

**Results of Mathematics Project Competition for Secondary Schools (2022/23)**  
**中學數學專題習作比賽（2022/23）成績**

**Category A: Junior secondary project A 組：初中習作**

<b>Results 成績</b>	<b>School 學校</b>	<b>Title of Project 專題習作名稱</b>
Champion 冠軍	Diocesan Girls' School 拔萃女書院	Brouwer's Fixed Point Theorem: Finding a Fixed Point in Triangles and Extension to Quadrilaterals
1st runner-up 亞軍	Kwun Tong Government Secondary School 觀塘官立中學	Investigation on the Generalization of Pick's Formula
2nd runner-up 季軍	St. Paul's Co-educational College 聖保羅男女中學	Foundations of Junior Secondary Pure Geometry --- (Re-)constructed from Junior Secondary Students' Perspectives

**Award for Best Presentation**  
**最佳演繹獎**

<b>School 學校</b>	<b>Title of Project 專題習作名稱</b>
Diocesan Girls' School 拔萃女書院	Brouwer's Fixed Point Theorem: Finding a Fixed Point in Triangles and Extension to Quadrilaterals

**Teams of Outstanding Performance and the Titles of their Winning Projects**  
**表現優異獎隊伍及作品名稱**

School (in alphabetic order) 學校(按英文名字排序)	Title of Project 專題習作名稱
Kiangsu-Chekiang College (Shatin) 沙田蘇浙公學	淺談井字過三關
Wong Shiu Chi Secondary School 王肇枝中學	海倫三角形尋根之旅
Wong Shiu Chi Secondary School 王肇枝中學	連續三角形列上的面積問題

**Teams of Good Performance and the Titles of their Winning Projects**  
**表現良好獎隊伍及作品名稱**

School (in alphabetic order) 學校(按英文名字排序)	Title of Project 專題習作名稱
Christian Alliance S C Chan Memorial College 香港九龍塘基督教中華宣道會陳瑞芝紀念中學	Parabola in Daily Life
Christian Alliance S C Chan Memorial College 香港九龍塘基督教中華宣道會陳瑞芝紀念中學	密鋪世界的奧秘
HKUGA College 港大同學會書院	The Mathematics Behind the 2048 Tile Game
HKUGA College 港大同學會書院	The G-A-M-E: Good At Maximizing Expected payoff
Hong Kong Chinese Women's Club College 香港中國婦女會中學	Windscreen Wipers
Kiangsu-Chekiang College (Kwai Chung) 葵涌蘇浙公學	二次函數圖像的 x 軸截距與頂點形成的三角形
Kwun Tong Government Secondary School 觀塘官立中學	Specials in Triangles: Relations and Concurrency of Lines

School (in alphabetic order) 學校(按英文名字排序)	Title of Project 專題習作名稱
Po Leung Kuk Celine Ho Yam Tong College 保良局何蔭棠中學	不同方法解決倒水問題的探究
Pui Ching Middle School 香港培正中學	以建模的方式模擬病毒對人口的影響並分析可行的對策
Pui Ching Middle School 香港培正中學	The Probability of Winning Happy Rainbow and Similar Coin Throwing Booth Games
Sha Tin Government Secondary School 沙田官立中學	The special covering areas
Sha Tin Government Secondary School 沙田官立中學	$(\text{Side})^2$
Shun Tak Fraternal Association Yung Yau College 順德聯誼總會翁祐中學	探討最短路徑及物流優化問題
Shun Tak Fraternal Association Yung Yau College 順德聯誼總會翁祐中學	探究不同直線所形成的交點數量範圍
Shun Tak Fraternal Association Yung Yau College 順德聯誼總會翁祐中學	翻摺六邊形
Shun Tak Fraternal Association Yung Yau College 順德聯誼總會翁祐中學	投資組合的探究
Shun Tak Fraternal Association Yung Yau College 順德聯誼總會翁祐中學	Time-series approach and Machine Learning approach to capture the COVID-19 development in Hong Kong
Stewards Ma Kam Ming Charitable Foundation Ma Ko Pan Memorial College 香港神託會主辦馬錦明慈善基金馬可賓紀念中學	抽獎活動的概率
The Church of Christ in China Ming Yin College 中華基督教會銘賢書院	Applications of Monte Carlo methods
Wah Yan College, Hong Kong 香港華仁書院	Password System
Wong Shiu Chi Secondary School 王肇枝中學	Inscribed Equilateral Triangle
Yan Oi Tong Tin Ka Ping Secondary School 仁愛堂田家炳中學	三角形的四心

## **Category B: S1 mini-project B 組：中一小型習作**

### **Team of Outstanding Performance and the Title of the Winning Project** **表現優異獎隊伍及作品名稱**

<b>School (in alphabetic order)</b> <b>學校(按英文名字排序)</b>	<b>Title of Project</b> <b>專題習作名稱</b>
Diocesan Girls' School 拔萃女書院	An Investigation on University Applications using Mathematical Modelling

### **Team of Mathematical Modelling Award and the Title of the Winning Project** **數學建模獎隊伍及作品名稱**

<b>School (in alphabetic order)</b> <b>學校(按英文名字排序)</b>	<b>Title of Project</b> <b>專題習作名稱</b>
Diocesan Girls' School 拔萃女書院	An Investigation on University Applications using Mathematical Modelling

### **Teams of Good Performance and the titles of their Winning Projects** **表現良好獎隊伍及作品名稱**

<b>School (in alphabetic order)</b> <b>學校(按英文名字排序)</b>	<b>Title of Project</b> <b>專題習作名稱</b>
Carmel Holy Word Secondary School 迦密聖道中學	破解尼姆遊戲的祕密
Christian Alliance S C Chan Memorial College 宣道會陳瑞芝紀念中學	Game Theory
Kwun Tong Government Secondary School 觀塘官立中學	與萬年曆有關的運算
Lung Kong WFSL Lau Wong Fat Secondary School 世界龍岡學校劉皇發中學	格格不入

School (in alphabetic order) 學校(按英文名字排序)	Title of Project 專題習作名稱
Pok Oi Hospital Chan Kai Memorial College 博愛醫院陳楷紀念中學	1vs10，從數學去驗證抽獎體感的迷思
Sha Tin Government Secondary School 沙田官立中學	Speed Calculation of Multiplication
St. Paul's College 聖保羅書院	楊輝三角形
St. Paul's Co-educational College 聖保羅男女中學	The Mathematics Involved in Soccer Betting
Stewards Pooi Kei College 香港神託會培基書院	The Rule of 72
Wah Yan College, Hong Kong 香港華仁書院	Collatz Chaos
Wong Shiu Chi Secondary School 王肇枝中學	紮樽的數學
Yan Oi Tong Tin Ka Ping Secondary School 仁愛堂田家炳中學	Estimation of the Perimeter and the Area of Inferior Planets' Orbits in the Solar System

Remark : Letter would be sent to the school of the awarding team for the results of Mathematics Project Competition for Secondary Schools (2022/23) by 5 June 2023. Award teams would be invited to attend the Prize-giving Ceremony of Mathematics Project Competition and Mathematics Book Report Competition for Secondary Schools (2022/23) cum Exhibition of the Winning Entries held on 6 July 2023 (Thursday) at 2:30 p.m. in 9/F Auditorium, The Hong Kong Federation of Youth Groups Building, 21 Pak Fuk Road, North Point, Hong Kong.

註：得獎隊伍的參賽學校將在2023年6月5日收到中學數學專題習作比賽(2022/23)結果的信件。得獎隊伍亦會被邀請參加於2023年7月6日(星期四)下午2時30分假香港北角百福道21號香港青年協會大廈9樓演講廳舉行的中學數學專題習作比賽及數學閱讀報告比賽(2022/23)頒獎禮暨優勝作品展覽。