



Sun Life Financial
Canadian Open Mathematics Challenge (COMC)
2011 Competition Report



The Canadian Mathematics Society (CMS), Canada's national association for mathematics, promotes the advancement, discovery, learning and application of mathematics. To learn more about the CMS, please go to the web site at: www.cms.math.ca

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FOREWORD

Mathematics is a vital part of what happens in the world around us. Today mathematics is more important than ever to help sustain our individual and national success. The Sun Life Financial COMC provides students with a unique opportunity to discover, learn, and apply mathematics and more importantly, to fuel an interest that is critical to our future. The Canadian Mathematics Society (CMS) is pleased to report the formal results of the 2011 Sun Life Financial Canadian Open Mathematics Challenge (COMC) competition.

2011 marked the 16th edition of the COMC. The 2011 COMC was very well received and, in addition to the awards and prizes outlined in this report, also resulted in strong groups of students being invited to write the Sun Life Financial Repêchage and Sun Life Financial Canadian Mathematical Olympiad (CMO) competitions.

In 2011 the CMS partnered with University of Toronto and Laval University to stage the COMC as well as with the University of Ottawa, Carleton University, and Nelson Education. The CMS extends a special note of thanks and appreciation to Jim Colliander (Toronto), Pamela Brittan (Toronto), Frédéric Gourdeau (Laval), Line Baribeau (Laval), Joseph Khoury (Ottawa), David Thomson (Carleton), and Sean Chamberland (Nelson) and all the volunteers that helped to mark the competition papers.

The competition questions were developed by the 2011 Problem Committee which consisted of Adrian Tang (Calgary) who chaired and coordinated the committee, Alexander Remorov (Toronto), David Arthur (Google), Richard Hoshino (NII Tokyo), Farzin Barekat (UCLA), Andy Liu (Alberta), Lino Demasi (SFU) and Alex Fink (NCS). The success of the COMC owes much to the quality of the questions developed for the competition and the 2011 committee is to be thanked and commended on their diligence and hard work to make the competition more accessible with a new three-section format.

As the title sponsor of the competition and long-standing sponsor of the CMS, the support of Sun Life Financial is very much appreciated and valued.

To all the 2011 COMC participants, students and teachers alike, in Canada and abroad, the CMS appreciates their interest and participation. While the COMC awards and certificates help to recognize excellence, the prizes are a way to say thank you.

A competition like the Sun Life Financial COMC is a substantial undertaking and is only made possible by the efforts of many volunteers and staff as well as sponsors. Teachers across Canada gave selflessly of their time to help their students prepare for the competition. Nelson Education helps to distribute posters and promote the competition. Teams of volunteers at the University of Toronto and Laval University mark the competition papers. Volunteers from the University of Ottawa and Carleton University validate the grading. Without the work of these dedicated individuals and sponsors, the success of the competition would not be possible.

The CMS welcomes feedback on the COMC (and indeed on any CMS competition) and you are invited to contact us at: comc@cms.math.ca

Bill Sands (Calgary)
Chair, Competitions Committee
Canadian Mathematical Society

Jim Colliander
Chair, COMC Committee
Canadian Mathematical Society



INTRODUCTION

The Sun Life Financial Canadian Open Mathematics Challenge (COMC) is the national competition for Canadian students, one that also welcomes international participation. The competition is one in a series of Canadian Mathematical Society (CMS) competitions leading to the selection of the Canadian student team (Math Team Canada) to compete in the International Mathematical Olympiad (IMO).

The purpose of the Sun Life Financial COMC is to encourage students to explore, discover, and learn more about mathematics and problem solving. At the same time, the competition serves to provide teachers and students with a unique enrichment activity.

Competition problems were designed to be original, to require some curricular knowledge, to apply some problem solving techniques, and to provide some discovery and insight. Few students are expected to be able to solve all of the problems in the given time. Students are encouraged to revisit any of the competition problems they did not solve and to talk to their teachers and classmates about them.

Outstanding performance in the Sun Life Financial COMC is recognized in many ways. There are national, provincial, and regional awards for best in Canada and province or region. There are also best in Canada and province or region awards and certificates for best at grade levels. There are international awards as well as international and Canadian honour rolls. In addition, the top fifty or so Canadian students are invited to write the more advanced Sun Life Financial Canadian Mathematical Olympiad (CMO) while the next 50 or so are invited to write the Sun Life Financial R pechage.

For students in grades 8 to 10 who wrote the 2011 competition, the results are considered for invitations to the 2012 CMS National Math Camp. The National Camp is designed primarily for early year Canadian high school students with at least two years remaining in high school and with the potential to compete at the mathematical Olympiad level. The CMS, in partnership with universities across Canada, also stages select regional math camps (<http://cms.math.ca/MathCamps/>).



OVERALL RESULTS

- The overall average grade was 37 out of 80.
- The national mean grade was 37.0 and the median grade was 36.0.
- Highest domestic score was 80 – a perfect paper (by two students).
- Percentage of students scoring 40 or better: 41.9 %
- A total of 4,220 eligible papers were submitted, including 629 international submissions.
- A total of 505 awards went to Canadian students and 6 awards went to international students.
- A total of 17 students were cited on the 2011 COMC National Honour Roll.
- A total of 6 students were cited on the 2011 COMC International Honour Roll.
- There were 61 students that scored 70 or better and were invited to write the Sun Life Financial Canadian Mathematical Olympiad (CMO).
- There were 65 students that scored between 65 and 69 inclusive and were invited to write the Sun Life Financial Rêpechage for which the best performing students may also be invited to write the Sun Life Financial CMO.
- A total of 445 prizes were randomly awarded to domestic participants.
- The 2011 competition had student participation from each province and continued to attract significant international participation.

RESULTS BY SECTION AND QUESTION

COMC questions and solutions are presented in Annex A.

Part A

The questions in Part A were designed to be accessible in content to all high school students writing the competition. Each question required some reading, some thought, and some calculation. This set of questions was relatively easy and the right answer scored full marks – incomplete or incorrect solutions were eligible for partial marks.

A1.

Average score: 3.8 and median score: 4

This question was very well done. Most contestants solved the problem by solving for r directly and substituting r into $(r - 3)^2$.

A2.

Average score: 3.9 and median score: 4

Contestants did very well on this problem, with most contestants solving the problem by inspection.

A3.

Average score: 3.4 and median score: 4

Most contestants solved this problem completely, but many others made multiplication errors when calculating the corner numbers and/or addition errors when summing all eight numbers.

A4.

Average score: 3.2 and median score: 4

This geometry problem was solved completely by roughly two-thirds of the contestants. The most common solutions were either using properties of the 30-60-90 triangle or by using cosine law.

Part B

The four problems in Part B, each worth 6 marks, were designed to also be accessible in content to all high school students; however, these questions required somewhat more consideration and thought, and definitely more calculation to arrive at a solution. Correct solutions received full marks while incomplete or incorrect solutions were eligible for partial marks.

B1.

Average score: 4.1 and median score: 6

This tricky problem was very well done and solved completely by roughly two-thirds of the contestants. Many of the contestants were well-versed with the distance = speed \times time formula and used it brilliantly in this problem.

B2.

Average score: 0.9 and median score: 0

This problem was not done as well as expected. The problems committee suspects that many contestants may not know the definition of a geometric sequence. We admit fault in

this matter and apologize for the inconvenience caused by not including this definition. The key observation to this problem was that the common ratio of the geometric sequence is not an integer. The contestants who solved this problem were those who were able to come to this conclusion.

B3.

Average score: 2.0 and median score: 1

Contestants who successfully solved this problem are familiar with Pythagorean theorem, similar triangles and circle geometry. However, many contestants did not realize that $\angle BDC$ and $\angle BEC$ are both 90° .

B4.

Average score: 1.9 and median score: 0

This counting problem was done far better than expected, with over a quarter of the contestants solving it completely. The key was to recognize that each person in the group either solved 8 short and 3 long problems, or 7 short and 4 long problems.

Part C

The four problems in Part C, each worth 10 marks, were designed to be challenging and required not only some additional knowledge but also an element of inspiration. For this set of problems, correct solutions (often achievable in more than one way) did not necessarily receive full marks as marks were also awarded for presentation, logic, clarity, etc., in arriving at a solution.

C1.

Average score: 5.6 and median score: 6

Parts (a) and (b) were very well done, as most contestants were able to demonstrate their mastery of equation of lines and determining length of a segment in the Cartesian plane. Part (c) was not done as well as expected, as many contestants were unable to determine the centre of a circle passing through three points.

C2.

Average score: 5.2 and median score: 5

This was a fun logic problem and parts (a) and (b) were very well done. Part (c) required a precise explanation to yield full marks. Several contestants were able to conclude the answers to all 100 problems, but were not able to explain clearly why the answers are unique.

C3.

Average score: 2.2 and median score: 0

This problem was tricky and contestants had to recognize to use the quotient and remainder upon division by 7 and 8 to solve this problem. Obtaining the numerical answer of 343 in part (b) was not too difficult. The difficult part of the problem was proving that 343 was indeed the largest integer n for which $B(n) \leq A(n)$. Several contestants lost marks in part (b) due to incorrect and/or insufficient explanation.

C4.

Average score: 1.2 and median score: 1

This was a difficult problem. Part (a) was in general done very well by contestants who attempted it. These contestants were able to solve for the roots of a quadratic and the roots of a quartic equation with two integer roots. Part (b) was very difficult. The two challenges in this problem were to recognize that $f(f(x)) - x$ can be factored as the product of two quadratics and to draw significant conclusions about (a, b) from the discriminant of the two factors. Very few contestants recognized the initial factorization and were unable to proceed. However, eleven contestants had a perfect score on this challenging, yet beautiful problem.

STUDENT SCORE PERCENTILE RANKING

Score	Percentile	Papers	Total
80	0.07	3	3
79	0.09	1	4
78	0.12	1	5
77	0.14	1	6
76	0.21	3	9
75	0.26	2	11
74	0.31	2	13
73	0.55	10	23
72	0.90	15	38
71	1.21	13	51
70	1.61	17	68
69	2.01	17	85
68	2.68	28	113
67	3.13	19	132
66	3.65	22	154
65	4.24	25	179
64	4.98	31	210
63	5.71	31	241
62	6.68	41	282
61	7.68	42	324
60	8.27	25	349
59	9.27	42	391
58	10.36	46	437
57	11.56	51	488
56	12.89	56	544
55	14.15	53	597
54	15.85	72	669
53	17.01	49	718
52	18.63	68	786
51	20.17	65	851
50	21.73	66	917
49	23.65	81	998
48	25.50	78	1076
47	27.32	77	1153
46	29.22	80	1233
45	31.21	84	1317
44	33.29	88	1405
43	35.55	95	1500
42	38.06	106	1606
41	40.71	112	1718
40	43.06	99	1817

Score	Percentile	Papers	Total
39	45.62	108	1925
38	47.91	97	2022
37	50.52	110	2132
36	52.65	90	2222
35	55.17	106	2328
34	57.73	108	2436
33	60.33	110	2546
32	63.15	119	2665
31	65.83	113	2778
30	68.08	95	2873
29	70.24	91	2964
28	72.75	106	3070
27	74.95	93	3163
26	77.18	94	3257
25	79.15	83	3340
24	81.52	100	3440
23	83.53	85	3525
22	85.66	90	3615
21	87.16	63	3678
20	88.41	53	3731
19	90.19	75	3806
18	91.75	66	3872
17	93.29	65	3937
16	94.50	51	3988
15	95.57	45	4033
14	96.59	43	4076
13	97.30	30	4106
12	97.84	23	4129
11	98.34	21	4150
10	98.70	15	4165
9	99.19	21	4186
8	99.41	9	4195
7	99.55	6	4201
6	99.64	4	4205
5	99.79	6	4211
4	99.86	3	4214
3	99.95	4	4218
2	99.98	1	4219
1	100.00	1	4220
0	100.00	0	4220

NATIONAL AWARDS

CANADIAN CHAMPIONS

Gold Medal Award:	Matthew Brennan Upper Canada College, Toronto, ON Steven Yu Pinetree S.S., Coquitlam, BC
Silver Medal Award:	James Rickards Colonel By Secondary School, Gloucester, ON
Bronze Medal Award:	Kevin Zhou Woburn Collegiate Institute, Scarborough, ON
Honour Roll:	Vitalik Buterin The Abelard School, Toronto, ON Anqi Dong Walter Murray Collegiate, Saskatoon, SK Qinyi (Grace) Geng West Vancouver Secondary School, West Vancouver, BC Jae Won Kim Boston Education, Coquitlam, BC Leo Lai Sir Winston Churchill S. S., Vancouver, BC Bobby Qiu Don Mills C.I., North York, ON Desmond Sisson Western Canada H.S., Calgary, AB Alvin Yonathan Sukmadji Earl Haig Secondary School, North York, ON Susan Sun West Vancouver Secondary School, West Vancouver, BC Heng (Henry) Tang Vaughan Secondary School, Thornhill, ON Fei Wu Upper Canada College, Toronto, ON Suizhi Wu Lester B. Pearson College, Victoria, BC Bill Zhao A.Y. Jackson S.S., North York, ON

BEST IN CANADA – GRADE 12 OR CÉGEP

Gold Medal Award:	Matthew Brennan Upper Canada College, Toronto, ON Steven Yu Pinetree S.S., Coquitlam, BC
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Silver Medal Award:	James Rickards Colonel By Secondary School, Gloucester, ON
Bronze Medal Award:	Kevin Zhou Woburn Collegiate Institute, Scarborough, ON
Honour Roll:	Vitalik Buterin The Abelard School, Toronto, ON Anqi Dong Walter Murray Collegiate, Saskatoon, SK Jae Won Kim Boston Education, Coquitlam, BC Alvin Yonathan Sukmadji Earl Haig Secondary School, North York, ON Susan Sun West Vancouver Secondary School, West Vancouver, BC Heng (Henry) Tang Vaughan Secondary School, Thornhill, ON Bill Zhao A.Y. Jackson S.S., North York, ON

BEST IN CANADA – GRADE 11

Gold Medal Award:	Qinyi (Grace) Geng West Vancouver Secondary School, West Vancouver, BC Leo Lai Sir Winston Churchill S. S., Vancouver, BC Bobby Qiu Don Mills C.I., North York, ON Suizhi Wu Lester B. Pearson College, Victoria, BC
Silver Medal Award:	Daniel Hui Woburn Collegiate Institute, Scarborough, ON Ursula Anne Lim Burnaby North S.S., Burnaby, BC
Bronze Medal Award:	Dong Won Kang North Toronto C.I., Toronto, ON Qian (David) Liang A.Y. Jackson S.S., North York, ON Yuanhao Wei Earl of March S.S., Kanata, ON
Honour Roll:	Robert (Hou Yao) Huang Semiahmoo Secondary School, Surrey, BC Fred Lee Boston Education, Coquitlam, BC Hee-Joo Nam Western Canada H.S., Calgary, AB

Daniel Spivak
Vaughan Secondary School, Thornhill, ON

Shun Da (Simon) Suo
Olympiads School, North York, ON

Chris Waddell
Walter Murray Collegiate, Saskatoon, SK

Ray Wang
A.Y. Jackson S.S., North York, ON

Ethan White
Westmount Charter School, Calgary, AB

Yuchen Xia
Earl Haig Secondary School, North York, ON

Peter Xie
Don Mills C.I., North York, ON

Dennis Xu
Abbey Park H.S., Oakville, ON

Leslie Ying
University of Toronto Schools, Toronto, ON

Yiwen Zhang
Crofton House School, Vancouver, BC

Michael Zhu
Lisgar Collegiate Institute, Ottawa, ON

BEST IN CANADA – GRADE 10

Gold Medal Award:

Desmond Sisson
Western Canada H.S., Calgary, AB

Fei Wu
Upper Canada College, Toronto, ON

Silver Medal Award:

Letian Chen
Hon. Vincent Massey S. S. , Windsor, ON

Bronze Medal Award:

Xiaoze (Jerry) Wu
Marc Garneau C.I., Toronto, ON

Reena Zhan
University of Toronto Schools, Toronto, ON

Tony Zou
Bell High School, Nepean, ON

Honour Roll:

Chen Chang
Hon. Vincent Massey S. S. , Windsor, ON

Jiaqi Dong
Don Mills C.I., North York, ON

Billy Jin
Waterloo C.I., Waterloo, ON

Zi Yan Li
St. George's School, Vancouver, BC

Johnny Tang
Markham D.H.S., Markham, ON

Jerry Wang
Cawthra Park S.S., Mississauga, ON

BEST IN CANADA – GRADE 9

Gold Medal Award: Yusuf Safadi
Abbey Park H.S., Oakville, ON

Silver Medal Award: Michael Pang
St. John's-Ravenscourt School, Winnipeg, MB

Bronze Medal Award: Rongxin (Richard) Du
Marc Garneau C.I., Toronto, ON

Honour Roll: Frank Cheng
Burnaby North S.S., Burnaby, BC

Gloria (Yuliang) Fang
University of Toronto Schools, Toronto, ON

Casper Tsai
University Transition Program, Vancouver, BC

Karen Wang
University Transition Program, Vancouver, BC

BEST IN CANADA – GRADE 8 OR UNDER

Gold Medal Award: Jeanne Lim
Burnaby North S.S., Burnaby, BC

Silver Medal Award: Shu Hao (Jack) Li
University Transition Program, Vancouver, BC

Ben Wei
Olympiads School, North York, ON

Bronze Medal Award: Kevin Hu
Mulgrave School, West Vancouver, BC

Honour Roll: Elbert Lai
Waterloo C.I., Waterloo, ON

Dan Ursu
Hon. Vincent Massey S.S., Windsor, ON

Bill (Hanyu) Zhu
Valleys Senior Public School, Mississauga, ON

Michael Zou
Eglinton Jr.P.S., Toronto, ON

PROVINCIAL AWARDS**CHAMPIONS FOR BRITISH COLUMBIA**

Gold Medal Award:	Steven Yu Pinetree S.S., Coquitlam, BC
Silver Medal Award:	Susan Sun West Vancouver Secondary School, West Vancouver, BC
Bronze Medal Award:	Qinyi (Grace) Geng West Vancouver Secondary School, West Vancouver, BC Jae Won Kim Boston Education, Coquitlam, BC Leo Lai Sir Winston Churchill S. S., Vancouver, BC Suizhi Wu Lester B. Pearson College, Victoria, BC
Honour Roll:	Eric Ahn West Vancouver Secondary School, West Vancouver, BC Raymond Cheng Sir Winston Churchill S. S., Vancouver, BC David Choi St. George's School, Vancouver, BC Xun Yang Hu Sir Winston Churchill S. S., Vancouver, BC Robert (Hou Yao) Huang Semiahmoo Secondary School, Surrey, BC Ursula Anne Lim Burnaby North S.S., Burnaby, BC Henry Liu Pinetree S.S., Coquitlam, BC Yingjie Qian Bulkley Valley Christian School, Smithers, BC Everest Shi Burnaby North S.S., Burnaby, BC Foster Tom New Westminster S.S., New Westminster, BC Jerry Wang Sir Winston Churchill S. S., Vancouver, BC Hye Min (Liah) Yang Riverside S.S., Port Coquitlam, BC

BEST IN BRITISH COLUMBIA – GRADE 12

Gold Medal Award:	Steven Yu Pinetree S.S., Coquitlam, BC
Silver Medal Award:	Susan Sun West Vancouver Secondary School, West Vancouver, BC
Bronze Medal Award:	Jae Won Kim Boston Education, Coquitlam, BC
Honour Roll:	Eric Ahn West Vancouver Secondary School, West Vancouver, BC Raymond Cheng Sir Winston Churchill S. S., Vancouver, BC David Choi St. George's School, Vancouver, BC Xun Yang Hu Sir Winston Churchill S. S., Vancouver, BC Henry Liu Pinetree S.S., Coquitlam, BC Yingjie Qian Bulkley Valley Christian School, Smithers, BC Everest Shi Burnaby North S.S., Burnaby, BC Foster Tom New Westminster S.S., New Westminster, BC Jerry Wang Sir Winston Churchill S. S., Vancouver, BC Hye Min (Liah) Yang Riverside S.S., Port Coquitlam, BC

BEST IN BRITISH COLUMBIA – GRADE 11

Gold Medal Award:	Qinyi (Grace) Geng West Vancouver Secondary School, West Vancouver, BC Leo Lai Sir Winston Churchill S. S., Vancouver, BC Suizhi Wu Lester B. Pearson College, Victoria, BC
Silver Medal Award:	Ursula Anne Lim Burnaby North S.S., Burnaby, BC
Bronze Medal Award:	Robert (Hou Yao) Huang Semiahmoo Secondary School, Surrey, BC
Honour Roll:	Fred Lee Boston Education, Coquitlam, BC Zicheng Wang Burnaby North S.S., Burnaby, BC

Young Yang
Fraser Heights S.S., Surrey, BC
Shing Him (Nicholas) Yu
Lester B. Pearson College, Victoria, BC
Yiwen Zhang
Crofton House School, Vancouver, BC

BEST IN BRITISH COLUMBIA – GRADE 10

Gold Medal Award: Zi Yan Li
St. George's School, Vancouver, BC

Silver Medal Award: Frank Zhu
University Hill Secondary School, Vancouver, BC

Bronze Medal Award: Kevin Tian
St. George's School, Vancouver, BC

Suhei Wong
Sir Winston Churchill S. S., Vancouver, BC

David Zheng
New Westminster S.S., New Westminster, BC

Honour Roll: Jeff Choi
St. George's School, Vancouver, BC

Vivian Dai
Richmond S.S., Richmond, BC

Ian Lee
St. George's School, Vancouver, BC

Tony Li
St. George's School, Vancouver, BC

Steven Shao
Burnaby North S.S., Burnaby, BC

Jacqueline Shen
Burnaby South Secondary, Burnaby, BC

Steven Xu
Richmond S.S., Richmond, BC

Anna Ye
Burnaby South Secondary, Burnaby, BC

Anni Zhang
Sir Winston Churchill S. S., Vancouver, BC

Carol (Mian Xiu) Zhang
Lord Byng S.S., Vancouver, BC

Gavin Zhang
Sir Winston Churchill S. S., Vancouver, BC

BEST IN BRITISH COLUMBIA – GRADE 9

Gold Medal Award:	Frank Cheng Burnaby North S.S., Burnaby, BC
Silver Medal Award:	Karen Wang University Transition Program, Vancouver, BC
Bronze Medal Award:	Casper Tsai University Transition Program, Vancouver, BC
Honour Roll:	Sung il Ahn Yale Secondary, Abbotsford, BC Howell Liu University Transition Program, Vancouver, BC Scott Xiao Burnaby North S.S., Burnaby, BC Ray Zhang Cariboo Hill S.S., Burnaby, BC

BEST IN BRITISH COLUMBIA – GRADE 8 OR UNDER

Gold Medal Award:	Jeanne Lim Burnaby North S.S., Burnaby, BC
Silver Medal Award:	Shu Hao (Jack) Li University Transition Program, Vancouver, BC
Bronze Medal Award:	Kevin Hu Mulgrave School, West Vancouver, BC

CHAMPIONS FOR ALBERTA

Gold Medal Award:	Desmond Sisson Western Canada H.S., Calgary, AB
Silver Medal Award:	Hee-Joo Nam Western Canada H.S., Calgary, AB Ethan White Westmount Charter School, Calgary, AB
Bronze Medal Award:	Bai Li Henry Wise Wood Sr. H.S, Calgary, AB
Honour Roll:	Janet Leahy Sir Winston Churchill High School, Calgary, AB James Lin Western Canada H.S., Calgary, AB Julian Salazar Henry Wise Wood Sr. H.S, Calgary, AB Chang Su Western Canada H.S., Calgary, AB Jianwei (Jian Jian) Sun Western Canada H.S., Calgary, AB

Samuel Tang
Western Canada H.S., Calgary, AB
Feng Tian
Western Canada H.S., Calgary, AB

BEST IN ALBERTA – GRADE 12

Gold Medal Award: Bai Li
Henry Wise Wood Sr. H.S, Calgary, AB

Silver Medal Award: James Lin
Western Canada H.S., Calgary, AB
Chang Su
Western Canada H.S., Calgary, AB

Bronze Medal Award: Julian Salazar
Henry Wise Wood Sr. H.S, Calgary, AB

Honour Roll: Yuanchen Feng
Western Canada H.S., Calgary, AB
Aneesh Jaydeep
Sir Winston Churchill High School, Calgary, AB
Megan Liang
Western Canada H.S., Calgary, AB
Chong Luo
Western Canada H.S., Calgary, AB
Jianwei (Jian Jian) Sun
Western Canada H.S., Calgary, AB
Samuel Tang
Western Canada H.S., Calgary, AB

BEST IN ALBERTA – GRADE 11

Gold Medal Award: Hee-Joo Nam
Western Canada H.S., Calgary, AB
Ethan White
Westmount Charter School, Calgary, AB

Silver Medal Award: Janet Leahy
Sir Winston Churchill High School, Calgary, AB

Bronze Medal Award: Lister Li
Sir Winston Churchill High School, Calgary, AB

Honour Roll: Yubo Han
Western Canada H.S., Calgary, AB
Henry Su
Western Canada H.S., Calgary, AB
Alexander Yuan
Western Canada H.S., Calgary, AB

BEST IN ALBERTA – GRADE 10

Gold Medal Award:	Desmond Sisson Western Canada H.S., Calgary, AB
Silver Medal Award:	Feng Tian Western Canada H.S., Calgary, AB
Bronze Medal Award:	Michael Ru Old Scona Academic School, Edmonton, AB
Honour Roll:	Yu Nigh Dai Sir Winston Churchill High School, Calgary, AB Shin-Chang Lin McNally Comp. H.S., Edmonton, AB Al Zhang Western Canada H.S., Calgary, AB

(No awards granted for Grade 8 and 9 in Alberta)

CHAMPIONS FOR SASKATCHEWAN

Gold Medal Award:	Anqi Dong Walter Murray Collegiate, Saskatoon, SK
Silver Medal Award:	Chris Waddell Walter Murray Collegiate, Saskatoon, SK
Bronze Medal Award:	Zhiming Chen Evan Hardy Collegiate, Saskatoon, SK
Honour Roll:	Ian Chen Centennial Collegiate, Saskatoon, SK Lukas Fehr Walter Murray Collegiate, Saskatoon, SK Zimu Yang Centennial Collegiate, Saskatoon, SK Chenghui Zhou Walter Murray Collegiate, Saskatoon, SK

BEST IN SASKATCHEWAN – GRADE 12

Gold Medal Award:	Anqi Dong Walter Murray Collegiate, Saskatoon, SK
Silver Medal Award:	Zhiming Chen Evan Hardy Collegiate, Saskatoon, SK
Bronze Medal Award:	Chenghui Zhou Walter Murray Collegiate, Saskatoon, SK
Honour Roll:	Lukas Fehr Walter Murray Collegiate, Saskatoon, SK Marcus Lee Walter Murray Collegiate, Saskatoon, SK

Zimu Yang
Centennial Collegiate, Saskatoon, SK

BEST IN SASKATCHEWAN – GRADE 11

Gold Medal Award: Chris Waddell
Walter Murray Collegiate, Saskatoon, SK

Silver Medal Award: Ian Chen
Centennial Collegiate, Saskatoon, SK

Bronze Medal Award: Jason Lawrence
Centennial Collegiate, Saskatoon, SK

Rui Song
Walter Murray Collegiate, Saskatoon, SK

Honour Roll: Bruce Hu
Walter Murray Collegiate, Saskatoon, SK

Young Kyun Kim
Luther College High School, Regina, SK

Jake Milner
Walter Murray Collegiate, Saskatoon, SK

BEST IN SASKATCHEWAN – GRADE 8 OR UNDER

Gold Medal Award: Richard Cao
Walter Murray Collegiate, Saskatoon, SK

(No awards granted for Grade 9 and 10 in Saskatchewan)

CHAMPIONS FOR MANITOBA

Gold Medal Award: Yue Liu
Fort Richmond Collegiate, Winnipeg, MB

Michael Pang
St. John's-Ravenscourt School, Winnipeg, MB

Silver Medal Award: Seunghyun Lee
Grant Park H.S., Winnipeg, MB

David Liu
Fort Richmond Collegiate, Winnipeg, MB

Bronze Medal Award: Danheng Shen
St. John's-Ravenscourt School, Winnipeg, MB

Honour Roll: Kevin Carruthers
St. John's-Ravenscourt School, Winnipeg, MB

Hong Ji Youn
St. John's-Ravenscourt School, Winnipeg, MB

Thomas Lamothe
St. John's-Ravenscourt School, Winnipeg, MB

Ki Beom Lee
Fort Richmond Collegiate, Winnipeg, MB
Shuyi Wu
Fort Richmond Collegiate, Winnipeg, MB

BEST IN MANITOBA – GRADE 12

Gold Medal Award: Yue Liu
Fort Richmond Collegiate, Winnipeg, MB

Silver Medal Award: Kevin Carruthers
St. John's-Ravenscourt School, Winnipeg, MB

Bronze Medal Award: Thomas Lamothe
St. John's-Ravenscourt School, Winnipeg, MB

Honour Roll: Kimia Sheikholeslami
Kelvin H.S., Winnipeg, MB
Melissa Wong
St. John's-Ravenscourt School, Winnipeg, MB
Jiageng (Michael) Wu
St. John's-Ravenscourt School, Winnipeg, MB

BEST IN MANITOBA – GRADE 11

Gold Medal Award: Seunghyun Lee
Grant Park H.S., Winnipeg, MB
David Liu
Fort Richmond Collegiate, Winnipeg, MB

Silver Medal Award: Danheng Shen
St. John's-Ravenscourt School, Winnipeg, MB

Bronze Medal Award: Hong Ji Youn
St. John's-Ravenscourt School, Winnipeg, MB

Honour Roll: Eleanor Fascione
Balmoral Hall School, Winnipeg, MB
Ki Beom Lee
Fort Richmond Collegiate, Winnipeg, MB
Shuyi Wu
Fort Richmond Collegiate, Winnipeg, MB

BEST IN MANITOBA – GRADE 10

Gold Medal Award: Jay (Jaewoo) Lee
Fort Richmond Collegiate, Winnipeg, MB

Silver Medal Award: Victor Li
St. John's-Ravenscourt School, Winnipeg, MB

Bronze Medal Award: Fei Hong
St. John's-Ravenscourt School, Winnipeg, MB

Brian Lee
St. John's-Ravenscourt School, Winnipeg, MB

Honour Roll: Joseph Asaminew
St. John's-Ravenscourt School, Winnipeg, MB

BEST IN MANITOBA – GRADE 9

Gold Medal Award: Michael Pang
St. John's-Ravenscourt School, Winnipeg, MB

(No awards granted for grade 8 in Manitoba)

CHAMPIONS OF ONTARIO

Gold Medal Award: Matthew Brennan
Upper Canada College, Toronto, ON

Silver Medal Award: James Rickards
Colonel By Secondary School, Gloucester, ON

Bronze Medal Award: Kevin Zhou
Woburn Collegiate Institute, Scarborough, ON

Honour Roll: Vitalik Buterin
The Abelard School, Toronto, ON

Bobby Qiu
Don Mills C.I., North York, ON

Alvin Yonathan Sukmadji
Earl Haig Secondary School, North York, ON

Heng (Henry) Tang
Vaughan Secondary School, Thornhill, ON

Fei Wu
Upper Canada College, Toronto, ON

Bill Zhao
A.Y. Jackson S.S., North York, ON

BEST IN ONTARIO – GRADE 12

Gold Medal Award: Matthew Brennan
Upper Canada College, Toronto, ON

Silver Medal Award: James Rickards
Colonel By Secondary School, Gloucester, ON

Bronze Medal Award: Kevin Zhou
Woburn Collegiate Institute, Scarborough, ON

Honour Roll: Vitalik Buterin
The Abelard School, Toronto, ON

Alvin Yonathan Sukmadji
Earl Haig Secondary School, North York, ON

Heng (Henry) Tang
Vaughan Secondary School, Thornhill, ON

Bill Zhao
A.Y. Jackson S.S., North York, ON

BEST IN ONTARIO – GRADE 11

Gold Medal Award: Bobby Qiu
Don Mills C.I., North York, ON

Silver Medal Award: Daniel Hui
Woburn Collegiate Institute, Scarborough, ON

Bronze Medal Award: Dong Won Kang
North Toronto C.I., Toronto, ON

Qian (David) Liang
A.Y. Jackson S.S., North York, ON

Yuanhao Wei
Earl of March S.S., Kanata, ON

Honour Roll: Daniel Spivak
Vaughan Secondary School, Thornhill, ON

Shun Da (Simon) Suo
Olympiads School, North York, ON

Ray Wang
A.Y. Jackson S.S., North York, ON

Yuchen Xia
Earl Haig Secondary School, North York, ON

Peter Xie
Don Mills C.I., North York, ON

Dennis Xu
Abbey Park H.S., Oakville, ON

Leslie Ying
University of Toronto Schools, Toronto, ON

Michael Zhu
Lisgar Collegiate Institute, Ottawa, ON

BEST IN ONTARIO – GRADE 10

Gold Medal Award: Fei Wu
Upper Canada College, Toronto, ON

Silver Medal Award: Letian Chen
Hon. Vincent Massey S. S. , Windsor, ON

Bronze Medal Award: Xiaoze (Jerry) Wu
Marc Garneau C.I., Toronto, ON

Reena Zhan
University of Toronto Schools, Toronto, ON

Tony Zou
Bell High School, Nepean, ON

Honour Roll: Chen Chang
Hon. Vincent Massey S. S. , Windsor, ON

Jiaqi Dong
Don Mills C.I., North York, ON

Billy Jin
Waterloo C.I., Waterloo, ON

Johnny Tang
Markham D.H.S., Markham, ON

Jerry Wang
Cawthra Park S.S., Mississauga, ON

BEST IN ONTARIO – GRADE 9

Gold Medal Award: Yusuf Safadi
Abbey Park H.S., Oakville, ON

Silver Medal Award: Rongxin (Richard) Du
Marc Garneau C.I., Toronto, ON

Bronze Medal Award: Gloria (Yuliang) Fang
University of Toronto Schools, Toronto, ON

Honour Roll: Jane Du
The Woodlands School, Mississauga, ON

Tim Min
Waterloo C.I., Waterloo, ON

Hang Yi Xiong
Brookfield High School, Ottawa, ON

Ben (Yi Xian) Zhang
Woburn Collegiate Institute, Scarborough, ON

BEST IN ONTARIO – GRADE 8 AND UNDER

Gold Medal Award: Ben Wei
Olympiads School, North York, ON

Silver Medal Award: Elbert Lai
Waterloo C.I., Waterloo, ON

Bronze Medal Award: Dan Ursu
Hon. Vincent Massey S. S. , Windsor, ON

Bill (Hanyu) Zhu
Valleys Senior Public School, Mississauga, ON

Honour Roll: Thomas Ricciotti
Math Challenge at Western, London, ON

Kai Sun
Math Challenge at Western, London, ON

Michael Zou
Eglinton Jr.P.S., Toronto, ON

CHAMPIONS FOR QUEBEC

Gold Medal Award:	Xue Si Cai Marianopolis College, Westmount, QC
Silver Medal Award:	Gordon Hua Marianopolis College, Westmount, QC
Bronze Medal Award:	Yu Yang Liu Marianopolis College, Westmount, QC
Honour Roll:	Joseph Alacchi Marianopolis College, Westmount, QC Jranqiu Chen Marianopolis College, Westmount, QC Wenyu Chen Champlain St-Lawrence, Québec, QC Shida Li Marianopolis College, Westmount, QC Igor Sadikov Marianopolis College, Westmount, QC

BEST IN QUEBEC – GRADE 12 OR CÉGEP

Gold Medal Award:	Xue Si Cai Marianopolis College, Westmount, QC
Silver Medal Award:	Gordon Hua Marianopolis College, Westmount, QC
Bronze Medal Award:	Yu Yang Liu Marianopolis College, Westmount, QC
Honour Roll:	Joseph Alacchi Marianopolis College, Westmount, QC Jranqiu Chen Marianopolis College, Westmount, QC Wenyu Chen Champlain St-Lawrence, Québec, QC Shida Li Marianopolis College, Westmount, QC Igor Sadikov Marianopolis College, Westmount, QC

BEST IN QUEBEC – GRADE 11

Gold Medal Award:	Fredric Lam Centennial Reg. H.S., Greenfield Park, QC
Silver Medal Award:	Karen Butt Lower Canada College, Montreal, QC
Bronze Medal Award:	Sean Segal Lower Canada College, Montreal, QC

Honour Roll: David Marcovitch
Lower Canada College, Montreal, QC
Emily Tiberi
Lower Canada College, Montreal, QC
Yingda Wang
Collège Sainte-Anne de Lachine, Lachine, QC

(No awards granted for Grade 8, 9 and 10 in Quebec)

CHAMPIONS FOR NEW BRUNSWICK

Gold Medal Award: Tim McLean
Fredericton H.S., Fredericton, NB

Silver Medal Award: Yuhuai Tony Wu
Fredericton H.S., Fredericton, NB

Bronze Medal Award: James Beirne
Fredericton H.S., Fredericton, NB

Honour Roll: Yusing Gu
Bernice MacNaughton High School, Moncton, NB
David Landry
Fredericton H.S., Fredericton, NB
Sophie Sun
Fredericton H.S., Fredericton, NB

BEST IN NEW BRUNSWICK – GRADE 12

Gold Medal Award: Tim McLean
Fredericton H.S., Fredericton, NB

Silver Medal Award: James Beirne
Fredericton H.S., Fredericton, NB

Bronze Medal Award: Sophie Sun
Fredericton H.S., Fredericton, NB

Honour Roll: Yusing Gu
Bernice MacNaughton High School, Moncton, NB
Yu Sang Hu
Fredericton H.S., Fredericton, NB
David Landry
Fredericton H.S., Fredericton, NB

BEST IN NEW BRUNSWICK – GRADE 11

Gold Medal Award: Yuhuai Tony Wu
Fredericton H.S., Fredericton, NB

(No awards granted for grades 8, 9, and 10 in New Brunswick)

CHAMPIONS FOR PRINCE EDWARD ISLAND

Gold Medal Award:	Chloe Guo Colonel Gray Sr. H.S, Charlottetown, PE
Silver Medal Award:	Thunder (Pei Ting) Zheng Colonel Gray Sr. H.S, Charlottetown, PE
Bronze Medal Award:	Yedda Li Colonel Gray Sr. H.S, Charlottetown, PE

BEST IN PRINCE EDWARD ISLAND – GRADE 12

Gold Medal Award:	Chloe Guo Colonel Gray Sr. H.S, Charlottetown, PE
Silver Medal Award:	Thunder (Pei Ting) Zheng Colonel Gray Sr. H.S, Charlottetown, PE
Bronze Medal Award:	Yedda Li Colonel Gray Sr. H.S, Charlottetown, PE

(No awards granted for Grades 8, 9, 10, and 11 in Prince Edward Island)

CHAMPIONS FOR NOVA SCOTIA

Gold Medal Award:	Xuelu Feng Horton High School, Wolfville, NS
Silver Medal Award:	Peter Graves-Akerley Charles P. Allen H.S., Bedford, NS
Bronze Medal Award:	Wesley Fisher Dartmouth H.S., Dartmouth, NS
Honour Roll:	Sarah Hyatt Charles P. Allen H.S., Bedford, NS Stefan Keselj Charles P. Allen H.S., Bedford, NS Minseok Kim Charles P. Allen H.S., Bedford, NS Jiaqi Li Horton High School, Wolfville, NS

BEST IN NOVA SCOTIA – GRADE 12

Gold Medal Award:	Xuelu Feng Horton High School, Wolfville, NS
Silver Medal Award:	Peter Graves-Akerley Charles P. Allen H.S., Bedford, NS
Bronze Medal Award:	Wesley Fisher Dartmouth H.S., Dartmouth, NS
Honour Roll:	Peter Fawcett Horton High School, Wolfville, NS

Sarah Hyatt
Charles P. Allen H.S., Bedford, NS
Jiaqi Li
Horton High School, Wolfville, NS

BEST IN NOVA SCOTIA – GRADE 11

Gold Medal Award: Dwayne Wang
Springhill High School, Springhill, NS

BEST IN NOVA SCOTIA – GRADE 10

Gold Medal Award: Stefan Keselj
Charles P. Allen H.S., Bedford, NS

Silver Medal Award: Minseok Kim
Charles P. Allen H.S., Bedford, NS

(No awards granted in Grades 8 and 9 in Nova Scotia)

CHAMPIONS FOR NEWFOUNDLAND AND LABRADOR

Gold Medal Award: Damian White
Queen Elizabeth Reg. H.S., Conception Bay South, NL

BEST IN NEWFOUNDLAND AND LABRADOR – GRADE 12

Gold Medal Award: Damian White
Queen Elizabeth Reg. H.S., Conception Bay South, NL

(No awards granted for Grades 8, 9, 10 and 11 in Newfoundland and Labrador)

REGIONAL AWARDS**CHAMPIONS FOR CENTRAL ONTARIO**

Gold Medal Award:	Heng (Henry) Tang Vaughan Secondary School, Thornhill, ON
Silver Medal Award:	Freid Tong The Woodlands School, Mississauga, ON
Bronze Medal Award:	Simon Ang Li Glenforest Secondary School, Mississauga, ON Yusuf Safadi Abbey Park H.S., Oakville, ON Daniel Spivak Vaughan Secondary School, Thornhill, ON Johnny Tang Markham D.H.S., Markham, ON Dennis Xu Abbey Park H.S., Oakville, ON Haoling (James) Yan Unionville H.S., Markham, ON
Honour Roll:	Michael Chan Thornhill S.S., Thornhill, ON Yishi Sun White Oaks Secondary School, Oakville, ON Jerry Wang Cawthra Park S.S., Mississauga, ON

BEST IN CENTRAL ONTARIO – GRADE 12

Gold Medal Award:	Heng (Henry) Tang Vaughan Secondary School, Thornhill, ON Freid Tong The Woodlands School, Mississauga, ON
Silver Medal Award:	Simon Ang Li Glenforest Secondary School, Mississauga, ON Haoling (James) Yan Unionville H.S., Markham, ON
Bronze Medal Award:	Michael Chan Thornhill S.S., Thornhill, ON
Honour Roll:	SeungJin An St. Andrew's College, Aurora, ON Vanessa Deng Unionville H.S., Markham, ON Zhi Hao Ouyang The Woodlands School, Mississauga, ON

Arun Sithamparapillai
Markham D.H.S., Markham, ON
Yishi Sun
White Oaks Secondary School, Oakville, ON

BEST IN CENTRAL ONTARIO – GRADE 11

Gold Medal Award: Daniel Spivak
Vaughan Secondary School, Thornhill, ON
Dennis Xu
Abbey Park H.S., Oakville, ON

Silver Medal Award: Ted Ying
The Woodlands School, Mississauga, ON

Bronze Medal Award: Tom Huang
Richmond Hill H.S., Richmond Hill, ON

Honour Roll: David Pechersky
Vaughan Secondary School, Thornhill, ON
Bryan Qiu
Richmond Hill H.S., Richmond Hill, ON
Haochen Sang
The Woodlands School, Mississauga, ON

BEST IN CENTRAL ONTARIO – GRADE 10

Gold Medal Award: Johnny Tang
Markham D.H.S., Markham, ON

Silver Medal Award: Jerry Wang
Cawthra Park S.S., Mississauga, ON

Bronze Medal Award: Sang Woo Park
King's Christian Collegiate, Oakville, ON

Honour Roll: Jeff Kim
King's Christian Collegiate, Oakville, ON
Yu-Jin Lee
Abbey Park H.S., Oakville, ON
Ceginna Xingyi Shi
Vaughan Secondary School, Thornhill, ON
Yi Michael Xu
Vaughan Secondary School, Thornhill, ON

BEST IN CENTRAL ONTARIO – GRADE 9

Gold Medal Award: Yusuf Safadi
Abbey Park H.S., Oakville, ON

Silver Medal Award: Jane Du
The Woodlands School, Mississauga, ON

BEST IN CENTRAL ONTARIO – GRADE 8 AND UNDER

Gold Medal Award: Bill (Hanyu) Zhu
Valleys Senior Public School, Mississauga, ON

CHAMPIONS FOR EASTERN ONTARIO

Gold Medal Award: James Rickards
Colonel By Secondary School, Gloucester, ON

Silver Medal Award: Simon Li
Bell High School, Nepean, ON
Yuanhao Wei
Earl of March S.S., Kanata, ON
Tony Zou
Bell High School, Nepean, ON

Bronze Medal Award: Michael Zhu
Lisgar Collegiate Institute, Ottawa, ON

Honour Roll: Bailey Gu
Lisgar Collegiate Institute, Ottawa, ON
Toby Kao
Gloucester H.S., Gloucester, ON
Lauryn Peng
Bell High School, Nepean, ON
Jesse K. Wang
Lisgar Collegiate Institute, Ottawa, ON
Sunny Wang
Bell High School, Nepean, ON

BEST IN EASTERN ONTARIO – GRADE 12

Gold Medal Award: James Rickards
Colonel By Secondary School, Gloucester, ON

Silver Medal Award: Simon Li
Bell High School, Nepean, ON

Bronze Medal Award: Lauryn Peng
Bell High School, Nepean, ON

Honour Roll: Wanyi Cui
Glebe Collegiate Institute, Ottawa, ON
Dominic Ling
St. Matthew H.S., Orleans, ON
Geoffry Song
Lisgar Collegiate Institute, Ottawa, ON
Joe Su
Lisgar Collegiate Institute, Ottawa, ON

Kendall Wen
Lisgar Collegiate Institute, Ottawa, ON
Kevin Wu
Colonel By Secondary School, Gloucester, ON
Michael Yu
Bell High School, Nepean, ON

BEST IN EASTERN ONTARIO – GRADE 11

Gold Medal Award: Yuanhao Wei
Earl of March S.S., Kanata, ON

Silver Medal Award: Michael Zhu
Lisgar Collegiate Institute, Ottawa, ON

Bronze Medal Award: Jesse K. Wang
Lisgar Collegiate Institute, Ottawa, ON
Sunny Wang
Bell High School, Nepean, ON

Honour Roll: Nicole Chassin
Lisgar Collegiate Institute, Ottawa, ON
Bailey Gu
Lisgar Collegiate Institute, Ottawa, ON
Richard Liu
Lisgar Collegiate Institute, Ottawa, ON

BEST IN EASTERN ONTARIO – GRADE 10

Gold Medal Award: Tony Zou
Bell High School, Nepean, ON

Silver Medal Award: Toby Kao
Gloucester H.S., Gloucester, ON

Bronze Medal Award: Stephen Xu
Bell High School, Nepean, ON

Honour Roll: Ameen Ismail
Merivale H.S., Nepean, ON
Robbin Xu
Lisgar Collegiate Institute, Ottawa, ON

BEST IN EASTERN ONTARIO – GRADE 9

Gold Medal Award: Hang Yi Xiong
Brookfield High School, Ottawa, ON

Silver Medal Award: Shengjin (Emily) Wang
Colonel By Secondary School, Gloucester, ON

(No awards granted for Grade 8 in Central Ontario)

CHAMPIONS FOR NORTHERN ONTARIO

Gold Medal Award:	Taaron Vainio Sir Winston Churchill C.V.I., Thunder Bay, ON
Silver Medal Award:	Tyler Sanderson Manitouwadge High School, Manitouwadge, ON
Bronze Medal Award:	Shawn Gong Sir Winston Churchill C.V.I., Thunder Bay, ON
Honour Roll:	YunYu Wang Sir Winston Churchill C.V.I., Thunder Bay, ON

BEST IN NORTHERN ONTARIO – GRADE 12

Gold Medal Award:	Taaron Vainio Sir Winston Churchill C.V.I., Thunder Bay, ON
Silver Medal Award:	Tyler Sanderson Manitouwadge High School, Manitouwadge, ON
Bronze Medal Award:	YunYu Wang Sir Winston Churchill C.V.I., Thunder Bay, ON

BEST IN NORTHERN ONTARIO – GRADE 10

Gold Medal Award:	Shawn Gong Sir Winston Churchill C.V.I., Thunder Bay, ON
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(No awards granted in Grades 8, 9, and 11 in Northern Ontario)

CHAMPIONS FOR SOUTHWESTERN ONTARIO

Gold Medal Award:	Letian Chen Hon. Vincent Massey S. S. , Windsor, ON
Silver Medal Award:	Sean-Xiaonan Lu Hon. Vincent Massey S. S. , Windsor, ON David Yu Hon. Vincent Massey S. S. , Windsor, ON
Bronze Medal Award:	Hunter Qin Hon. Vincent Massey S. S. , Windsor, ON
Honour Roll:	Harry Bang Hon. Vincent Massey S. S. , Windsor, ON Anton Borissov Waterloo C.I., Waterloo, ON Chen Chang Hon. Vincent Massey S. S. , Windsor, ON Tina Fang A. B. Lucas Secondary School, London, ON Billy Jin Waterloo C.I., Waterloo, ON

BEST IN SOUTHWESTERN ONTARIO – GRADE 12

Gold Medal Award:	Sean-Xiaonan Lu Hon. Vincent Massey S. S. , Windsor, ON David Yu Hon. Vincent Massey S. S. , Windsor, ON
Silver Medal Award:	Hunter Qin Hon. Vincent Massey S. S. , Windsor, ON
Bronze Medal Award:	Anton Borissov Waterloo C.I., Waterloo, ON
Honour Roll:	Harry Bang Hon. Vincent Massey S. S. , Windsor, ON Yan Hung (Matt) Ng A. B. Lucas Secondary School, London, ON Jay Woo London Central S. S., London, ON Fan Yang A. B. Lucas Secondary School, London, ON

BEST IN SOUTHWESTERN ONTARIO – GRADE 11

Gold Medal Award:	Tina Fang A. B. Lucas Secondary School, London, ON
Silver Medal Award:	Alexandru Gatea Waterloo C.I., Waterloo, ON Justin Jeong A. B. Lucas Secondary School, London, ON
Bronze Medal Award:	Alex Lee Waterloo C.I., Waterloo, ON Wuhan Zhou Hon. Vincent Massey S. S. , Windsor, ON
Honour Roll:	Ryan Kim Math Challenge at Western, London, ON Angus Kong Hon. Vincent Massey S. S. , Windsor, ON Jerry Liu Waterloo C.I., Waterloo, ON Shawn Liu Hon. Vincent Massey S. S. , Windsor, ON Vasu Sareen Math Challenge at Western, London, ON Weiwei-Bing Zhang Hon. Vincent Massey S. S. , Windsor, ON

BEST IN SOUTHWESTERN ONTARIO – GRADE 10

Gold Medal Award:	Letian Chen Hon. Vincent Massey S. S. , Windsor, ON
Silver Medal Award:	Chen Chang Hon. Vincent Massey S. S. , Windsor, ON
Bronze Medal Award:	Billy Jin Waterloo C.I., Waterloo, ON
Honour Roll:	Victoria Cao Hon. Vincent Massey S. S. , Windsor, ON Jerry Feng Sandwich Secondary School, LaSalle, ON Yuwei Xu Hon. Vincent Massey S. S. , Windsor, ON

BEST IN SOUTHWESTERN ONTARIO – GRADE 9

Gold Medal Award:	Tim Min Waterloo C.I., Waterloo, ON
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BEST IN SOUTHWESTERN ONTARIO – GRADE 8 AND UNDER

Gold Medal Award:	Elbert Lai Waterloo C.I., Waterloo, ON
Silver Medal Award:	Dan Ursu Hon. Vincent Massey S. S. , Windsor, ON
Bronze Medal Award:	Thomas Ricciotti Math Challenge at Western, London, ON
Honour Roll:	Kai Sun Math Challenge at Western, London, ON Joe Zhang Hon. Vincent Massey S. S. , Windsor, ON

CHAMPIONS FOR TORONTO

Gold Medal Award:	Matthew Brennan Upper Canada College, Toronto, ON
Silver Medal Award:	Kevin Zhou Woburn Collegiate Institute, Scarborough, ON
Bronze Medal Award:	Vitalik Buterin The Abelard School, Toronto, ON
Honour Roll:	Daniel Hui Woburn Collegiate Institute, Scarborough, ON Sally Li Marc Garneau C.I., Toronto, ON Bobby Qiu Don Mills C.I., North York, ON

Alvin Yonathan Sukmadji
Earl Haig Secondary School, North York, ON

Fei Wu
Upper Canada College, Toronto, ON

Shi Qi Xiao
Albert Campbell Collegiate Institute, Toronto, ON

Eric Zhan
University of Toronto Schools, Toronto, ON

Bill Zhao
A.Y. Jackson S.S., North York, ON

Albert Zheng
A.Y. Jackson S.S., North York, ON

BEST IN TORONTO – GRADE 12

Gold Medal Award: Matthew Brennan
Upper Canada College, Toronto, ON

Silver Medal Award: Kevin Zhou
Woburn Collegiate Institute, Scarborough, ON

Bronze Medal Award: Vitalik Buterin
The Abelard School, Toronto, ON

Honour Roll: Sally Li
Marc Garneau C.I., Toronto, ON

Alvin Yonathan Sukmadji
Earl Haig Secondary School, North York, ON

Shi Qi Xiao
Albert Campbell Collegiate Institute, Toronto, ON

Eric Zhan
University of Toronto Schools, Toronto, ON

Bill Zhao
A.Y. Jackson S.S., North York, ON

Albert Zheng
A.Y. Jackson S.S., North York, ON

BEST IN TORONTO – GRADE 11

Gold Medal Award: Bobby Qiu
Don Mills C.I., North York, ON

Silver Medal Award: Daniel Hui
Woburn Collegiate Institute, Scarborough, ON

Bronze Medal Award: Dong Won Kang
North Toronto C.I., Toronto, ON

Qian (David) Liang
A.Y. Jackson S.S., North York, ON

Honour Roll: Shun Da (Simon) Suo
Olympiads School, North York, ON

Ray Wang
A.Y. Jackson S.S., North York, ON
Yuchen Xia
Earl Haig Secondary School, North York, ON
Peter Xie
Don Mills C.I., North York, ON
Leslie Ying
University of Toronto Schools, Toronto, ON

BEST IN TORONTO – GRADE 10

Gold Medal Award: Fei Wu
Upper Canada College, Toronto, ON

Silver Medal Award: Xiaoze (Jerry) Wu
Marc Garneau C.I., Toronto, ON
Reena Zhan
University of Toronto Schools, Toronto, ON

Bronze Medal Award: Jiaqi Dong
Don Mills C.I., North York, ON

Honour Roll: Justin Chai
Upper Canada College, Toronto, ON
Michael Chow
Albert Campbell Collegiate Institute, Toronto, ON
Sherry Guo
Martingrove Collegiate Institute, Toronto, ON
Henry Wu
University of Toronto Schools, Toronto, ON
Samuel Wu
Northern S.S., Toronto, ON

BEST IN TORONTO – GRADE 9

Gold Medal Award: Rongxin (Richard) Du
Marc Garneau C.I., Toronto, ON

Silver Medal Award: Gloria (Yuliang) Fang
University of Toronto Schools, Toronto, ON

Bronze Medal Award: Ben (Yi Xian) Zhang
Woburn Collegiate Institute, Scarborough, ON

Honour Roll: Kinton Cheung
Upper Canada College, Toronto, ON
Ally Yu
Dr. Norman Bethune C.I., Scarborough, ON
William Zou
North Toronto C.I., Toronto, ON

BEST IN TORONTO – GRADE 8 OR UNDER

Gold Medal Award: Ben Wei
Olympiads School, North York, ON

Silver Medal Award: Michael Zou
Eglinton Jr.P.S., Toronto, ON

2011 COMC PRIZES

A random number generator was used to randomly select a single grand prize winner as well as winners from nominal groupings of thirty students. In total 445 prizes were awarded.

The \$1,000 Grand Prize winner is Adam Albogatchiev, Glenforest Secondary School, Mississauga, Ont.

The students listed below are winners of a CMS 2011 COMC T-shirt:

A

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- **Adam, Braeden** of Our Lady of Mount Carmel (Windsor, ON)
 - **Ahmed, Zaman** of Webber Academy (Calgary, AB)
 - **Ahn, Kurt** of Lord Byng S.S. (Vancouver, BC)
 - **Ahn, Suyeon** of Assumption College School (Windsor, ON)
 - **Ai, Shihan** of A.Y. Jackson S.S. (North York, ON)
 - **Alam, Rejuana** of Northern S.S. (Toronto, ON)
 - **Alteen, Dianna** of Corner Brook Regional High (Corner Brook, NL)
 - **Artymouicz, Adam** of Northern S.S. (Toronto, ON)
 - **Ashbourne, Paul** of Aurora High School (Aurora, ON)
 - **Ashimova, Altyнай** of Bodwell H.S. (North Vancouver, BC)
 - **Au-Yeung, Timothy** of Hon. W. C. Kennedy C.I. (Windsor, ON)

B

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- **Bagheri, Moeen** of Leo Hayes H.S. (Fredericton, NB)
 - **Bai, Edward** of A.Y. Jackson S.S. (North York, ON)
 - **Barnett, Steven** of North Toronto C.I. (Toronto, ON)
 - **Belov, Denis** of Bodwell H.S. (North Vancouver, BC)
 - **Bharwani, Nash** of Richmond Hill H.S. (Richmond Hill, ON)
 - **Bhatti, Irwind** of Southpointe Academy (Delta, BC)
 - **Blanchard, Martin** of Collège de Bois-de-Boulogne (Montreal, QC)
 - **Bleyan, Hrayr** of Lawrence Park Collegiate Institute (Toronto, ON)
 - **Bontlees, Liam** of Mount Prevost MS, Duncan, BC (Duncan, BC)
 - **Boughn, Ameila** of St. Clement's School (Toronto, ON)
 - **Brigdan, Matthew** of Queen Elizabeth H.S. (Calgary, AB)
 - **Buda, Sergiu** of John Taylor C.I. (Winnipeg, MB)

C

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- **Cagalawan, James** of Francis Libermann C.H.S. (Scarborough, ON)
 - **Cai, Gary (Zi Peng)** of Agincourt Collegiate Institute (Scarborough, ON)
 - **Cai, Xue Si** of Marianopolis College (Westmount, QC)
 - **Cao, Victoria** of Hon. Vincent Massey S. S. (Windsor, ON)

- **Catz, Astrid** of Stephen Lewis S.S. (Thornhill, ON)
- **Chai, Justin** of Upper Canada College (Toronto, ON)
- **Chan, Calvin Lie Chi** of Pickering College (Newmarket, ON)
- **Chan, Jeremy** of John Fraser Secondary School (Mississauga, ON)
- **Chan, Jia-Ying** of College St. Louis (Lasalle, QC)
- **Chan, Yu Ching Jay** of St. Margaret's School (Victoria, BC)
- **Chao, Yu-Hsin (Jerry)** of Bodwell H.S. (North Vancouver, BC)
- **Chapman, Mike** of Osgoode Township High School (Metcalf, ON)
- **Cheang, Kevin** of Windermere Secondary (Vancouver, BC)
- **Chen, Flora** of Port Credit Secondary School (Mississauga, ON)
- **Chen, Harley** of Richmond S.S. (Richmond, BC)
- **Chen, Jackson** of Sir Winston Churchill High School (Calgary, AB)
- **Chen, Jaden** of Lorne Park S.S. (Mississauga, ON)
- **Chen, Tiffany** of St. Margaret's School (Victoria, BC)
- **Chen, Tina** of Canada International College (Scarborough, ON)
- **Chen, Yajing** of Georges Vanier S.S. (North York, ON)
- **Chen, Yingru** of London Int'l Academy (London, ON)
- **Chen, Yongfan** of York Mills C.I. (North York, ON)
- **Chen, You** of Semiahmoo Secondary School (Surrey, BC)
- **Cheng, Dylan** of Dr. Norman Bethune C.I. (Scarborough, ON)
- **Cheng, Lou** of Collège Jean de Brebeuf (Montréal, QC)
- **Cheng, Vicky** of Agincourt Collegiate Institute (Scarborough, ON)
- **Chiu, Isabella** of University of Toronto Schools (Toronto, ON)
- **Chong, Sherman** of Canada International College (Scarborough, ON)
- **Chow, Mandee** of Henry Wise Wood Sr. H.S (Calgary, AB)
- **Chu, Eddie** of Argyle S.S. (North Vancouver, BC)
- **Chu, Lavina** of John Fraser Secondary School (Mississauga, ON)
- **Chu, Weilian** of Old Scona Academic School (Edmonton, AB)
- **Colquhoun, Sarah** of Bell High School (Nepean, ON)
- **Corkett, Duane** of McNally Comp. H.S. (Edmonton, AB)
- **Critak, Nico** of Iroquois Ridge High School (Oakville, ON)

D

- **d'Eugenio, Giuseppe** of Vanier College (Saint-Laurent, QC)
- **Dale, Alex** of St. Matthew H.S. (Orleans, ON)
- **Daniels, Alan** of St. Andrew's College (Aurora, ON)
- **Dao, Andy** of William Lyon Mackenzie CI (North York, ON)
- **Davies, Bobby** of Port Credit Secondary School (Mississauga, ON)
- **Deschamps, David** of Hillfield-Strathallan Coll. H.S. (Hamilton, ON)
- **Ding, Yizhuo** of Columbia International College (Hamilton, ON)
- **Ding, Yujia** of Champlain Regional College (Saint-Lambert, QC)
- **Dong, You (York)** of Lord Byng S.S. (Vancouver, BC)
- **Downey, Eva** of Balmoral Hall School (Winnipeg, MB)
- **Drolet, Charles** of Cégep de Sherbrooke (Sherbrooke, QC)
- **Du, Eugene** of Western Canada H.S. (Calgary, AB)
- **Duan, Sylvia** of St. Margaret's School (Victoria, BC)

- **Dubé, Félix** of Collège de Bois-de-Boulogne (Montreal, QC)

E

- **Elamuhilan, Janushan** of Morrish Public School (Scarborough, ON)
- **ElSayed, Tasneem** of John Fraser Secondary School (Mississauga, ON)
- **Enkin Lewis, Shlomo** of Grant Park H.S. (Winnipeg, MB)
- **Ergina, Sam** of Lower Canada College (Montreal, QC)
- **Evans, Stuart** of Sandwich Secondary School (LaSalle, ON)

F

- **Fan, Henry** of Oakville Trafalgar High School (Oakville, ON)
- **Feng, Tuo** of Canada International College (Scarborough, ON)
- **Feng, Yi Hui** of Collège Jean de Brebeuf (Montréal, QC)
- **Fenlon, Fionna** of Sir Winston Churchill C.V.I. (Thunder Bay, ON)
- **Fisher, Katie** of Sir John A. Macdonald S.S. (Waterloo, ON)

G

- **Gao, HanYang** of Vancouver College H.S. (Vancouver, BC)
- **Gerard, Christophe** of Walter Murray Collegiate (Saskatoon, SK)
- **Ghassemi, Taha** of John Abbott College (Ste Ann de Bellevue, QC)
- **Giesbrecht, Carissa** of Monsignor J. Pereyma (Oshawa, ON)
- **Gilrola, Mitchell** of Leo Hayes H.S. (Fredericton, NB)
- **Gomolin, ArieH** of Marianopolis College (Westmount, QC)
- **Gong, Shawn** of Sir Winston Churchill C.V.I. (Thunder Bay, ON)
- **Goring, Spencer** of New Westminster S.S. (New Westminster, BC)
- **Gorovikov, Vladimir** of Centennial Collegiate (Saskatoon, SK)
- **Goulet-Bourdon, Maxime** of Champlain Regional College (Saint-Lambert, QC)
- **Grande, Antonio** of Vanier College (Saint-Laurent, QC)
- **Groves, Lucas** of Clarenville High School (Clarenville, NL)
- **Gu, An** of Magee S.S. (Vancouver, BC)
- **Guo, Feng** of Don Mills C.I. (North York, ON)

H

- **Hahm, Hyoung Jo (Jason)** of Martingrove Collegiate Institute (Toronto, ON)
- **Han, Henry** of St. George's School (Vancouver, BC)
- **Han, Henry** of Sir John A. Macdonald S.S. (Waterloo, ON)
- **Hayes, Reid** of Sir John A. Macdonald S.S. (Waterloo, ON)
- **He, Andie** of Earl Haig Secondary School (North York, ON)
- **He, Hilary** of Magee S.S. (Vancouver, BC)

- **He, Shujia** of Charles P. Allen H.S. (Bedford, NS)
- **Ho, Edward** of Marc Garneau C.I. (Toronto, ON)
- **Hou, Coco** of Bond Academy/Bond International College (Toronto, ON)
- **Hou, Shilin** of Walter Murray Collegiate (Saskatoon, SK)
- **Hsu, Meng-Den (Peter)** of Pinetree S.S. (Coquitlam, BC)
- **Hsu, Yingzi** of Matthew McNair S.S. (Richmond, BC)
- **Hu, Laureen (Le)** of Western Canada H.S. (Calgary, AB)
- **Huang, Andrew** of Unionville H.S. (Markham, ON)
- **Huang, Darrien** of Burnaby South Secondary (Burnaby, BC)
- **Huang, Justin** of Riverdale C.I. (Toronto, ON)
- **Huang, Ruoxia** of Lord Byng S.S. (Vancouver, BC)
- **Huang, Wina** of Crofton House School (Vancouver, BC)
- **Huang, Winnie** of frontenac secondary (kingston, ON)
- **Huang, Yingqi** of London Int'l Academy (London, ON)
- **Hung, Hei Ling Nicholas** of Brebeuf College School (Willowdale, ON)

I

- **Iannvcci, Natalie** of Monsignor Johnson C.S.S. (Etobicoke, ON)
- **Inniss, Joshua** of Archbishop Jordan Catholic High School (Sherwood Park, AB)
- **Ionescu, Benjamin** of Centennial Reg. H.S. (Greenfield Park, QC)

J

- **Jacot, Gabriel** of Humberside C.I. (Toronto, ON)
- **Janmohamed, Alyf** of Upper Canada College (Toronto, ON)
- **Jeong, Sean** of Robert Bateman H. S. (Burlington, ON)
- **Jeong, Steve** of London Central S. S. (London, ON)
- **Jiang, Bill** of Lisgar Collegiate Institute (Ottawa, ON)
- **Jin, Hao** of Bell High School (Nepean, ON)
- **Jin, Jerena** of Bond Academy/Bond International College (Toronto, ON)
- **Jin, Tony** of West Point Grey Academy (Vancouver, BC)
- **Jo, Daniel** of Fredericton H.S. (Fredericton, NB)
- **Joe, Adam** of Nepean H.S. (Ottawa, ON)
- **Juhnke, Luisa** of South Huron D.H.S. (Exeter, ON)
- **Jung, Esther** of Earl Haig Secondary School (North York, ON)
- **Jung, Young Hwan (Tommy)** of The Woodlands School (Mississauga, ON)

K

- **Kan, Da Min** of Claremont S.S. (Victoria, BC)
- **Kandola, Manisha** of New Westminster S.S. (New Westminster, BC)
- **Kang, Il Hae** of Webber Academy (Calgary, AB)
- **Katani Shoostari, Mohammad Amin** of Newtonbrook S.S. (Toronto, ON)

- **Ken, Yiming (Michael)** of Lord Byng S.S. (Vancouver, BC)
- **Khachatryan, Haroutiun** of Brebeuf College School (Willowdale, ON)
- **Khamar, Kunal** of Middlefield C.I. (Markham, ON)
- **Kim, Charles** of York Mills C.I. (North York, ON)
- **Kim, David** of Ernest Manning High School (Calgary, AB)
- **Kim, Hongjo** of King's Christian Collegiate (Oakville, ON)
- **Kim, Jennifer** of Abbey Park H.S. (Oakville, ON)
- **Kim, JiSup** of Yale Secondary (Abbotsford, BC)
- **Kim, Matthew** of Glenforest Secondary School (Mississauga, ON)
- **Kim, Nelson** of Toronto District Christian High School (Woodbridge, ON)
- **Kim, Paul Da Hyun** of Heritage Woods Secondary (Port Moody, BC)
- **Kim, Shina** of Centennial Collegiate (Saskatoon, SK)
- **Kim, Yun-Jae** of Lisgar Collegiate Institute (Ottawa, ON)
- **King, Vanessa** of Ernest Manning High School (Calgary, AB)
- **Klumbauer, Damian** of Lorne Park S.S. (Mississauga, ON)
- **Kong, Angus** of Hon. Vincent Massey S. S. (Windsor, ON)
- **Kou, Xiaohuang** of Champlain St-Lawrence (Québec, QC)
- **Kwan, Laurie** of Earl Haig Secondary School (North York, ON)
- **Kwok, Winston** of Upper Canada College (Toronto, ON)

L

- **Ladha, Alim** of Hillfield-Strathallan Coll. H.S. (Hamilton, ON)
- **Lai, Samuel** of Vancouver College H.S. (Vancouver, BC)
- **Lam, Sarah** of Dr. G.W. Williams S.S (Aurora, ON)
- **Lapointe, Simon** of Cégep Ste. Foy (Québec, QC)
- **Laranjeiro, Anore** of Bishop Ryan Catholic Secondary School (Hamilton, ON)
- **Lau, Kelton** of Markville S.S (Markham, ON)
- **Le Sage-Fafard, Sophie** of Collège André-Grasset (Montréal, QC)
- **Lee, Adrian** of Sinclair S.S. (Whitby, ON)
- **Lee, Cornell** of Pinetree S.S. (Coquitlam, BC)
- **Lee, David** of Abbey Park H.S. (Oakville, ON)
- **Lee, Ian** of St. George's School (Vancouver, BC)
- **Lee, Juliana** of A.Y. Jackson S.S. (North York, ON)
- **Lee, Young Seo (Diane)** of Luther College High School (Regina, SK)
- **Lei, Cyndi** of New Westminster S.S. (New Westminster, BC)
- **Lele, Meghan** of The Woodlands School (Mississauga, ON)
- **Leung, Michelle** of Bloor C.I. (Toronto, ON)
- **Leung, Vincent** of R.C. Palmer S.S. (Richmond, BC)
- **Li, Alan** of Markville S.S (Markham, ON)
- **Li, Alice** of Sarnia Northern C.I. & V.S. (Sarnia, ON)
- **Li, Betty** of White Oaks Secondary School (Oakville, ON)
- **Li, Chunxiao** of Clarkson S.S. (Mississauga, ON)
- **Li, Huinan (Helen)** of Queen Elizabeth H.S. (Calgary, AB)
- **Li, Jia Shu** of West Vancouver Secondary School (West Vancouver, BC)
- **Li, Junzhe** of Hillfield-Strathallan Coll. H.S. (Hamilton, ON)
- **Li, Lily** of Sir Winston Churchill S. S. (Vancouver, BC)

- **Li, Liying** of Prince of Wales S.S. (Vancouver, BC)
- **Li, Paul** of R.C. Palmer S.S. (Richmond, BC)
- **Li, Shida** of Marianopolis College (Westmount, QC)
- **Li, Shuhao** of Semiahmoo Secondary School (Surrey, BC)
- **Li, Veronica** of Southpointe Academy (Delta, BC)
- **Li, Vicky** of Thornhill S.S. (Thornhill, ON)
- **Liang, Sike** of Columbia International College (Hamilton, ON)
- **Liao, Jacky** of Albert Campbell Collegiate Institute (Toronto, ON)
- **Lim, Andrew** of William Lyon Mackenzie CI (North York, ON)
- **Lin, Cong** of Pinetree S.S. (Coquitlam, BC)
- **Lin, Erica** of Pinetree S.S. (Coquitlam, BC)
- **Lin, Laban** of Fraser Heights S.S. (Surrey, BC)
- **Lin, Ling** of Fraser Heights S.S. (Surrey, BC)
- **Lin, Rachel (Rou-Chen)** of University Transition Program (Vancouver, BC)
- **Lin, Timothy** of R.C. Palmer S.S. (Richmond, BC)
- **Liu, Andy** of The Woodlands School (Mississauga, ON)
- **Liu, Chelsea (Ziche)** of Dr. Norman Bethune C.I. (Scarborough, ON)
- **Liu, Geyi (Johnson)** of Lord Byng S.S. (Vancouver, BC)
- **Liu, Hong-Yue (Sean)** of Sir Winston Churchill S. S. (Vancouver, BC)
- **Liu, Hsin-Yen** of William Lyon Mackenzie CI (North York, ON)
- **Liu, Mingyao** of Oak Bay High School (Victoria, BC)
- **Liu, Shawn** of Hon. Vincent Massey S. S. (Windsor, ON)
- **Liu, Shi Zuo** of Columbia International College (Hamilton, ON)
- **Liu, Sihao (Frank)** of Don Mills C.I. (North York, ON)
- **Liu, Viko (JiaQi)** of Burnaby Central S.S. (Burnaby, BC)
- **Liu, Yifan** of Lord Byng S.S. (Vancouver, BC)
- **Lo, Andy** of Thornhill S.S. (Thornhill, ON)
- **Lo, Calvin** of Glenforest Secondary School (Mississauga, ON)
- **Lo, Simon** of New Westminster S.S. (New Westminster, BC)
- **Loa, Patrick** of East York C.I. (East York, ON)
- **Lockman, Sandhini** of St. John's-Ravenscourt School (Winnipeg, MB)
- **Loewen, James** of E. L. Crossley Secondary School (Fonthill, ON)
- **Long, Xueshan** of Georges Vanier S.S. (North York, ON)
- **Loree-Spacek, Jack** of Sir Winston Churchill C.V.I. (Thunder Bay, ON)
- **Lotte, Ariane** of Cégep de Rosemont (Montréal, QC)
- **Lou, Jishi** of Don Mills C.I. (North York, ON)
- **Lu, Lingxiao** of Magee S.S. (Vancouver, BC)
- **Lu, Liz** of Sir Winston Churchill S. S. (Vancouver, BC)
- **Lu, Phillip** of Sir John A. Macdonald S.S. (Waterloo, ON)
- **Lu, Travis** of Vaughan Secondary School (Thornhill, ON)
- **Lung, Patrick** of Marc Garneau C.I. (Toronto, ON)
- **Luo, Xi** of Marianopolis College (Westmount, QC)
- **Luo, Yiyun** of Glebe Collegiate Institute (Ottawa, ON)
- **Luu, Ivy** of Parkdale Junior & Senior Public School (Toronto, ON)
- **Lynch, Thomas** of Riverdale C.I. (Toronto, ON)

M

- **Ma, Amelia** of Southpointe Academy (Delta, BC)
- **Ma, Ken** of Grant Park H.S. (Winnipeg, MB)
- **MacDonald, Alannah** of E. L. Crossley Secondary School (Fonthill, ON)
- **MacDonald, Brandon** of Dr. John Hugh Gillis School (Antigonish, NS)
- **MacFarlane, Emily** of Northern S.S. (Toronto, ON)
- **Mao, Xuefan** of Columbia International College (Hamilton, ON)
- **Marshall, Samuel** of Charles P. Allen H.S. (Bedford, NS)
- **Massé, Catherine** of Cégep Saint-Jean-sur-Richelieu (Saint-Jean-sur-Richelieu, QC)
- **Matsui, Hasuto** of Lord Byng S.S. (Vancouver, BC)
- **Mayank, Dhruv** of Webber Academy (Calgary, AB)
- **McDonald, Brad** of Sir Winston Churchill High School (Calgary, AB)
- **Mendis, Melisha** of Balmoral Hall School (Winnipeg, MB)
- **Meng, Felix** of Unionville H.S. (Markham, ON)
- **Milner, Jake** of Walter Murray Collegiate (Saskatoon, SK)
- **Mohamed, Faraz** of Westmount Charter School (Calgary, AB)
- **Montroy, Malcolm** of Nepean H.S. (Ottawa, ON)
- **Moro, Pedro** of Sandwich Secondary School (LaSalle, ON)

N

- **Nam, Jung Hyun (John)** of R.E. Mountain S.S. (Langley, BC)
- **Nawaz, Aqsa** of Sir John A. Macdonald S.S. (Waterloo, ON)
- **Ng, Ambrose** of Oakville Trafalgar High School (Oakville, ON)
- **Ng, Crystal** of Richmond Hill H.S. (Richmond Hill, ON)
- **Ng, Yan Hung (Matt)** of A. B. Lucas Secondary School (London, ON)
- **Nguyen, Lam** of York Memorial Collegiate Institute (Toronto, ON)
- **Nguyen, Minh-Tri** of Collège de Maisonneuve (Montréal, QC)
- **Nguyen, Vanessa** of St. Clement's School (Toronto, ON)
- **Nie, Tian** of Westdale S.S. (Hamilton, ON)
- **Norman, Jacob** of Mount Prevost MS, Duncan, BC (Duncan, BC)

O

- **Odwak, Cori** of Grant Park H.S. (Winnipeg, MB)
- **Oringer, Cory** of Lower Canada College (Montreal, QC)
- **Ostrander, Kaitlin** of Bishop Ryan Catholic Secondary School (Hamilton, ON)
- **Otto, Kalin** of Westmount Charter School (Calgary, AB)
- **OuYang, Victor** of Agincourt Collegiate Institute (Scarborough, ON)
- **Ouysuis-Mongerson, Frederik** of John Abbott College (Ste Ann de Bellevue, QC)

P

- **Pan, Andrew** of Walter Murray Collegiate (Saskatoon, SK)
- **Pan, Yun Yi** of The Woodlands School (Mississauga, ON)
- **Pang, Michael** of St. John's-Ravenscourt School (Winnipeg, MB)
- **Parilova, Veva** of Stephen Lewis S.S. (Thornhill, ON)
- **Park, John** of Pinetree S.S. (Coquitlam, BC)
- **Park, Joo Heon** of Fraser Heights S.S. (Surrey, BC)
- **Park, Jun Yang (James)** of R.E. Mountain S.S. (Langley, BC)
- **Park, Kyu Young** of Southridge School (Surrey, BC)
- **Park, Minsang (Mike)** of University Transition Program (Vancouver, BC)
- **Parmar, Hanna** of Pinetree S.S. (Coquitlam, BC)
- **Parmar, Simran** of Cariboo Hill S.S. (Burnaby, BC)
- **Pechersky, David** of Vaughan Secondary School (Thornhill, ON)
- **Pecile, Jacob** of Riverdale C.I. (Toronto, ON)
- **Persofsky, Benjamin** of The Dragon Academy (Toronto, ON)
- **Pham Ngoc, Minh** of Magee S.S. (Vancouver, BC)
- **Ping, Claire** of Sir Winston Churchill S. S. (Vancouver, BC)
- **Pliszka, Kenji** of St. John's-Ravenscourt School (Winnipeg, MB)
- **Porteous, Cameron** of Forest Heights Collegiate Institute (Kitchener, ON)

Q

- **Qian, Long** of University Hill Secondary School (Vancouver, BC)
- **Qiu, Barry** of Johnston Heights Jr. S.S. (Surrey, BC)
- **Quan, Curtis** of Colonel By Secondary School (Gloucester, ON)

R

- **Ramkishore, Anouchka** of King City S.S. (King City, ON)
- **Ramsden, Sophie** of Sentinel S.S. (West Vancouver, BC)
- **Ranas, Rae Alissa** of Princess Margaret Secondary School (Delta, BC)
- **Reesor, Emma** of Glenforest Secondary School (Mississauga, ON)
- **Ren, Shaun** of The Woodlands School (Mississauga, ON)
- **Richard, Gabriel** of Waterloo C.I. (Waterloo, ON)
- **Richardson, Daniel** of Lorne Park S.S. (Mississauga, ON)
- **Rideout, Colin** of Queen Elizabeth Reg. H.S. (Conception Bay South, NL)
- **Rim, Wei** of Glenforest Secondary School (Mississauga, ON)
- **Rivard, Jillian** of Osgoode Township High School (Metcalf, ON)
- **Robertson, Ezekiel** of Horton High School (Greenwich, NS)
- **Romano, Giovanni** of Glenview Park S.S. (Cambridge, ON)
- **Rose, Grant** of Clarenville High School (Clarenville, NL)
- **Ross, Cody** of Springhill High School (Springhill, NS)
- **Roy, Simon-Pierre** of Collège F.X. Garneau (Québec, QC)

- **Ruan, Ken** of Stephen Leacock C.I. (Scarborough, ON)
- **Ryan, Sarah** of St. Clement's School (Toronto, ON)

S

- **Salazar, Julian** of Henry Wise Wood Sr. H.S (Calgary, AB)
- **Sanderson, Tyler** of Manitouwadge High School (Manitouwadge, ON)
- **Seknon, Manvir** of St Augustine SS (Brampton, ON)
- **Seo, Brian** of Pinetree S.S. (Coquitlam, BC)
- **Seyed Ghasemipour, Seyed Kamyar** of Earl Haig Secondary School (North York, ON)
- **Shah, Prajay** of Henry Wise Wood Sr. H.S (Calgary, AB)
- **Shang, Sam** of Sir Winston Churchill High School (Calgary, AB)
- **Shen, Kevin** of Sir Winston Churchill S. S. (Vancouver, BC)
- **Shen, Sirui** of Hon. Vincent Massey S. S. (Windsor, ON)
- **Sheng, Ming En** of John Fraser Secondary School (Mississauga, ON)
- **Shi, Everest** of Burnaby North S.S. (Burnaby, BC)
- **Shi, Jenny** of Earl Haig Secondary School (North York, ON)
- **Shi, Ruiqi** of London Int'l Academy (London, ON)
- **Shin, John** of The Woodlands School (Mississauga, ON)
- **Sin, Emily** of Glenforest Secondary School (Mississauga, ON)
- **Sit, Alicia** of St. Matthew H.S. (Orleans, ON)
- **Sivarajah, Harish** of Albert Campbell Collegiate Institute (Toronto, ON)
- **Siydock, Ian** of frontenac secondary (kingston, ON)
- **Skelly, Matthew** of Sinclair S.S. (Whitby, ON)
- **Solis, Stephen** of Mother Teresa Catholic Secondary School (London, ON)
- **Song, Ellen** of Horton High School (Wolfville, NS)
- **Spice, Danielle** of Oakville Trafalgar High School (Oakville, ON)
- **Su, Amy** of William Aberhart High School (Calgary, AB)
- **Su, Ying** of Dr. Norman Bethune C.I. (Scarborough, ON)
- **Su, Zichuan** of Marianopolis College (Westmount, QC)
- **Sun, Haoyu (Charles)** of Colonel Gray Sr. H.S (Charlottetown, PE)
- **Sun, Huan Xin** of Columbia International College (Hamilton, ON)
- **Sun, Jianwei (Jian Jian)** of Western Canada H.S. (Calgary, AB)
- **Sun, Olive** of Burnaby South Secondary (Burnaby, BC)
- **Sun, Susan** of West Vancouver Secondary School (West Vancouver, BC)
- **Sundaralingam, Lakshman** of Burnaby South Secondary (Burnaby, BC)
- **Suo, Shun Da (Simon)** of Olympiads School (North York, ON)
- **Suryadevara, Krishna** of York Memorial Collegiate Institute (Toronto, ON)
- **Sze, Shing Kwan** of Bodwell H.S. (North Vancouver, BC)
- **Szeto, Jeffrey** of Markville S.S (Markham, ON)

T

- **Tahmid, Ahnaf** of East York C.I. (East York, ON)
- **Tajadod, Alireza** of Thornhill S.S. (Thornhill, ON)
- **Tan, Boon Hwee** of Evan Hardy Collegiate (Saskatoon, SK)

- **Tan, Sarah** of St. Clement's School (Toronto, ON)
- **Tang, Julia** of William Lyon Mackenzie CI (North York, ON)
- **Tao, Yifan** of Stephen Leacock C.I. (Scarborough, ON)
- **Teutsch, Laura** of Merivale H.S. (Nepean, ON)
- **Thambimuthi, Thanujah** of William Aberhart High School (Calgary, AB)
- **Thompson, Garrett** of Sarnia C.I. & V.S. (Sarnia, ON)
- **Tian, Feng** of Western Canada H.S. (Calgary, AB)
- **Tian, Lei** of Columbia International College (Hamilton, ON)
- **Tin, Benton** of Markham D.H.S. (Markham, ON)
- **Trudelle, Guillaume** of Collège de Maisonneuve (Montréal, QC)
- **Tucson, Tyler** of Forest Heights Collegiate Institute (Kitchener, ON)

U

- **Urban, Matthew** of Riverside S.S. (Port Coquitlam, BC)

V

- **Vainio, Taaron** of Sir Winston Churchill C.V.I. (Thunder Bay, ON)
- **Vallières, Élise** of Cégep de Chicoutimi (Chicoutimi, QC)
- **Vedpathak, Omkar** of Harold M. Brathwaite S. S. (Brampton, ON)
- **Viarouge, Isabelle** of Collège F.X. Garneau (Québec, QC)
- **Vierich, Alex** of Earl of March S.S. (Kanata, ON)
- **Virtue, Christoples** of William Aberhart High School (Calgary, AB)

W

- **Wadhvana, Neil** of Etobicoke School of the Arts (toronto, ON)
- **Wang, Gary** of Colonel By Secondary School (Gloucester, ON)
- **Wang, Jack** of Don Mills C.I. (North York, ON)
- **Wang, Jason** of Colonel Gray Sr. H.S (Charlottetown, PE)
- **Wang, Jesse K.** of Lisgar Collegiate Institute (Ottawa, ON)
- **Wang, Jiayi** of Henry Wise Wood Sr. H.S (Calgary, AB)
- **Wang, Josh** of Pinetree S.S. (Coquitlam, BC)
- **Wang, Kevin** of Sir Winston Churchill S. S. (Vancouver, BC)
- **Wang, Kristy** of Old Scona Academic School (Edmonton, AB)
- **Wang, Ray** of A.Y. Jackson S.S. (North York, ON)
- **Wang, Winnie** of Burnaby North S.S. (Burnaby, BC)
- **Wang, Xuening** of Columbia International College (Hamilton, ON)
- **Wang, Yiyao (Ivy)** of Georges Vanier S.S. (North York, ON)
- **Wang, Zhihe** of London Int'l Academy (London, ON)
- **Wang, Zichun** of Lord Byng S.S. (Vancouver, BC)
- **Wang, Zixiao** of Richmond Hill H.S. (Richmond Hill, ON)
- **Wang, Zixuan** of London Int'l Academy (London, ON)

- **Watson, Tyler** of St. John's Kilmarnock School (Breslau, ON)
- **Wei, Ben** of Olympiads School (North York, ON)
- **Wen, Jingzi** of Don Mills C.I. (North York, ON)
- **Weng, Hongzhi** of St. Andrew's College (Aurora, ON)
- **Wheeler, Cody** of frontenac secondary (kingston, ON)
- **Wong, Joel** of Walter Murray Collegiate (Saskatoon, SK)
- **Wong, Shannon** of Richmond Hill H.S. (Richmond Hill, ON)
- **Wu, Gonghao** of York Mills C.I. (North York, ON)
- **Wu, Henry** of University of Toronto Schools (Toronto, ON)
- **Wu, Michael** of Fort Richmond Collegiate (Winnipeg, MB)
- **Wu, Xiaoze (Jerry)** of Marc Garneau C.I. (Toronto, ON)
- **Wyma, Matthew** of Walter Murray Collegiate (Saskatoon, SK)

X

- **Xi, Peiqi** of Cowichan Sr. S.S. (Duncan, BC)
- **Xi, Yang** of London Int'l Academy (London, ON)
- **Xia, Sean** of Lisgar Collegiate Institute (Ottawa, ON)
- **Xiao, Edward** of Iroquois Ridge High School (Oakville, ON)
- **Xie, Ziwei (Michael)** of Iroquois Ridge High School (Oakville, ON)
- **Xiong, Yayang** of Burnaby Central S.S. (Burnaby, BC)
- **Xliao, Xiao Tian Qi** of Columbia International College (Hamilton, ON)
- **Xu, Leon** of Waterloo C.I. (Waterloo, ON)
- **Xu, Maxime** of Colonel By Secondary School (Gloucester, ON)
- **Xue, Ziyi (Jerry)** of Fraser Heights S.S. (Surrey, BC)

Y

- **Yan, Daniel** of Woburn Collegiate Institute (Scarborough, ON)
- **Yan, Henry** of Rockridge Secondary School (West Vancouver, BC)
- **Yang, Bernie** of Agincourt Collegiate Institute (Scarborough, ON)
- **Yang, Roy** of Pinetree S.S. (Coquitlam, BC)
- **Yang, Ruiqi (Sarah)** of R.E. Mountain S.S. (Langley, BC)
- **Yang, Xichi** of Kelvin H.S. (Winnipeg, MB)
- **Yau, Stanley** of Woburn Collegiate Institute (Scarborough, ON)
- **Ye, Guanzhou** of Richmond Hill H.S. (Richmond Hill, ON)
- **Yin, Tony** of Agincourt Collegiate Institute (Scarborough, ON)
- **Yoon, Michaela** of Semiahmoo Secondary School (Surrey, BC)
- **Yu, Ally** of Dr. Norman Bethune C.I. (Scarborough, ON)
- **Yu, Cleo (Fucheng)** of Burnaby North S.S. (Burnaby, BC)
- **Yu, Derek** of Evan Hardy Collegiate (Saskatoon, SK)
- **Yu, Meng-ting** of Lambrick Park (Victoria, BC)
- **Yu, Shing Him Nicholas (Nicholas)** of Lester B. Pearson College (Victoria, BC)
- **Yufan, Qi** of Columbia International College (Hamilton, ON)
- **Yule, Carson** of Claremont S.S. (Victoria, BC)
- **Yung, Priscilla** of Marc Garneau C.I. (Toronto, ON)

Z

- **Zeng, Tion** of Earl of March S.S. (Kanata, ON)
- **Zeng, Yan** of Southpointe Academy (Delta, BC)
- **Zhang, Amy (BingZhen)** of Markham D.H.S. (Markham, ON)
- **Zhang, Anni** of Sir Winston Churchill S. S. (Vancouver, BC)
- **Zhang, Azura** of Elgin Park Secondary School (Surrey, BC)
- **Zhang, Brent** of North Toronto C.I. (Toronto, ON)
- **Zhang, Carol (Mian Xiu)** of Lord Byng S.S. (Vancouver, BC)
- **Zhang, Cynthia** of York Mills C.I. (North York, ON)
- **Zhang, Di Seu** of St. John's International School (Vancouver, BC)
- **Zhang, Gavin** of Sir Winston Churchill S. S. (Vancouver, BC)
- **Zhang, Heming** of Fredericton H.S. (Fredericton, NB)
- **Zhang, Hongyu** of London Int'l Academy (London, ON)
- **Zhang, Jian Xing** of Columbia International College (Hamilton, ON)
- **Zhang, Karen (Jia Rong)** of Semiahmoo Secondary School (Surrey, BC)
- **Zhang, Maggie** of Marc Garneau C.I. (Toronto, ON)
- **Zhang, Tommy Tiannin** of Richmond S.S. (Richmond, BC)
- **Zhang, Weixin** of Richmond Hill H.S. (Richmond Hill, ON)
- **Zhang, Yun Qian** of Columbia International College (Hamilton, ON)
- **Zhao, Kinna** of Albert Campbell Collegiate Institute (Toronto, ON)
- **Zhao, Yi Ji** of Old Scona Academic School (Edmonton, AB)
- **Zheng, Thunder (Pei Ting)** of Colonel Gray Sr. H.S (Charlottetown, PE)
- **Zheng, Tommy** of Abbey Park H.S. (Oakville, ON)
- **Zhong, Calvin** of The Woodlands School (Mississauga, ON)
- **Zhong, Lynn** of Claremont S.S. (Victoria, BC)
- **Zhou, Zi Wei** of Mulgrave School (West Vancouver, BC)
- **Zhu, David** of R.C. Palmer S.S. (Richmond, BC)
- **Zhu, Henry** of Pinetree S.S. (Coquitlam, BC)
- **Zhu, Henry** of Waterloo C.I. (Waterloo, ON)
- **Zhu, Tian Rong** of Semiahmoo Secondary School (Surrey, BC)
- **Zhu, Tianai (Alice)** of Western Canada H.S. (Calgary, AB)
- **Zhu, Weiming** of Georges Vanier S.S. (North York, ON)
- **Zhu, Yinqin** of Unionville H.S. (Markham, ON)
- **Zhu, Yuanhao (Ben)** of White Oaks Secondary School (Oakville, ON)
- **Zuo, Yu Xin (Catheryn)** of Colonel Gray Sr. H.S (Charlottetown, PE)

ANNEX A

COMC 2011 PROBLEMS AND SOLUTIONS