



香港資優教育學苑

The Hong Kong Academy for Gifted Education

香港特別行政區政府教育局資助
Subvented by the Education Bureau, the Government of the HKSAR

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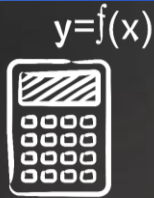
(Token- required)

[**Gifted Programme**]

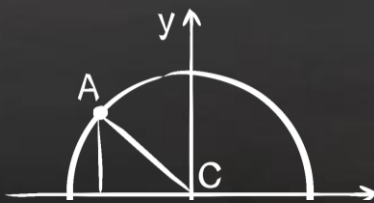
Algebra Course (Level I)

Math Magic and Algebra Enrichment 1

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(Vice Principal of TWGHs S. C. Gaw Memorial College)



Algebra



Application Deadline
29 Apr 2024 12:00 noon

Result Release
10 May 2024

Intended Learning Outcomes

Upon completion of the gifted programme, gifted students should be able to:

1. analyze and solve mathematical problems by using algebraic skills;
2. develop problem solving skills by analyzing mathematical problems that involve factorization and equations;
3. apply algebraic concepts in solving mathematical magic problems;
4. develop collaboration skills through working together and be perseverant when facing difficulties;
5. enhance the interest in delving deeper into the study of mathematics and algebra.

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

◆ Gifted Programme Introduction

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.

This programme is co-organized with TWGHs S. C. Gaw Memorial College.

◆ Schedule

Session	Date	Time	Venue
1	8 Jun		TWGHs S. C. Gaw Memorial College, 7 Tsing Sum Street, Town Centre, Tsing Yi, N.T. (Map)
2	15 Jun	9:00 a.m. – 12:30 p.m.	
3	22 Jun		

◆ Suitable for

- P4 to P6 HKAGE student members
- Class size: 24

◆ Pre-requisite

No special prerequisites are needed.

- Knowledge of negative numbers and Excel is an advantage but not a must.
- **This programme is a basic level programme. It is recommended to choose other programmes if students have mastered the relevant knowledge.**

◆ Medium of Instruction

Cantonese with Chinese handouts

◆ Screening

Please answer the screening question in the online application form.

*The screening question is designed to help the applicant understand 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 mathematics / algebra in the screening question can be enrolled in the programme.

◆ Certificate

E-Certificate will be awarded to gifted students who have:

- attended **all** sessions; and
- completed all the assignments with satisfactory performance

◆ 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