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# PMO CORE COMMITTEE

Director: MA. NERISSA MASANGKAY Secretary: MAY ANNE C. TIRADO Treasurer: JOHNATAN S. PIMENTEL



# The 19th Philippine Mathematical Olympiad

# What is PMO?

The Philippine Mathematical Olympiad is the oldest and most prestigious nationwide mathematics competition among high school students. The 19th 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 19th PMO is open to all junior and senior high school students. It shall be carried out in three stages:

- Qualifying Stage 22 October 2016 (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 19 November 2016 (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 **21 January 2017 (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 August 2016 and continues throughout the year.

For more information, visit our website at pmo.ph 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 20 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 multiplechoice exam consisting of
- Fifteen questions worth 2 points each
- Ten guestions worth 3 points each
- And five questions 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 questions that will require answers only;
  - 3 open-ended questions 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 questions that require full solutions.
  - In the oral phase of the competition, 30 questions are to be read to the participants. These questions 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 openended 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 questions will be divided as follows:

- 15 questions worth 2 points each
- 10 questions worth 3 points each
- 5 guestions 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 qualified to join in the International Mathematical Olympiad Summer Camp (IMOSC). 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 IMOSC.

# Awards and Prizes for the PMO

Area Stage			! !	National Stage		
1st Place	Student Coach School	Medal Certificate Certificate	1st Place	Student Coach School	P 20000 and Medal P 5000 and certificate Trophy P 15000 and Medal	
!	Student Coach School	Medal Certificate Certificate		Student Coach School	P 3000 and certificate Trophy	
! 3 <sup>rd</sup> Place ! !	Student Coach School	Medal Certificate Certificate	3 <sup>rd</sup> Place	Student Coach School	P 10000 and Medal P 2000 and certificate Trophy	

# **Regional Testing Centers**

Region 1/CAR	University of the Philippines Baguio City	Region 8	Leyte Normal University, Tacloban City	
Region 2	Cagayan State University Carig Campus, Tuguegarao City	Region 9	Carlos Dominguez Hall, Ateneo de Zamboanga University, Zamboanga City	
Region 3	College of Business Administration, Tarlac State University, Tarlac City			
i	ranac State Oniversity, Tanac City	Regions 10	CSM Annex Building Mindanao State University – Iligan, Institute of Technology, Iligan City	
Region 4A	University of Batangas, Batangas City, Batangas			
Region 4B	Western Philippines University – Puerto Princesa City Campus	Region 11	University of the Southeastern Philippines, Obrero, Davao City	
į	Sta. Monica Heights, PPC	Region 12* & ARMM*	CSM Annex Building	
! Region 5	Ateneo de Naga University, Naga City		Mindanao State University – Iligan, Institute of Technology, Iligan City	
! Region 6	Central Philippine University Jaro, Iloilo City	Region 13	College of Science Education Building Caraga State University	
Region 7	AS Building, UP Cebu College,		Ampayon, Butuan City	
1	Cebu City	NCR	Ateneo de Manila University,	
!		*May take the qualifying exam in the testing center nearest them.		

# **Area Coordinators**

! Qualifying Stage	Area Stage	National Stage
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