



E1MAT003C

(Token- required)

Algebra Course (Level I)

# Perspectives on Junior Secondary Mathematics- Algebra

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**Application Deadline**  
**31 Jan 2022 12:00 n.n**

**Result Release**  
**11 Feb 2022**

## **Intended Learning Outcomes**

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

1. apply index laws to simplify, manipulate and evaluate expressions,
2. simplify and manipulate algebraic expressions,
3. explain the relations between different graphs and functions,
4. manipulate and solve linear inequalities strategically.



## ◆ Introduction

Could anyone explain why "negative times negative becomes positive" ( $- \times - = +$ )?

This is an important foundation of mathematics known as algebra. Mathematics is not only a tool for calculation and proof, but also an essential problem-solving tool based on means of representation and algebraic methods. You will be surprised by applying algebraic skills in a wide variety of problem-solving situations. Typical examples are application of Remainder Theorem and solving equations using graphical methods learnt in senior secondary learning.

This course is designed to help students understand key algebraic knowledge at the junior secondary level and to be equipped with the basic knowledge required for learning mathematics at higher level. The key content involves basic computation including powers operation, factorization skills, concept of solving equations and the study of concept of inequalities.

## ◆ Schedule

Session	Date	Time	Venue
1	5 Mar	9:30 a.m. – 12:30 p.m.	Buddhist Kok Kwong Secondary School
2	12 Mar		
3	19 Mar		
4	26 Mar		

## ◆ Target Participants

- P4 to P6 HKAGE student members only in 2021/22 school year
- Class size: 38

This programme is same as Algebra Course (Level I): Perspectives on Junior Secondary Mathematics-Algebra (E1MAT003C) in 20/21 school year.

## ◆ Pre-requisite

- Students must have a good understanding of numbers and algebraic symbolism.
- All participants should also be able to handle basic indices and factorisation problems.

## ◆ Medium of Instruction

English with English Handouts

## ◆ Screening

Please answer the screening question in the online application form.

\*The screening question is designed to help the applicant understands the course level and the course content. The question must be answered by the student applicant and it can only be attempted once. The answer cannot be changed once the application is submitted. Selection is based on students' performance in answering the question. Only students who can demonstrate motivation and knowledge of Algebra in the screening question can be enrolled in the programme.

## ◆ Certificate

E-Certificate will be awarded to participants who have:

- attended at least 3 sessions; and
- completed all the assignments with satisfactory performance





## ◆ Sample Notes

1. Let  $N = 999\,999^2 - 888\,888^2$ . Which of the following is/are correct?
  - I.  $N$  is a prime number.
  - II.  $N$  is an odd number.
  - III.  $N$  is a multiple of 3.

2. Find the numbers of dots of 50th term in the following [figure](#) :



3. Solve the inequality  $x^2 + 4x + 3 \leq 0$  by using the graph of function  $y = -x^2 - 4x - 1$  given below.

