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The 21st Philippine Mathematical Olympiad

What is the PMO?

The Philippine Mathematical Olympiad is the oldest and most prestigious nationwide mathematics competition among high school students. The PMO is designed to select the best high school students in mathematical problem-solving through a friendly competition.

Objectives

The PMO aims to:

- stimulate the improvement of mathematics education in the country by awakening greater interest in and appreciation of mathematics among students and teachers and gaining insights into the levels of mathematics learning;
- identify and motivate the mathematically gifted;
- identify potential participants to the International Mathematical Olympiad;
- provide a vehicle for the professional growth of teachers; and
- encourage involvement of public and private sectors in the concerted promotion and development of mathematics education.

General Guidelines and Scheme of Conduct

The PMO is open to all junior and senior high school students. It shall be carried out in three stages:

1. **QUALIFYING STAGE - 20 October 2018 (Sat)**: The Qualifying Stage is a multiple choice exam which will be administered in each area (Luzon, Visayas, Mindanao, NCR). There will be one testing site for each region.
2. **AREA STAGE - 24 November 2018 (Sat)**: The Area Stage is a written competition among students in each area who will qualify based on their performance in the Qualifying Stage.
3. **NATIONAL STAGE - 26 January 2019 (Sat),** The National Stage is a written and oral competition among the winners of the Area Stage competition. This will be held in Metro Manila.

Test development (preparation, analysis and evaluation of questions and problems to be used in the competition) begins in September 2018 and continues throughout the year. For more information, visit our websites: **pmo.ph** OR **facebook.com/PhilippineMathematicalOlympiad**. For inquiries, email us at **pmo@math.upd.edu.ph**.

Participants' Qualifications

Qualifying Stage

- This competition shall be open to all junior and senior high school students in the country. Each of the participating schools may send **a maximum of 30 contestants**.
- Any bona fide student of private or public secondary high schools as specified above with a final grade of 88% (or its equivalent) in mathematics in the previous school year may apply.
- Participants will be asked to pay PhP 150.00 upon registration to the PMO coordinator of their region.

Area Stage

- The participants with the top fifty scores per area (Luzon, Visayas, Mindanao and NCR) will qualify for the area stage.

National Stage

- The participants from the area stage with the top twenty scores in national ranking will qualify for the national stage.

Format of the PMO Competition

Qualifying Stage

- The qualifying stage competition is a 25-item multiple-choice exam consisting of
  - Fifteen problems worth 2 points each
  - Ten problems worth 3 points each
- And five problems that will require answers only worth 6 points each

Area Stage

- The area stage competition is in the form of a written exam consisting of
  - 20 problems that will require answers only;
  - 3 open-ended problems that will require full solutions.

National Stage

- This competition shall have two phases: the written phase and the oral phase.
  - In the written phase of the competition, the contestants will be given 4.5 hours to answer 4 open-ended problems that require full solutions.
  - In the oral phase of the competition, 30 problems are to be read to the participants. These problems are to be answered within a specified time for each item. This phase is open to the public.

Selection of Winners

Qualifying Stage

The answer sheets will be checked and scored by a team designated by the PMO Technical Committee. The checkers will be selected so that each one is not related up to a second degree of consanguinity or affinity to any PMO participant. None of them will be teaching in any secondary school in the country. Each paper will be checked and double checked so as to ascertain the correctness of the scores.

Area Stage

The answer sheets will be checked by a board of judges which consists of college/university professors of mathematics who are not related up to a second degree of consanguinity or affinity to any PMO participant; and who are not teaching in high school.

Each correct answer in the first portion will merit 3 points. A complete and correct solution in the open-ended portion will merit 10 points. Partial points may be given in the open-ended portion as decided by the board of judges.

National Stage

Written Phase

The answer sheets will be checked by a board of judges which consists of four college/university professors of mathematics who are not related up to a second degree of consanguinity or affinity to any PMO participant, and who are not teaching in high school.

A complete and correct solution will merit 7 points. Partial points may be given as decided by the board.

Oral Phase

The board of judges shall consist of three members appointed by the PMO Committee.

The thirty problems will be divided as follows:

- 15 problems worth 2 points each
- 10 problems worth 3 points each
- 5 problems worth 6 points each

The participants will be ranked according to the following basis:

- 70% of the score in the written phase plus
- 30% of the score from oral phase

The top three participants and their coaches will be given trophies and cash awards.

The national finalists of the PMO will be will be invited to the **Mathematical Olympiad Summer Camp (MOSC)** for the **International Mathematical Olympiad (IMO)**. The IMO is the largest and most prestigious annual international mathematics competition among secondary school students. The representatives of the country to the IMO will be selected from the participants of the MOSC.

Awards and Prizes for the PMO

Area Stage

1st Place	Student	Medal
	Coach	Certificate
	School	Certificate
2nd Place	Student	Medal
	Coach	Certificate
	School	Certificate
3rd Place	Student	Medal
	Coach	Certificate
	School	Certificate

National Stage

1st Place	Student	P 20000 and Medal
	Coach	P 5000 and certificate
	School	Trophy
2nd Place	Student	P 15000 and Medal
	Coach	P 3000 and certificate
	School	Trophy
3rd Place	Student	P 10000 and Medal
	Coach	P 2000 and certificate
	School	Trophy

Regional Testing Centers

Region 1, CAR	University of the Philippines Baguio Baguio City
Region 2	Cagayan State University Carig Campus, Tuguegarao City
Region 3	Central Luzon State University Munoz City, Nueva Ecija
Region 4A	Math Building, University of the Philippines Los Banos **OR** Calayan Educational Foundation, Inc., Lucena, Quezon
Region 4B	Western Philippines University – Puerto Princesa City Campus Sta. Monica Heights, PPC
Region 5	Ateneo de Naga University, Naga City
Region 6	Central Philippine University Jaro, Iloilo City
Region 7	AS Building, University of the Philippines Cebu, Cebu City
Region 8	Leyte Normal University Tacloban City
Region 9	Carlos Dominguez Hall, Ateneo de Zamboanga University, Zamboanga City
Regions 10	CSM Annex Building Mindanao State University – Iligan, Institute of Technology, Iligan City
Region 11	Ateneo de Davao University Davao City
Region 12* **& ARMM***	CSM Annex Building Mindanao State University – Iligan, Institute of Technology, Iligan City
Region 13	College of Education Building Caraga State University Ampayon, Butuan City
NCR*	University of the Philippines Diliman

Stage Coordinators / Assistant Directors

Qualifying Stage	Area Stage	National Stage
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