee.

6 Responsible Office

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