
21-26 JULY 2019
HONG KONG
PAKISTAN MATHEMATICAL MODELING CHALLENGE

PMMC OVERVIEW

OVERVIEW

PMMC: The Pakistan Mathematical Modeling Challenge is the official National Competition designed to serve as the qualifying stage for the International Mathematical Modeling Challenge (IMMC) organized by The Consortium for Mathematics and Its Applications.

Pakistan Maths Team Selection: The two winning teams will be selected for Pakistan's National Maths Team A and Team B to participate in the International Mathematical Modeling Challenge (IMMC).

IMMC: The International Mathematical Modeling Challenge (IMMC) is a prestigious global competition where teams from over 43 countries come together to solve real-world problems through innovative mathematical modeling.

Eligibility/Age Group:
Students must be enrolled in School Year 8-11/O Levels/A Levels/Matriculation/Higher Secondary Education.

Students forming a team must ensure all members are from the same school.

Format: Online

STAGES

01 PMMC

02 PAKISTAN MATHS TEAM SELECTION

03 IMMC

AFFILIATES & ORGANIZING COMMITTEE

IMMC Affiliations:

- COMAP (USA)
- National Institute of Education (Singapore)
- Tongji University (China)
- NeoUnion ESC Organization, (Hong Kong)
- University of Hong Kong,
- Moscow State University (Russia),
- Freudenthal Institute (Netherlands)
- Roskilde University (Denmark),
- Australian Council for Educational Research (Australia)
- University of Massachusetts, Lowell (USA)

Flexible Competition Dates:

- Students have the option to attempt the problem from February 2025 to April 2025, during the selected slots.

Announcement of Pakistan Mathematics Team A and Pakistan Mathematics Team B:

- 20th April 2025

Ambassadors:

- Any student, teacher, school or college society that wishes to become our official coordinator in their region can reach out to us on our social media page.

PMMC & IMMC Stages: There is *only one stage*, each team will be given 5 days to solve the annual problem and submit their solution *online.*

The top two teams will be chosen for the Pakistan Mathematics Team, with their solutions competing against those from over 43 countries!

Both PMMC and IMMC will be held online.

Stages

PMMC — National Maths Team Announcement (Team A & Team B) — IMMC

PMMC AWARDS

GOLD AWARD

Gold Award: This prestigious award is reserved for the top 5% of participants.

SILVER AWARD

Silver Award: Awarded to the next 10% of participants.

BRONZE AWARD

The Bronze Award is given to the following 10% of participants.

- ***Honorable Mentions*** *are awarded to an additional 25% of participants.*
- ***Top 50%*** *of students participating will receive an award.*
- ***Every contestant*** *receives a certificate of participation.*

Sample Problems and Solutions

The problems from previous years can be found on the IMMC website linked below.

IMMC Contest Problems:
https://www.immchallenge.org/Contests/index.html

Additionally, the website provides selected team solutions and commentary from the international judging panel.

Format and Registration

PMMC & IMMC Stages: There is only one stage, each team will be given 5 days to solve the annual problem remotely and submit their solution online.

Registration: Students can register for the PMMC via the official social media page (Instagram: pmmcofficial). The top two teams from the PMMC will automatically qualify for the Pakistan Mathematics Team A and Team B, representing the country in the IMMC. No further registration is required for the IMMC. Further instructions are given on the next page.

Forming a Team

- A team may consist of up to four students, enrolled in the same school.
- The contest runs during a specified period each year. The dates and times for the contest period each year mentioned in the registration form.
- Each team will decide on a consecutive 5 day period during the contest period to work on the contest problem. For example, the contest for your team could be from 8:00 a.m. on a Thursday after the beginning of the contest period until 8:00 a.m. on the following Tuesday. Your team's contest ends upon completion of the 5 day period.
- Students will be given access to the problem at the chosen time.
- Team members should regularly check the email address they registered with, including their spam or junk folders, as it will be the primary channel for receiving problems and important contest updates.

Registration Instructions

Registration Process:

- All students must register online using the official social media page (Instagram: pmmcofficial).

Slot Selection:

- The entire competition will be conducted online.
- During registration, students can choose from a variety of time slots (spanning 5-day periods) to submit their exam.
- Slot selection can be based on the team's preferences.

Team Registration:

- Students must register their entire team at once by paying the registration fee collectively.

Confirmation:

- After paying the registration fee, students will receive a confirmation email within 5 days.

Registration Deadline:

- The deadline to register for PMMC is 15th December 2025.

Solution Guide for IMMC/PMMC

The IMMC operates on the assumption that opportunities to use mathematics are everywhere in the world around us. The challenge is to identify those opportunities, access them and apply mathematics productively to better understand the situation that confronts us and to resolve the problems presented. The IMMC exists to help students:

■ develop a systematic and successful approach to addressing individual problems located in real-world settings, and;

■ through this development, enable students cumulatively to become effective solvers of real-world problems. The aim is to develop students who not only can address problems set by others productively, but also become able to identify and address problems themselves.

In order to be useful and applicable in practice, both in the context of the IMMC, and more broadly, the cyclic process of modelling is scaffolded or guided by a systematic approach to individual problems, consistent with the approach taken by professional modellers when devising solutions to problems in their field. This systematic approach involves seven stages.

1. Identify a (real-world) problem

2. Specify a related mathematical question(s)

3. Formulate a mathematical model to address the question (including making simplifying assumptions, choosing variables, estimating magnitudes of inputs and so on)

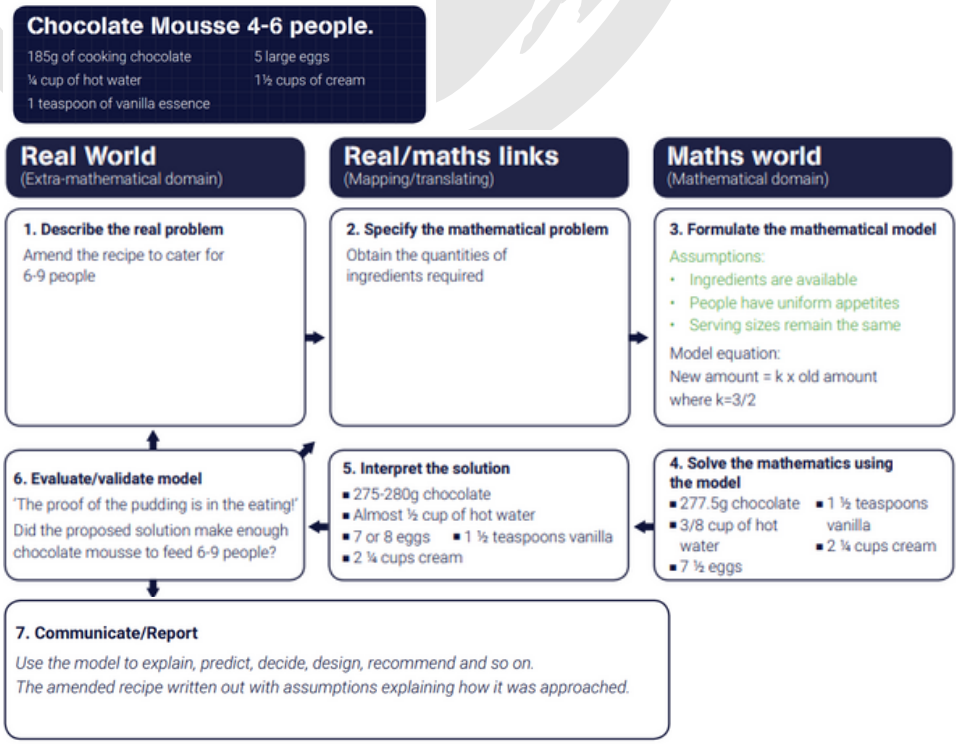
4. Solve the mathematics

5. Interpret the mathematical results in terms of their real world meanings

6. Make a judgement as to the adequacy of the solution to the original question(s)

7. Report on success or make adjustments and try for a better solution

Process



In the News

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IM2C Rationale

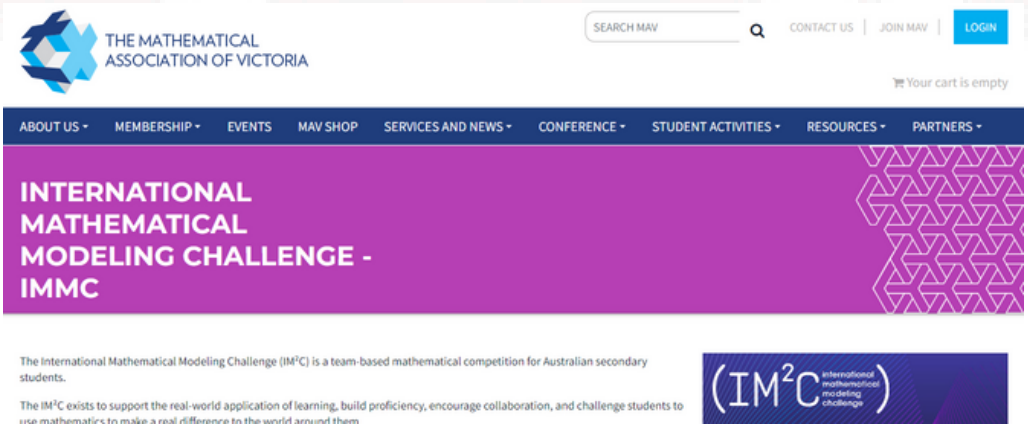
The purpose of the IM2C is to promote the teaching of mathematical modeling and applications at all educational levels for all students. It is based on t...

International Mathematical Modeling Challenge /

University partnerships boost Australia's International Mathematical Modeling Challenge

The 2024 state winners of IM²C (Australia) will learn from university researchers how to use mathematical modelling for positive change.

Australian Council for Educational Research



SHOWCASE YOUR TALENT AND QUALIFY FOR THE PAKISTAN'S NATIONAL MATHS TEAM!