



MATHS IGNITION – ALGEBRA (MATS1114)

Introduction

Maths Ignition is an introductory programme. It is designed as a series of courses of different topics and is developed as a bridging programme to the 'IMO Training' programme.

Maths Ignition – Algebra is the fourth course of the series. It aims to broaden students' knowledge in algebra on the basis of junior secondary mathematics curriculum through exploration and investigation approach. Students who have completed 2 out of 5 courses in Math Ignition series might be considered for direct admission to the "Introduction to Olympiad Mathematics 2018 (Phase I)" (MATS1151), an intermediate-level programme offered in Spring 2019 by IMO Hong Kong Committee.

Programme Type / Level

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

Instructor(s)

Mr. Hui Pak Nam
Co-organized with International Mathematical Olympiad Hong Kong Committee (IMOHKC)

Pre-requisites

- Students should have the basic knowledge in
1. Basic Manipulations of Algebraic Expressions
 2. Multiplication and Divisions of Polynomials
 3. Basic Algebraic Identities
 4. Expansion and Factorisation of Polynomials
 5. Solving Systems of Linear Equations

Target Participants



- S1 – S3 HKAGE student members
- Class size: 30
- All applicants **MUST** attend the **Aptitude Test** held in HKAGE on **25 Aug 2018** except for those who have attended the Aptitude Test held on 6 Jan 2018, 3 Feb 2018 or 30 Jun 2018.

- * Not for students who have enrolled in**
1. CGMO Training (Phase I) MATS1121 or
 2. Introduction to Olympiad Mathematics (Phase I) MATS1151 or
 3. Any phase of International Mathematics Olympiad (IMO) Training before

Medium of Instruction



Cantonese with English handouts

Certificate



- E-Certificate** will be awarded to participants who have:
- ❖ Attended **at least 3 sessions AND**
 - ❖ Satisfactory performance in the end-of-course test

Intended Learning Outcomes



- Upon completion of the programme, participants should be able to:
1. Broaden their mathematical knowledge in the topic of number theory on the basis of junior secondary mathematics curriculum;
 2. Strengthen their 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 **25 Aug 2018 (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 scheduled on **17 Nov 2018**. The result of an aptitude test will be valid for 1 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			
			6 Jan 2018	3 Feb 2018	30 Jun 2018	25 Aug 2018
Sep 2018	MATS1113	Maths Ignition - Number Theory	√	√	√	√
Nov 2018	MATS1114	Maths Ignition - Algebra	√	√	√	√
Feb 2019	MATS2115	Maths Ignition - Coordinate Geometry		√	√	√
Feb 2019	MATS1100	HK Winter Mathematics Olympiad 2018		√	√	√
Mar 2019	MATS1121	CGMO Training 2018 (Phase I)			√	√
Mar 2019	MATS1151	Introduction to Olympiad Mathematics 2018 (Phase I)			√	√
Jul 2019	MATS1111	Maths Ignition - Combinatorics				√
Aug 2019	MATS1112	Maths Ignition - Geometry				√
Aug 2019	MATS2330	Trigonometry				√

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

13 Aug 2018

Application Result
Release Date

29 Aug 2018

Student members may withdraw from the programme on or before the deadline. Otherwise, the token will be deducted.

Schedule



Session	Date	Time	Venue (HKAGE)
Aptitude Test	25 Aug	2:00 p.m. – 4:00 p.m.	Room 105
1	24 Nov	2:00 p.m. – 5:00 p.m.	Room 303
2	1 Dec		
3	8 Dec		
4	15 Dec		

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

Sample Examples for the Programme

- Without using a calculator, find $\sqrt[3]{8030}$ correct to 3 decimal places.
- Let a be a real number such that $a^2 - a - 1 = 0$. Find the value of $a^4 - a^3 + a^2 - 2a + 2016$.

Enquiries



For enquiries, please contact us at 3940 0101

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