

3. Mathematics Education

Mrs. PS Tong

Knowledge of Mathematics is essential for success in many disciplines and most careers. In this regard, the Mathematics Department works conscientiously to enable students to build up confidence and positive attitudes towards Mathematics learning. Our students have not only developed fluency in computational skills but also have been able to understand mathematical concepts, solve problems and reason mathematically.

Our teachers dedicated time and effort in providing quality education for our students. They are attentive to students' needs and supportive of their learning. Several mock sessions were held to prepare S.6 students for the public examinations. Tutorials were held frequently to provide students with assistance in mastering the subject. A bridging course for new S.1 and pre-exam tutorials for junior secondary students were conducted. All these arrangements equipped students with the subject knowledge deemed necessary to undertake further studies successfully.

It is gratifying to see that our students continue to perform excellently in the HKDSE examination this year. In the compulsory part, 14.7% of students achieved 5** and 67.4% attained Level 5 or above. In the Calculus and Statistics Module, 16.7% of students scored 5** and 73.3% scored Level 5 or higher; and in the Algebra and Calculus Module, 3.6% of students scored 5** and 64.3% scored Level 5 or higher. The A level girls also performed outstandingly in the International Advanced Level (IAL) examination. 67% of them scored A* and 100% attained B or above. This level of success can be credited to the hard work of the teachers and students.

We offered different enrichment activities for our junior secondary students. Examples of activities for all S.1 and 2 students include the 'Mathematics Trail' and 'Tessellation and Symmetry'. Also, sixteen interest classes for S.2 and 3 students were held after school this year. Many different topics like 'Fractals', 'The Pigeonhole Principle', 'Cryptography' and 'Graph Theory', etc. were discussed. These activities, with appropriate use of technology, were designed to provide students with interactive learning experiences, and the lively classroom atmosphere generated helped them to become actively engaged in the learning process.

Professor Stephen Watt from the University of Waterloo, Canada visited the School and delivered a talk to our elite Mathematics enthusiasts. During the session, he shared with his audience some interesting problems and made practical suggestions to solve them. Professor Watt was impressed by the problem solving abilities of our girls.

The Mathematics Team Student Committee worked enthusiastically to enhance the team spirit and promote the beauty of Mathematics. In October, they hold training sessions on Super 24 for S.1 -2 students. In January, they organised a Mathematics Theme Week which included a series of activities such as a Mathematics Talk on 'Conditional Probability: from a False HIV-positive Result of a pregnant Woman in a Local Hospital', interclass competition and game booths. All these activities were held successfully and brought fun to everyone who attended. In June, the student committee participated in the "STEM Activities for DGJS Primary 4 Students" and set up a booth on Cryptography. The students were delighted to share their knowledge on Caesar Cipher and Enigma codes to the younger students.

To nurture our mathematicians, we hold elite classes conducted by experienced trainers. This year, we are grateful to have the former members of the International Mathematical Olympiad Hong Kong (IMO HK) Team, Mr. Jeffrey Hui, Miss Mandy Kwok and Mr. Wong Tsz Chuen, to train our elite students. Around 80 girls attended these regular trainings. These mathematicians participated actively in various competitions and challenges to enrich their exposure to Mathematics and exhibit their talents. The commitment of the mathematicians and teachers were rewarded with success and recognition.

The major achievements of the girls in various competitions are listed below:

1. China Girls' Mathematical Olympiad (CGMO) 2018
Silver Medal: Wong Chi Ka
Bronze Medal: Ng Sze Mai and Tam Hoi Yan
2. International Mathematical Olympiad Preliminary Selection Contest
Bronze Award : Ng Sze Mai, Leung Ka Yan Miko
Honourable Mention : Tam Hoi Yan, Zhu Kezhen
3. The 5th International Mathematical Modeling Challenge
Outstanding Award:
team comprising Hui Yuk Ting Victoria, Ng Hannah and Chen Ling Yi
Finalist:
team comprising Tam Hoi Yan, Leung Ka Yan Miko, Zhu Kezhen and Chu Tsz Wai Athena
Meritorious:
team comprising Wong Charis Lorraine, Ho Po Ying and Choi Ching Lam
4. The 5th International Mathematical Modeling Challenge for the Region of Mainland, Taiwan, Hong Kong and Macau
Finalist Award:
team comprising Tam Hoi Yan, Leung Ka Yan Miko, Zhu Kezhen and Chu Tsz Wai Athena
Meritorious:
team comprising Hui Yuk Ting Victoria, Ng Hannah and Chen Ling Yi
team comprising Wong Charis Lorraine, Ho Po Ying and Choi Ching Lam
5. Hong Kong Junior Mathematics Olympiad – National Mathematical Forum for Youths
Mathematical Modelling Section
1st Runner up: team comprising So Wing Tung Abby, Wong Ka Yu and Lam Wai Sum
Problem Solving Section
Third Class Award: So Wing Tung Abby, Wong Ka Yu, Yu Sui Ki Rita, Tse Yan Wing Alvina, Lai Sum Yee, Ip Tsz Oi
6. Hong Kong Mathematical High Achievers Selection Contest
1st Class Award: Cheung Chun Yan Alicia
2nd Class Award: Ip Tsz Oi, Wong Ka Yu
3rd Class Award: Tsui Vivienne
7. True Light Girls' Invitational Mathematics Contest 2018
Team: Champion
team comprising Tam Hoi Yan, Leung Ka Yan Miko, Chu Tsz Wai Athena, Tse Wing Yan
Individual:
Champion : Leung Ka Yan Miko
1st Runner-up : Tam Hoi Yan
8. Pui Ching Invitational Mathematics Competition 2019
Team: Merit
Individual:
Silver Award: Chow Tsz Yau, Tam Hoi Yan
Bronze Award: Ip Tsz Oi, Tse Wing Yan, Leung Ka Yan Miko, Ng Sze Mai

9. National Hua Luo Geng Cup Mathematics Competition 2019 (Hong Kong region)
3rd Class Award: Wong Ka Yu
10. Mathematics Project Competition for Secondary Schools 2018 – 2019
1st Runner-up: team comprising Cheng Chun Yan, Cheung Chun Yan Alicia, Ching Michelle, Tse Yan Wing Alvina, Tsui Vivienne, Wan Kiu Isabella
11. Mathematics Book Report Competition for Secondary Schools 2018 – 2019
First Class Prize: Lam Wai Sum
Second Class Prize: So Wing Tung Abby, Tan Yu Yng Lorraine, Yu Sui Ki Rita, Ip Tsz Sum
12. The 10th Hong Kong Mathematics Creative Problem Solving Competition for Secondary Schools
Gold Award: team comprising Chow Tsz Yau, So Hoi Ting, So Wing Tung Abby, Wong Ka Yu
13. 36th Hong Kong Mathematics Olympiad
Merit prize in the Geometric Construction Event:
team comprising Ng Sze Mai, Leung Ka Yan Miko, Tam Hoi Yan, Zhu Kezhen
Individual
Second-class Honour: Ho Po Ying, Ng Sze Mai
Third-class Honour: Tse Wing Yan, Leung Ka Yan Miko
14. Canadian Mathematics Contests
Cayley Contest: 55 students received distinction certificates
Medalists: Tam Hoi Yan, Chu Tsz Wai Athena
Pascal Contest: 50 students received distinction certificates
Medalist: Liu Hiu Wai Jasmine
Gauss Contest: 39 students received distinction certificates
Top Scorers: Chow Tsz Yau, Tan Yu Yng Lorraine, Wong Hoi Yau Bertha, Wong Ka Yu, Chan Jing Jane
15. CUHK-Sensetime Secondary Schools Students AI Competition 2019
Second Prize: team comprising Leung Ka Yan Miko, Choi Ching Lam
16. Asia International Mathematical Olympiad Open Contest 2019
Overall: 1st Runner-up, 8 Gold Awards, 4 Silver Awards and 3 Bronze Awards
S3 Level: Champion: Ip Tsz Oi
S1 Level: Champion: Chow Tsz Yau
Gold Award: Ho Nga Chi, Ngo Nathania, Tsui Vivienne, Leung Ka Yan Miko, Wong Ka Yu, So Wing Tung Abby, Tse Yan Wing Alvina, Chu Tsz Wai Athena
17. Hong Kong & Macau Mathematical Olympiad Open Contest cum The Asia International Mathematical Olympiad Open Contest Trial 2019
Overall: 1st Runner-up, 24 Gold Awards, 11 Silver Awards and 1 Bronze Award
S3 Level: Champion: Ip Tsz Oi
S1 Level: Champion: Chow Tsz Yau
Gold Award: Cheung Hoi Ching, Chow Tsz Yau, Leung Tiffany Sabrina, Ngo Nathania, Ho Nga Chi, Hui Hoi Lam, So Wing Tung Abby, Tan Yu Yng Lorraine, Wang Lu, Wong Ka Yu, Lam Wai Sum, Cheung Ka Yan, Chan Tsz Ching, Cheung Chun Yan Alicia, Ip Tsz Oi, Tse Yan Wing Alvina, Tsui Vivienne, Tam Hoi Yan, Leung Ka Yan Miko, Pang

Adelaide Kwun-Kiu, Zhu Kezhen, Chu Tsz Wai Athena, Tse Wing Yan, Tse Wing Sze

18. 「華夏盃」全國數學奧林匹克邀請賽 2019
(全國) 總決賽
一等獎: 蘇泳潼, 張雋欣
二等獎: 唐晞桐, 陸欣怡, 楊凱如, 黃嘉愈
三等獎: 張雯婷
(華南賽區) 晉級賽
共奪得四個特等獎、二個一等獎、十個二等獎和一個三等獎
特等獎: 周芷悠, 陸欣怡, 黃嘉愈, 張雋欣
(香港賽區) 初賽: 共奪得十四個一等獎、三個二等獎和三個三等獎
19. Hong Kong Mathematical Games Open 2019
Gold Award and Full Score in Sentinels: Leung Man Sum
Gold Award: Ng Hey
20. Guangdong-Hong Kong-Macao Greater Bay Area Mathematical Olympiad 2019
Hong Kong Region
First Class Award: Cheung Chun Yan Alicia, Tsui Vivienne, Wan Kiu Isabella, Leung Rachel Wai Ching
Greater Bay Area Region
First Class Award: Leung Rachel Wai Ching

To conclude this report, I would like to express my heartfelt thanks to all the teachers in the Department. Without their support and contribution, such achievements could not have been possible. I also wish to express my gratitude to our Headmistress, Mrs. S. Lau, for her generous support and encouragement throughout the year.

Mathematics Project Competition for Secondary Schools 2018 – 2019



Mathematics Team

