



# Introduction to Olympiad Mathematics 2021 (Phase I) (E1IMO008C)

## Introduction

- An introductory level comprehensive mathematics programme which covers a wide range of topics
- Broaden students' mathematical knowledge and strengthen their problem-solving skills
- Students can learn more about the scope of International Mathematical Olympiad Training
- Consists of 2 phases

This programme is co-organized with International Mathematical Olympiad Hong Kong Committee (IMOHKC)

## Programme Type / Level

Intermediate Course in Mathematical Olympiad ([Token-required](#))

## Instructor(s)

Dr Ching Tak Wing and other trainers

## Pre-requisites

Students should know the basic knowledge of the following:

Quadratic Equations and Functions, Binomial Theorem, Mathematical Induction, Remainder Theorem and Factor Theorem, Arithmetic and Geometric Sequences, Circles and Trigonometry

## Target Participants

- S1 – S6 HKAGE student members
- Class size: 30

All applicants **MUST** attend the **Aptitude Test** held on **20 Feb 2021**.

Except for those who have

- a) completed any 2 out of 5 courses in Maths Ignition series
- OR
- b) attended the Aptitude Test held on 21 Nov 2020.

**Remarks: Not for student members who have completed any phase of “International Mathematics Olympiad Training” or “Introduction to Olympiad Mathematics” before**

Due to the limited seats in computer rooms, students who have attended the Aptitude Test on 21 Nov 2020 would not be allowed to take the test on 20 Feb 2021. Their results on 21 Nov 2020 will be used for this programme.

Students will be selected randomly in attending the Aptitude Test if the application is over-subscribed.

Only selected students could join the Aptitude Test held on 20 Feb 2021.

All unselected students, except those with exemption as stated in a) or b), will be regarded as their application of this programme unsuccessful.

This programme is the same as Introduction to Olympiad Mathematics 2020 (Phase I) (MATS1151) in 19/20 school year.

## Medium of Instruction

Cantonese with English handouts

## Certificate

**E-Certificate** will be awarded to participants who have:

- ❖ Attended **at least 7 sessions** AND
- ❖ Had Satisfactory performance in all assessments

## Intended Learning Outcomes

Upon completion of the programme, participants should be able to:

1. Broaden mathematical knowledge in a variety of areas on the basis of senior secondary mathematics curriculum;
2. Strengthen the problem solving and higher-order thinking skills;
3. Learn more about the scope of International Mathematical Olympiad Training.

## Aptitude Test

Students who wish to apply for this programme must take a general aptitude test on **20 Feb 2021 (2:00 p.m. – 4:00 p.m.)**.

This general aptitude test consists of 100 multiple choice questions which covers a wide range of topics in mathematics. The purpose of the test is to figure out the applicant's knowledge in different fields of mathematics in order to choose the most suitable students for different programmes. Neither under-qualified nor over-qualified students will be admitted.

The next aptitude test is tentatively scheduled in **May 2021**. The result of an aptitude test will be valid for one year. If a student takes the test more than once, the latest result will prevail. The following table lists the programmes for which the results of this general aptitude test will apply

Programme Date	Code	Programme Name	Aptitude test valid	
			21 Nov 2020	20 Feb 2021
Mar 2021	E1IMO007C	CGMO Training 2021 (Phase I)	√	√
Mar 2021	E1IMO008C	Introduction to Olympiad Mathematics 2021 (Phase I)	√	√
Jul 2021	E1IMO001C	Maths Ignition - Combinatorics	√	√
Aug 2021	E1IMO002C	Maths Ignition - Geometry	√	√
Aug 2021	E3MAT001C	Polynomials	√	√
Sep 2021	E1IMO003C	Maths Ignition - Number Theory	√	√
Nov 2021	E1IMO004C	Maths Ignition - Algebra	√	√
Feb 2022	E1IMO005C	Maths Ignition - Coordinate Geometry		√

### Remarks:

1. All aptitude tests will only be arranged on the designated dates. No make-up test will be arranged.
2. No Calculator is allowed.
3. Please bring along with your Identification Card, e.g. HKID, student ID.
4. Please arrive at the venue 15 minutes prior to the Aptitude Test begins.

**If students who have selected to join the aptitude test are absent without any**

reasons and prior notification provided, it will result in a lower priority in joining the aptitude test next time when they apply.

Application Deadline **1 Feb 2021**  
**12:00 n.n.**

Application Result Release Date **26 Feb 2021**

If student members withdraw from the programme after the Application Deadline, the token will be deducted.

Schedule	Session	Date	Time	Venue (HKAGE)
	<b>Aptitude Test</b>	<b>20 Feb 2021</b>	<b>2:00 p.m. – 4:00 p.m.</b>	<b>Computer Room 1/F HKPC</b>
	1	6 Mar	2:00 p.m. – 5:30 p.m.	Room 105
	2	13 Mar		Room 303
	3	20 Mar		Room 303
	4	27 Mar		Online Teaching
	5	10 Apr		Room 303
	6	17 Apr		
	7	24 Apr		
	8	8 May		
	9	15 May		Room 105

**Remarks:**

- For any assessment to be held in the programme, no make-up will be arranged.
- HKPC:** Hong Kong Productivity Council, 78 Tat Chee Avenue, Kowloon, Hong Kong ([MAP](#))

**Sample Examples for the Programme**

- Does there exist a multiple of 2017 of the form  $111\dots111$ ?
- If  $a+b+c=10$ , what is the greatest possible value of  $ab^2c^3$ ?

**Enquiries**

For enquiries, please contact Academic Programme Development Division on 3940 0101 after language selection, press "1".