

*Indonesia International Mathematics Competition
2022 (Virtual)
(IIMC 2022)*

Indonesia, 30th June to 6th July 2022



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

Information



Klinik Pendidikan MIPA

KLINIK PENDIDIKAN MIPA

MATHEMATICS EDUCATION CLINIC - INDONESIA

Ruko 6 No. 1 – 3 Jl. Raya Laladon Rt. 004 / 006 Laladon Ciomas Bogor 16610

Telp/ Fax : +62 251 863 0026, HP: +62 812 8546962, +62 813 10343400

Email: prmipa@yahoo.com, indonesiaimc2022@gmail.com

1 Rationale

Mathematics is generally acknowledged as a primary tool in the study of every subject. Using it, students can make sense of the world and solve complex and real problems. 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 2022 Objectives

- a) Organize an international mathematics competition for Key-Stage II (Upper Primary Level) and Key-Stage III (Lower Secondary Level) students;
- b) Create an academic atmosphere motivating teachers and students to improve the teaching and learning of mathematics with an emphasis on developing higher-order thinking skills;
- c) Establish networks with international educational organizations for the development of teaching and learning of mathematics;
- d) 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) Provide ideas meant to upgrade the school mathematics curriculum to be at par with international standards;
- f) 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) Empower teachers’ confidence to optimize their skills to teaching problem-solving in their daily mathematics lessons.

3 Activities

- a) International Mathematics Competition
 - Key-stage II - Elementary Mathematics International Competition 2022 (IMC: EMIC 2022)
 - Key-stage III - Invitational World Youth Mathematics Intercity Competition 2022 (IMC: IWYMIC 2022)
- b) *International Mathematics Educators Conference*
- c) *Mathematics Educators Problem-Solving Workshop*
- d) International Cultural Performance
- e) Puzzle Contest

4 Proposed Itinerary

Indonesia International Mathematics Competition 2022 (IIMC 2022) will be a virtual competition to be held from 30th June to 06th July 2022.

Proposed Date and Activities:

Date	Time	Activity	
Thursday, June 30, 2022	07:30 – 08:30 UTC	Web and Camera Connection Test by all Participating Countries (in time zones UTC +2 to UTC +10)	
	09:00 – 10:00 UTC	Opening Ceremony Program	
	10:00 – End UTC	Zoom Meeting of Team Leaders + Translation of Problems Paper	
	13:00 – 14:00 UTC	Web and Camera Connection Test by all Participating Countries (in time zones UTC -5 to UTC 0)	
Friday, July 01, 2022		Continuation of Translation of Problems Paper	
	07:30 – End UTC	<i>International Math Seminar (Online)</i>	
Saturday, July 02, 2022	07:30 – 09:00 UTC (KS 2) 07:30 – 09:30 UTC (KS 3)	Individual Contest (for UTC +2 to UTC +10)	
	10:30 – 11:45 UTC	Team Contest (KS 2 and KS 3) (for UTC +2 to UTC +10)	
	13:00 – 14:30 UTC (KS 2) 13:00 – 15:00 UTC (KS 3)	Individual Contest (for UTC -5 to UTC 0)	
	16:00 – 17:15 UTC	Team Contest (KS 2 and KS 3) (for UTC -5 to UTC 0)	
Sunday, July 03, 2022	07:30 – 11:00 UTC	Moderation of Key Stage 2 (Team Contest)	Puzzle Contest (1 st Round and 2 nd Round)
	11:00 – 12:00 UTC	Cut off for Key Stage 2	
Monday, July 04, 2022	07:30 – 11:00 UTC	Moderation of Key Stage 3 (Essay and Team Contest)	Puzzle Contest (Final)
	11:00 – 12:00 UTC	Cut off for Key Stage 3	
Tuesday, July 05, 2022	10:00 - 13:00 UTC	Puzzle contest flashback and presentation of awards & Cultural Presentation	
Wednesday, July 06, 2022	07:30 - 13:00 UTC	Mathematics Educators Problem-Solving Workshop and Awards ceremony	

Proposed Time Table

Date	Activity
Saturday, January 15, 2022	Finalizing the IIMC 2022 Rules and Guidelines
Monday, January 17, 2022	Promotion and Sending out of Official Invitation and IIMC 2022 Guidelines
Thursday, March 31, 2022	Deadline of Confirmation of Participation by countries (Sending back of participation form to the organizer)
Saturday, April 30, 2022	Deadline of Submission of Proposed Contest Problems and Conference papers
Monday, May 31, 2022	Deadline of Registration of Team Leaders, Deputy Leaders, and Participants
Saturday, June 25, 2022	Deadline of Submission of Greetings and Cultural Videos

Each participating city or country has to send confirmation of its participation to these e-mails: ccmp@seed.net.tw, prmipa@yahoo.com, and indonesiaimc2022@gmail.com.

5 IIMC 2022 Information

5.1 Participation and Application

- Each participating team will compete in their own country (or region). (See instructions below for venues following COVID19 restrictions).
- 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 to the IMC Executive Board. These countries whose status as former hosts of IMC activities are: Bulgaria, China, Hong Kong, India, Indonesia, Macau, Philippines, South Africa, Korea, Taiwan and Thailand. If an application reaches more than 150 teams, the IMC Executive Board reserves the right to limit the entries of teams from some countries in order to make total number of teams in the competition manageable.
- 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 Leaders can appoint a deputy leader and invigilators to help them 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 **30th June 2008**.
- Participants born between **29th June 2008** to **30th June 2009** must submit a school certificate as proof that they are students of a primary school.

Each participant must meet both requirements to avoid disqualification.

b) Key Stage III:

- Participants are not students at the upper secondary level at schools or any equivalent institutions;
- Participants must have been born on or after **30th June 2005**.
- Participants born between **29th June 2005** to **30th June 2006** must submit a school certificate as proof that they are students of a lower secondary school.

Each participant must meet both requirements to avoid disqualification.

5.4 IIMC 2022 Contest Paper Official Languages

English, Chinese and Bahasa Indonesia will be the official languages of the IIMC 2022 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 proposed questions for each of the Key-Stage II and Key-Stage III contests. Questions, written in English, should be sent in a Microsoft Word file. The ten questions must consist of five questions for the individual contest and another five questions for the team contest. The Proposed questions must be with the IMC Academic Committee on or before April 30, 2022 to allow them sufficient time to select questions and prepare the competition papers. The team leaders must NOT use the proposed problems or problems similar to those they submit to the organizers in training their contestants.

5.6 IIMC 2022 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, which require answers in ARABIC NUMERIC to be filled in the blank provided on the 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, which require answers in ARABIC NUMERIC to be filled in the blank provided on the answer sheet and 3 essay type questions, which require full solutions. The short answer questions are worth 5 points each while the essay questions are 20 points each, giving 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 be printed on a separate sheet of paper. The four-team members are given 10 minutes to discuss and distribute among themselves the first 8 questions. Each student must solve at least one question. No two-team members should be given the same question to answer. ***Team members are not allowed to use a pencil or pen during the ten minutes discussion period.*** They have 35 minutes to write independently the solutions to their allotted questions without further discussion or sharing of the questions. The four-team members have 25 minutes to solve together the last two questions. Each question is worth 40 points and question 2, 4, 6, 8, and 10 require complete solutions for full credits. Partial credits may be awarded.

5.8 Translation of Contest Paper

The proposal in translation of contest problems:

- *The country needing translation of the contest paper must send their intention to the head of the jury no more than five days before the leader meeting.*
- *The country requesting for translation of contest paper will receive a declaration of confidentiality form from the head jury. All persons involve in the translation must sign it and send it back to the jury no more than two days before the team leaders' meeting. So for example, if there are three persons involving in the translation from one's 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.*
- *A Jury member will provide the final contest papers after the leaders' meeting. The translation starts after the team leaders' meeting.*
- *Team Leaders of Participating Countries who need to translate contest questions into their respective language will start the process at **11:00 UTC on 30th June** and must be finished before **11:00 UTC on 01st July**.*

- *The team leader can download the problems for printing 6 hours before the contest and the team leader must send the problems to the contestants who write the paper at home 10 minutes before the contest starts.*

5.9 General Guideline for conducting online IIMC

- Each participating team will compete in their own country (or region).
- As far as possible, all team members should sit for the competition in the same location.
- ***Only the participants whose city is on a lockdown are allowed to write the competition at home. In this case, the team leader must inform the head of the jury or the organizing committee at least three days before the competition. Once the number of teams that will be in this scenario is finalized, then we will be holding a virtual meeting on the final procedures.***
- The competitions for both Key-Stage II and Key-Stage III divisions shall be held on 02nd July, 2022. (See the allocated time slots for the different time zones in the proposed itinerary table).
- Team leaders and deputy leaders must arrange webcams during the competitions to provide a live feed of the examinations to the organizing committee.

The team leaders can download all contest problems for both Key-Stage II and Key-Stage III divisions 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 puts the question papers with two sketch/scrap pages into sealed envelopes. Each participant has their own envelope. The students are allowed to open their envelopes after the start of the contest.
- 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. Their contest paper and answer sheets are to be left on their tables. The supervisor scans the answers after all the participants have left the room.
- The scanning process should be done inside the range of the camera.
- Save the scanned files in pdf or jpg format. If the jpg file format is used then please compress it with a .zip or .rar format.

- Name the files in this format: **Test Code + ID Code + Name** for Individual Contest and **Test Code + Country Code + Team name** for Team Contest.
For example:
 - INA2A-P01_Andy for Key Stage II Individual Contest.
 - INA3A-P01_Betty for Key Stage III Individual Contest.
 - INA2A for Key Stage II Team Contest.
 - INA3A for Key Stage III Team Contest.
- The team Leader or Tutor must send the scanned answers no more than 30 minutes after each contest.
- Rules for the participants in the test venue(s):
 - Participants are not allowed to bring books, scientific dictionaries, calculators, and other electronic devices into the contest venue.
 - Participants must write using a black pen or **HB, B or 2B** pencil.
 - Participants must write their ID, name, and their country on each page of the Answer Sheet.
 - Key stage III part B and Team Contest problems 2, 4, 6, 8, 10 of both Key stage II and III must have a detailed process written out in the space provided on the test paper. If there is not enough space under the question then the back of the page may be used, but please indicate "Continue on the next page" in the last line. (Or write PTO in large letters.)
- After the contest is over, every team leader marks their students' papers and writes the scores on the form provided by the jury.
- Guidelines for Team Leaders during the marking process:
 - Team leaders will receive some Google drive links before 02nd July, 2022 namely:
 - **Link 1** is for downloading files, including the Score Forms, Solutions and Marking Scheme of both Individual and Team Contest (for both Key Stages) and the Score Forms from the Juries.
 - **Link 2** is for uploading files, including the answer sheet of the Individual Contest, all answer pages of the Team Contest and the Score Forms from the Team Leaders.
 - Note:
 - Different countries have different Google Drive links. Team Leaders are asked to please keep all the links confidential.
 - The person who will upload the files needs to have a Gmail account.
 - Permission to access, view, open and edit on the links are initially restricted and will be opened at a specific time for the Team Leaders.
 - The students who do the contest at home have to send the scanned files to their team leaders or coordinator for uploading.

- **For Individual Contest:**
 - When the Individual Contest proper is finished, the invigilator has to scan all the answer sheets. Combine all papers of one student into one file. Then, upload the files to **Link 2**.
The file name of each file must be the student's code.
For example, INA2A-P01.pdf and INA3A-P01.pdf.
 - Once uploading of all files is finished, please send a note by email or in the WhatsApp group. We will move the files to our folders.
 - If your country enters one or two teams, then you have to upload the files within 30 minutes. If your country enters more than two teams, then you have to upload the files within 1 hour.
 - **After the said time limit, the Link 2 will be closed. We won't be accepting upload submissions after the said time limit.**
- **For Team Contest:**
 - The permission to access the link for Team Contest (**Link 2**) will be opened once the Team Contest has started. When the Team Contest is finished, you have to scan all papers. Combine all papers of one team into one file. Then, upload the files to **Link 2**. The file name of each file must be the team name. For example, INA2A.pdf and INA3A.pdf.
 - Once uploading of all files is finished, please send a note by email or in the WhatsApp group. We will move the files to our folders.
 - If your country enters one or two teams, then you have to upload the files within 30 minutes. If your country enters more than two teams, then you have to upload the files within 1 hour.
 - **After the said time limit, the Link 2 will be closed. We won't be accepting upload submissions after the said time limit.**
- After the permission to access the links to upload the Team Contest is closed, then you can download the Score Forms, Solutions and Marking Scheme of Contest Papers from **Link 1**.
 - You have to mark your students' paper and key in their scores in the score forms. Then upload all score forms to the link for uploading the score forms by team leaders (**Link 2**). When done marking and uploading the scores, please send a note by email or in the WhatsApp group. We will move the files to our folders.
 - For Keystage II:
 - If your country enters one or two teams, then you have to upload the files within 2 hours. If your country enters more than two teams, then you have to upload the files within 3 hours. It means you have 2 or 3 hours to mark your students' answers.

- For Keystage III:
 - You have to upload the files within 12 hours. It means you have 12 hours to mark your students' answers.
 - After 12 hours the permission to connect the link for the score forms by team leaders (**Link 2**) will be closed.
- At the same time, Juries also mark the students' answer. When they upload the scores, we will compare the scores between team leaders and juries. If scores are different, the juries will recheck it.
- Then the latest result will be uploaded to **Link 1** (03rd July, UTC 05:30 for Keystage II and 04th July, UTC 05:30 for Keystage III). Then the permission to connect to the link for downloading the score forms by Juries (**Link 1**) will be open. Team leaders must download the score forms. If you agree with the scores given by the jury, then please change your score. **Then send the score form to your national coordinator and upload the forms to the IIMC Web.**
- If your national coordinator does not upload the score forms to the **IIMC Web** within 2 hours, then it will be regarded as if you don't agree with the scores. The juries will be in the moderation ZOOM meeting from UTC 07:30 to UTC 10:30 and you can discuss your scores with him/her at the moderation meeting.

Note: Please keep in mind, Link 1 is always where you download files for your use and **Link 2** is always for where you post your updated files, you must save the address and must re-flash the page each time.

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 are divided into six groups of approximately equal sizes.

(I) 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 the teams remain in a tie, the IIMC 2022 Adjudicating Committee will make a ruling.

(II) 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 2022 Adjudicating Committee.

(3) 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 2022 Adjudicating Committee.

Proposal on how to award the prizes:

- *The organizer will host the awarding ceremony on an online platform and announce the winners by country as per the IIMC rules.*
- *The organizer will provide an e-certificate for each winner and all members of the delegation of each 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.*

(4) 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 2022 Organizing Committee.

(5) Puzzle Contest:

In each division, Puzzle Contest prizes will be given to one Champion, two First runners-up, and three Second runners-up.

6 Responsible Office

Klinik Pendidikan MIPA (Mathematics Education Clinic) Bogor, Indonesia

Website : <https://chiuchang.org/imc/en/home-en/>

E-mail : ccmp@seed.net.tw, prmipa@yahoo.com, and indonesiaimc2022@gmail.com

WhatsApp : [wenhsien.sun](https://wa.me/wenhsien.sun), +886-910132605