



# CGMO Training 2019 (Phase I) (MATS1121)

## Introduction

- An introductory level comprehensive mathematics programme which covers a wide range of topics
- Broaden students' mathematical knowledge and strengthen their problem-solving skills
- Consists of 3 phases
- Outstanding students in the programme will represent Hong Kong in China Girls Mathematical Olympiad (CGMO) 2019 held in summer

## Programme Type / Level

CGMO Training Course ([Token-required](#))

## Instructor(s)

Dr Ching Tak Wing and other trainers  
Co-organized with International Mathematical Olympiad Hong Kong Committee (IMOHKC)

## 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 **female** student members
- Class size: 20

All applicants **MUST** attend the **Aptitude Test** held on **11 Feb 2019**.

Except for those who have

1. completed any phase of *International Mathematics Olympiad Training*, *CGMO Training* or *Introduction to Olympiad Mathematics* before
- OR**
2. attended the Aptitude Test held on 3 Feb, 30 Jun, 25 Aug or 17 Nov 2018.

## Medium of Instruction



Cantonese with English handouts

## Certificate



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

- ❖ Attending **at least 7 sessions** AND
- ❖ 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 **11 Feb 2019 (4:30 p.m. – 6:30p.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 to be held in **May 2019**. 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			
			30 Jun 2018	25 Aug 2018	17 Nov 2018	11 Feb 2019
Mar 2019	MATS1121	CGMO Training 2019 (Phase I)	√	√	√	√
Mar 2019	MATS1151	Introduction to Olympiad Mathematics 2019 (Phase I)	√	√	√	√
Jul 2019	MATS1111	Maths Ignition - Combinatorics	√	√	√	√
Aug 2019	MATS1112	Maths Ignition - Geometry		√	√	√
Aug 2019 (tentative)	MATS2330	Trigonometry		√	√	√
Sep 2019	MATS1113	Maths Ignition - Number Theory			√	√
Oct 2019 (tentative)	MATS1411	Numbers Around Our Life			√	√
Nov 2019	MATS1114	Maths Ignition - Algebra			√	√
Feb 2020	MATS1115	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.

Application  
Deadline

4 Feb 2019

Application Result  
Release Date

22 Feb 2019

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>11 Feb 2019</b>	<b>4:30p.m – 6:30p.m</b>	<b>Computer Room, 1/F, Hong Kong Productivity Council</b>
1	9 Mar	2:00p.m. – 5:30p.m.	Room 204
2	16 Mar		
3	23 Mar		
4	30 Mar		
5	6 Apr		
6	13 Apr		
7	27 Apr		
8	4 May		
9	11 May		Room 105

Remarks: For any assessment to be held in the programme, no make-up will be arranged.

Hong Kong Productivity Council: 78 Tat Chee Avenue, Kowloon, Hong Kong [MAP](#)

## Sample Examples for the Programme

1. Do there exist 2017 consecutive positive integers, each of which has at least two prime factors?
2. Let  $ABC$  be an acute triangle and  $D, E, F$  be the feet of its altitudes. If  $P$  and  $Q$  denote the perimeters of  $\triangle ABC$  and  $\triangle DEF$  respectively, what are the possible values of  $\frac{P}{Q}$ ?

## Enquiries



For enquiries, please contact us at 3940 0101 after language selection, press "1".