

Math Magic and Algebra Enrichment (E1MAT015C)

Introduction	<p>Magic is usually performed with props, such as wands, poker cards or coins. Have you heard of mathematical magic with algebra? In this programme, you will learn many interesting properties of algebra and use them to reveal, as well as design, magnificent math magic.</p> <p>This programme is co-organized with TWGHs S. C. Gaw Memorial College.</p>		
Programme Type / Level	Algebra Course (Level I) (Token-required)		
Instructor(s)	Mr. LAU Hon Cheong (Panel Head of Mathematics of TWGHs S. C. Gaw Memorial College)		
Pre-requisite	<p>No special prerequisites are needed. Knowledge of negative numbers and Excel is an advantage but not a must.</p> <p>This programme is a basic level programme. It is recommended to choose other programmes if students have mastered the relevant knowledge.</p>		
Target Participants	<ul style="list-style-type: none"> ➢ P4 to P6 HKAGE student members ➢ Class size: 24 ➢ Priority will be given to P4 and P5 student members <p>This programme is same as “Algebra Course (Level 1): Maths Magic and Algebra Enrichment (MATP1211)” in 18/19 school year.</p>		
Medium of Instruction	Cantonese with Chinese handouts		
Certificate	<p>E-Certificate will be awarded to participants who have:</p> <ol style="list-style-type: none"> 1. attended AT LEAST 3 sessions AND 2. completed all the assessments with satisfactory performance. 		
Intended Learning Outcomes	<p>Upon completion of the programme, the participants should be able to:</p> <ul style="list-style-type: none"> • analyze and solve mathematical problems by using algebraic skills; • develop problem solving skills by analyzing mathematical problems that involve factorization and equations; • apply algebraic concepts in solving mathematical magic problems; • develop collaboration skills through working together to solve problems. 		
Screening	<p>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 the knowledge of algebra in the screening question can be enrolled in the programme.</p>		
Application Deadline	<p>1st batch: 3 May 2021 12:00 n.n.</p> <p>2nd batch: 24 May 2021 12:00 n.n.</p>	<p>Application Result Release Date</p>	<p>1st batch: 14 May 2021 2nd batch: 28 May 2021</p>
<p>If student members withdraw from the programme after the Application Deadline, the token will be deducted.</p>			

Schedule

Session	Date	Time	Venue
1	19 Jun 2021	9:00 a.m. – 12:00 n.n.	TWGHs S. C. Gaw Memorial College*
2	26 Jun		
3	3 Jul		
4	10 Jul		

* Address: 7 Tsing Sum Street, Town Centre, Tsing Yi, N.T. ([Map](#))

Sample Notes

活動(二)：心裡有數

1. 先想一個數 (如：6152894)，然後隨意將每一個數字調位 (如得出：1984265)。數字由 0-9，可以重複。
2. 求兩個數的差，即將大減小 (如 $6152894 - 1984265$)，得出 4168629。
3. 心裡將得出的數其中一個 0 以外的數字移走，告訴主持人剩下的數是什麼。
4. 主持人知道你心裡移走的是甚麼字。

試利用代數解釋這個魔術背後的原理。(同學可先用 4 位數來試驗。)

Reference:

- 波沙曼提爾 (2005).神奇數學 117.: 天下文化
- 安·魯尼 (2013).數學，為什麼是現在這樣子？：一門不教公式，只講故事的數學課.: 臉譜

Enquiries

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