

Canadian  
Mathematics  
Competition  
An activity of the Centre for  
Education in Mathematics and Computing,  
University of Waterloo, Waterloo, Ontario



Concours  
canadien de  
mathématiques  
Une activité du Centre d'éducation  
en mathématiques et en informatique,  
Université de Waterloo, Waterloo, Ontario

# 2005 Results

# 2005 Résultats

## Gauss Contests (Grades 7 & 8)

## Concours Gauss (7<sup>e</sup> et 8<sup>e</sup> années – Sec. I et II)

C.M.C. Sponsors:  
Avec la contribution de :



**Deloitte  
& Touche**  
Chartered  
Accountants  
**Samson Béclair  
Deloitte  
& Touche**  
Comptables  
agrés

THE  
**Great-West Life**  
ASSURANCE COMPANY



Great West Life  
and London Life /  
London Life et  
La Great-West,  
compagnies  
d'assurance-vie



C.M.C. Supporter:  
Avec la participation de :



Canadian Institute  
of Actuaries

**Canadian Mathematics Competition Faculty and Staff /  
Personnel du Concours canadien de mathématiques**

Barry Ferguson (Director)  
Ed Anderson  
Lloyd Auckland  
Peter Crippin  
Fiona Dunbar  
Jeff Dunnett  
Mike Eden  
Judy Fox  
Judith Koeller  
Joanne Kursikowski  
Angie Lapointe  
Matthew Oliver  
Larry Rice  
Linda Schmidt  
Kim Schnarr  
Carolyn Sedore  
Ian VanderBurgh

**Problems Committee / Comité des problèmes**

Mark Bredin (Chair / président), St. John's-Ravenscourt School, Winnipeg, MB  
Ed Barbeau, Toronto, ON  
Sandy Emms Jones, Forest Heights C.I., Kitchener, ON  
Kevin Grady, Cobden District P.S., Cobden, ON  
John Grant McLoughlin, University of New Brunswick, Fredericton, NB  
Joanne Halpern, Toronto, ON  
David Matthews, University of Waterloo, Waterloo, ON  
Gerald Stephenson, St. Thomas More C.S.S., Hamilton, ON

**Overall Comments**

The Grade 7 and Grade 8 Gauss Contests are the first two in a series of mathematics contests created and administered by the Canadian Mathematics Competition. The 2005 offering of these Contests drew an enrollment of just over 87 000, mainly from Canadian schools, but also including some international schools.

The summary of results found in these pages is compiled from voluntarily submitted reporting forms. These results are based on returns representing just under half of the total of enrolled students, and so can be viewed as reasonably representative of the actual results.

It is with pleasure that I note that, while the median for the grade 7 contest slipped by a few points to 86.22, the median for the grade 8 contest jumped up 10 points to 98.77. Both results are very good, and we hope that future papers will continue to garner similar results.

For people who are familiar with past results, it is important that you notice that the intervals for reporting scores changed this year. Thus there really was not a significant decrease in the number of students in the top group, nor an increase in the bottom group, as compared to previous years.

As it has always been in the past, a primary goal in setting the contests is to provide a fun activity which also challenges students, and affords teachers with an opportunity to work with their students on a mathematical activity outside the normal classroom routine. We extend our thanks to those students and teachers who participated this year, and hope that you will all continue to be active in such activities.

On behalf of everyone involved with the CMC, I offer congratulations to all participants, and especially to those named in this report. I look forward to your names, and others, appearing in future lists of participants.

Barry Ferguson  
Director, Canadian Mathematics Competition

**Commentaires généraux**

Les concours Gauss de 7<sup>e</sup> et 8<sup>e</sup> année (Sec. I et II) sont les deux premiers concours d'une série de concours de mathématiques créés et administrés par le Concours canadien de mathématiques. En 2005, ces concours ont mené à une inscription d'un peu plus de 87 000 étudiants, principalement de écoles canadiennes mais incluant quelques écoles internationales.

Le sommaire des résultats, trouvé dans ces pages, est compilé de formulaires de rapport de résultats volontairement soumis. Ces résultats sont basés sur les retours représentant la moitié du total d'étudiants inscrits, et donc peut être vu comme représentant de façon raisonnable les résultats actuels.

C'est avec plaisir que je note que même si la moyenne pour le concours de 7<sup>e</sup> année a glissé de quelques points à 86,22, la moyenne pour le concours de 8<sup>e</sup> année a fait un saut de 10 points à 98,77. Les deux résultats sont très bons, et nous espérons que les concours futurs continueront à représenter des résultats similaires.

Pour les gens qui sont familiers avec les résultats passés, c'est important que vous remarquiez que les intervalles de résultats rapportés ont changé cette année. Ainsi, comparé aux années précédentes, il n'y a pas vraiment de diminution significative dans le nombre d'étudiants dans le premier groupe, ni une augmentation dans le groupe inférieur.

Comme cela a toujours été dans le passé, le but primaire du concours est de donner une activité amusante mais, qui défie aussi les étudiants et permet aux enseignants de travailler avec leurs étudiants sur une activité mathématique hors de la routine de salle de classe. Nous offrons nos remerciements aux étudiants et aux enseignants qui ont participé cette année et nous espérons que vous continuerez à être actifs dans de telles activités.

De la part de tout le monde impliqué dans le CCM, je félicite tous les participants, et surtout ceux nommés dans ce rapport. J'ai hâte de voir vos noms et ceux de d'autres, apparaître dans les listes futures de participants.

Barry Ferguson  
Directeur, Concours canadien de mathématiques

**Number of students registered by province /  
Nombre d'étudiants inscrit par province**

	Enrollment/ Inscription
NL	1728
NS	1345
NB	517
PE	180
QC	7917
ON	49505
MB	1560
SK	410
AB	6525
BC	14900
International	2735
Total	<hr/> 87322

**Statistics for Canada /  
Statistiques pour le Canada**

Total number of students represented / Nombre d'élèves: 40224

Grade 7 / 7<sup>e</sup> année (Sec. I)

Number of schools represented / Nombre d'écoles	864
Number of students represented / Nombre d'élèves	20332
Median / Médiane	86.22

Marks Points	Number of Students Nombre d'élèves	Approximate Percentage of Students Pourcentage approximatif du nombre d'élèves
136 – 150	549	2.70
121 – 135	1542	7.58
106 – 120	2889	14.21
91 – 105	4020	19.77
76 – 90	4316	21.23
61 – 75	3689	18.14
≤ 60	3327	16.36

Grade 8 / 8<sup>e</sup> année (Sec. II)

Number of schools represented / Nombre d'écoles	838
Number of students represented / Nombre d'élèves	19892
Median / Médiane	98.77

Marks Points	Number of Students Nombre d'élèves	Approximate Percentage of Students Pourcentage approximatif du nombre d'élèves
136 – 150	973	4.89
121 – 135	2425	12.19
106 – 120	4486	22.55
91 – 105	4521	22.73
76 – 90	3477	17.48
61 – 75	2098	10.55
≤ 60	1912	9.61

Students are listed in alphabetical order / Les élèves sont nommés en ordre alphabétique

**Perfect scores of 150 / Notes parfaites de 150**

<b>Name/Nom</b>	<b>School/École</b>	<b>Location/Endroit</b>
Josh Alman	University of Toronto Schools	Toronto, ON
Daniel Anderson	Henry Munro M.S.	Ottawa, ON
Emily Baker	Joan of Arc Academy	Ottawa, ON
Chris Barnes	Coronation P.S.	Oshawa, ON
Stephen Chung	Boundary Park E.S.	Surrey, BC
Leo Ding	University of Toronto Schools	Toronto, ON
Camden Filtness	Boundary Park E.S.	Surrey, BC
Kristijan Gjorgjevik	St. Michael's University School	Victoria, BC
Giuseppe Grande	Grant Park H.S.	Winnipeg, MB
Ian Hansen	William Berczy P.S.	Unionville, ON
Lucy He	William Berczy P.S.	Unionville, ON
Walker Horsfall	The Valley's Senior P.S.	Mississauga, ON
Ricky Hu	Coronation P.S.	Oshawa, ON
Daniel Ibanez	John G. Althouse M.S.	Toronto, ON
Kim Jin Hoo	Pushkin Private School	Thornhill, ON
James Jun	St. Michael's College School	Toronto, ON
Mark Karantayer	Toronto Jewish Academy OHR Menachem	Thornhill, ON
Nora Kettle	St. Joseph's E.S.	Cobourg, ON
Maryam Khattab	I.Q.R.A. Islamic School	Mississauga, ON
David Ko	Montclair Senior School	Oakville, ON
Tyler Kroetsch	Holy Rosary School	Waterloo, ON
Ishaan Kumar	Upper Canada College – Prep School	Toronto, ON
Daniel Kur	Toronto Jewish Academy OHR Menachem	Thornhill, ON
Paul Lee	Crescent Park E.S.	Surrey, BC
Robert Lee	Willowbrook P.S.	Thornhill, ON
Michael Léger	Ecole l'harmonie	Waterloo, ON
Julia Lévesque	Joan of Arc Academy	Ottawa, ON
Jamieson Lim	St. Paul's E.S.	Richmond, BC
Ellen Lloyd	John Ware Jr. H.S.	Calgary, AB
Leah MacKinnon	Calvin Park P.S.	Kingston, ON
Kris Misquitta	Holy Redeemer R.C.E.S.	Toronto, ON
Dan Muirhead	John G. Althouse M.S.	Toronto, ON
Glen Nelson	Lena Shaw E.S.	Surrey, BC
Aaron Pang	Crosby Heights P.S.	Richmond Hill, ON
Cristina Rosu	University of Toronto Schools	Toronto, ON
Tyson Sangster	Pope John Paul II School	Lindsay, ON
Mariya Sardarli	Westbrook School	Edmonton, AB
Jonathan Schneider	University of Toronto Schools	Toronto, ON
Andrew Shure	Coronation P.S.	Oshawa, ON
Mark Sobaszek	Lester B. Pearson C.E.S.	Brampton, ON
Harry Son	Bonnaccord E.S.	Surrey, BC
Jessica-Lynne Welton	Havergal College	Toronto, ON
Ruth Wong	Cummer Valley M.S.	North York, ON
Andrew Xue	Broadview P.S.	Ottawa, ON
Dorothy Yu	St. John's-Ravenscourt School	Winnipeg, MB
Jacky Yu	Woodland P.S.	Thornhill, ON
Roger Zhang	Osler School	Vancouver, BC
William Zhao	Lloyd George School	Vancouver, BC
Peter Zhi	Elia M.S.	North York, ON
Liwei Zhou	Hawthorne P.S.	Ottawa, ON
Jonathan Zung	University of Toronto Schools	Toronto, ON

Students are listed in alphabetical order / Les élèves sont nommés en ordre alphabétique

### Perfect scores of 150

Name/Nom		School/École	Location/Endroit
Sophie	Aladas	Joan of Arc Academy	Ottawa, ON
Hadi	Alasaad	Academie IBN-Sina	Montreal, QC
Alex	Alexa	Glashan P.S.	Ottawa, ON
Danane	Amine	Academie IBN-Sina	Montreal, QC
Pamela	Andrews	Stonepark Intermediate School	Charlottetown, PE
Jackie	Au	Ideal Mini School	Vancouver, BC
Arden	Azim	University of Toronto Schools	Toronto, ON
Robert	Bai	John G. Althouse M.S.	Toronto, ON
Alexandra	Baronide	Joan of Arc Academy	Ottawa, ON
Voloh	Ben	Glen Shields P.S.	Concord, ON
Alistair	Blacklock	Rockridge S.S.	West Vancouver, BC
Jennifer	Blight	St. Joseph's E.S.	Dryden, ON
Gauruv	Bose	Hawthorne P.S.	Ottawa, ON
James	Brulé	St. Joseph's E.S.	Cobourg, ON
Brian	But	Upper Canada College	Toronto, ON
Miles	Byworth	Henderson Avenue P.S.	Markham, ON
Sean	Cai	Tomken Road M.S.	Mississauga, ON
Warren	Carpani	Errol Village P.S.	Camlachie, ON
Jeremy	Chad	United Synagogue Day School - Bayview Campus	North York, ON
Son	Changkon	Greater Victoria Gauss Committee	Victoria, BC
Ananya	Chattoraj	Evergreen Park School	Moncton, NB
Mihai	Chelaru-Cente	University of Toronto Schools	Toronto, ON
Jenny	Chen	Fielding Drive P.S.	Ottawa, ON
Kevin	Chen	Burnaby South S.S.	Burnaby, BC
Wilson	Cheng	Town Centre Montessori Private Schools	Markham, ON
Allen	Chi	Seaquam S.S.	Delta, BC
Edward	Cho	Laurelwood P.S.	Waterloo, ON
Jeffrey	Choi	St. George's School	Vancouver, BC
Wilkie	Choi	Henry Kelsey Sr. P.S.	Agincourt, ON
Daniel	Chow	Burnaby South S.S.	Burnaby, BC
Derrick	Chow	St. Justin Martyr C.S.	Unionville, ON
Veronica	DiKun	Burnaby South S.S.	Burnaby, BC
Tony	Dong	Thomas Street M.S.	Mississauga, ON
Jovy	Eramela	Burnaby Mountain S.S.	Burnaby, BC
Joel	Foo	Richmond Christian School	Richmond, BC
Jack	Fu	St. George's School	Vancouver, BC
Milton	Fu	St. George's School	Vancouver, BC
Brian	Gracie	University of Toronto Schools	Toronto, ON
Megan	Gregor	Jack Chambers P.S.	London, ON
Jenny	Gu	University of Toronto Schools	Toronto, ON
Carrie	Guo	Macklin P.S.	Scarborough, ON
Cindy	Guo	Jesse Ketchum School	Toronto, ON
John	Han	St. Michael School	Oakville, ON
Philip	Hau	St. Justin Martyr C.S.	Unionville, ON
Kevin	He	Sir Winston Churchill S.S.	Vancouver, BC
Jeong	Ho	Holy Redeemer R.C.E.S.	Toronto, ON
Sofia	Hou	Broadview P.S.	Ottawa, ON
Jiun-Ruey	Hu	Cummer Valley M.S.	North York, ON
Mark	Iyengar	Francis Libermann E.S.	Scarborough, ON
Mitesh	Jani	Cedarwood P.S.	Markham, ON
David	Jin	St. Michael's College School	Toronto, ON
Zaakir	Jiwa	St. George's School	Vancouver, BC
Alex	Jung	Cummer Valley M.S.	North York, ON

<b>Name/Nom</b>		<b>School/École</b>	<b>Location/Endroit</b>
Gregory	Kay	Netivot HaTorah Day School	Thornhill, ON
Caleb	Keung	Crosby Heights P.S.	Richmond Hill, ON
You Chia	Kuo	Cummer Valley M.S.	North York, ON
Mark	Lam	Eric Hamber S.S.	Vancouver, BC
Marc-André	Lapointe	Mont-Saint-Sacrement	St-Gabriel-de-Valcartier, QC
Anders	Lee	Milliken P.S.	Scarborough, ON
John	Lee	Southridge School	Surrey, BC
William	Lee	Unionville P.S.	Unionville, ON
Simeon	Leung	Vancouver Christian School	Vancouver, BC
Theodore	Lim	St. George's School	Vancouver, BC
Maninder	Longowal	Tempo School	Edmonton, AB
Aileen	Lu	The Woodlands School	Mississauga, ON
Edward	Lu	Town Centre Montessori Private Schools	Markham, ON
Keith	Lui	Eric Hamber S.S.	Vancouver, BC
Ruby	Lung	Havergal College	Toronto, ON
Kent	Ly	Charlton P.S.	Thornhill, ON
Jeongho	Lyu	Blessed Trinity School	North York, ON
Judith	Ma	University of Toronto Schools	Toronto, ON
Julianne	Macaulay	Jack Chambers P.S.	London, ON
Richard	Mack	Immaculata Regional H.S.	Kelowna, BC
François	Martel	Collège Saint-Alexandre	Gatineau, QC
Diana	Martin	Tomken Road M.S.	Mississauga, ON
Vinny	Mei	Semiahmoo S.S.	Surrey, BC
Yves	Miao	Evergreen Park School	Moncton, NB
Scott	Michelson	St. George's School	Vancouver, BC
Anna	Mo	Calvin Park P.S.	Kingston, ON
Christa Joy Lily	Moase	Collège St-Charles-Garnier	Quebec, QC
Devlin	Morrison	Sir George Simpson J.H.S.	St. Albert, AB
Vivek	Morzaria	William Berczy P.S.	Unionville, ON
Andrew	Nesta	Don Bosco School	Calgary, AB
Crystal	Ngai	York House School	Vancouver, BC
Theresa	Ngo	Avonmore School	Edmonton, AB
Beth	Otto	Avonmore School	Edmonton, AB
Avery	Ozburn	Havergal College	Toronto, ON
Anthony	Park	St. Anne C.E.S.	Richmond Hill, ON
Jason	Park	Sherwood Heights School	Mississauga, ON
Bhavika	Patel	University of Toronto Schools	Toronto, ON
Gregory	Pechersky	Toronto Jewish Academy OHR Menachem	Thornhill, ON
Ryan	Peressotti	Notre Dame E.S.	Niagara Falls, ON
Arthur	Pham	Forest Hill P.S.	Toronto, ON
Polina	Phokeev	David Ledder M.S.	Mississauga, ON
Jean-Robert	Pimm-Dupuch	Ashbury College	Ottawa, ON
Adam	Prins	Greenbriar Sr. P.S.	Brampton, ON
Sammy	Ptasznik	United Synagogue Day School - Bayview Campus	North York, ON
David	Robinson	Webber Academy	Calgary, AB
Boris	Shang	Semiahmoo S.S.	Surrey, BC
Danny	Shi	Windermere S.S.	Vancouver, BC
Joy	Shi	J. T. Tuck P.S.	Burlington, ON
Jason	Song	Fraser Heights S.S.	Surrey, BC
Quinn	Spicker	Fraser Heights S.S.	Surrey, BC
James	Sproul	Crescent School	Willowdale, ON
Chen	Sun	Orchard Park P.S.	London, ON
Eric	Szeto	David Thompson S.S.	Vancouver, BC
Jonathan	Tam	Crescent School	Willowdale, ON
Aayush	Tandon	The Valley's Senior P.S.	Mississauga, ON
Thushanth	Thanikasegaran	St. Margaret's P.S.	West Hill, ON

<b>Name/Nom</b>		<b>School/École</b>	<b>Location/Endroit</b>
Nitharshan	Thevathasan	Ontario Int'l Institute	Scarborough, ON
Spencer	Thompson	Upper Canada College	Toronto, ON
Kevin	Tong	Burnaby Mountain S.S.	Burnaby, BC
Sarah	Truong	University of Toronto Schools	Toronto, ON
Amanda	Tu	Southridge School	Surrey, BC
Julie	Van	Lower Canada College	Montreal, QC
Jonathan	Wai	Camilla Senior P.S.	Mississauga, ON
Wilson	Wai	University of Toronto Schools	Toronto, ON
Andrea	Wan	Dolphin Sr. P.S.	Mississauga, ON
Frank	Wang	Ramer Wood P.S.	Markham, ON
Linda	Wang	Burnaby South S.S.	Burnaby, BC
Scott	Wang	University of Toronto Schools	Toronto, ON
Nissi	Wei	Macklin P.S.	Scarborough, ON
Michael	Weingert	Matthews Hall	London, ON
Ryan	White	Calvin Park P.S.	Kingston, ON
Gabriel	Wong	St. George's School	Vancouver, BC
Jamie	Wong	Glashan P.S.	Ottawa, ON
Melanie	Wong	University of Toronto Schools	Toronto, ON
Sebastian	Wong	Yale S.S.	Abbotsford, BC
Kefan	Xie	Macklin P.S.	Scarborough, ON
Alan	Xu	Burnaby South S.S.	Burnaby, BC
Julie	Xu	F.E. Osborne J.H.S.	Calgary, AB
Han	Yan	University of Toronto Schools	Toronto, ON
Zeya	Yang	Henry Munro M.S.	Ottawa, ON
Tsviatana	Yatsevich	E.S. Paul Gérin Lajoie d'Outremont	Outremont, QC
Jeffrey	Yu	University of Toronto Schools	Toronto, ON
Richard	Yu	Forest Hill P.S.	Toronto, ON
Josh	Zehr	Tavistock P.S.	Tavistock, ON
Andrew	Zhang	Ramer Wood P.S.	Markham, ON
Bridget	Zhang	John G. Althouse M.S.	Toronto, ON
May	Zhang	Camilla Senior P.S.	Mississauga, ON
Steven	Zhang	Ecole Father Beauregard School	Fort McMurray, AB
Haonan	Zhou	J.B. Tyrrell Sr. P.S.	Toronto, ON
Fay	Zhu	Ryerson M.S.	Hamilton, ON
Zimu	Zhu	Cummer Valley M.S.	North York, ON



**Perfect scores of 150 for Grade 7 Students /  
Notes parfaites de 150 pour les élèves de 7<sup>e</sup> année (Sec. I)**

Name/Nom		School/École	Location/Endroit
Gaurav	Ahuja	I.C.A.E.	Troy, MI
Mary Krysllette	Bunyi	Mathematics Trainer's Guild Philippines	Zamboanga City, Philippines
Rigel Stewart	Espiritu	Mathematics Trainer's Guild Philippines	Zamboanga City, Philippines
Robin Galileo	Gene	Mathematics Trainer's Guild Philippines	Zamboanga City, Philippines
Neil	Gurram	I.C.A.E.	Troy, MI
Randy	Jai	I.C.A.E.	Troy, MI
Aaron	Lin	Chinese International	Braemar Hill, Hong Kong
Rishi	Shah	I.C.A.E.	Troy, MI
John Francis	Simeon	Mathematics Trainer's Guild Philippines	Zamboanga City, Philippines
Kennarol	Sychingping	Mathematics Trainer's Guild Philippines	Zamboanga City, Philippines
Kevin	Wu	I.C.A.E.	Troy, MI

**Perfect scores of 150 for Grade 8 Students /  
Notes parfaites de 150 pour les élèves de 8<sup>e</sup> année (Sec. II)**

Name/Nom		School/École	Location/Endroit
Carlo Francisco	Adajar	Mathematics Trainer's Guild Philippines	Zamboanga City, Philippines
Radha	Arghal	I.C.A.E.	Troy, MI
Francesca	Choi	Mathematics Trainer's Guild Philippines	Zamboanga City, Philippines
Andrew	Gulick	I.C.A.E.	Troy, MI
Alan	Huang	I.C.A.E.	Troy, MI
Sandhya	Kajeepeta	Abbott Middle School	West Bloomfield, MI
Sudharshan	Mohanram	I.C.A.E.	Troy, MI
Misha	Nasrollazadeh	Abbott Middle School	West Bloomfield, MI
Raymond	See	Chinese International	Braemar Hill, Hong Kong
Allen	Shen	I.C.A.E.	Troy, MI
Charles	Zhang	I.C.A.E.	Troy, MI