

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

2003 Results

Fryer Contest
(Grade 9)

Galois Contest
(Grade 10)

Hypatia Contest
(Grade 11)

2003 Résultats

Concours Fryer
(9^e année – Sec. III au Québec)

Concours Galois
(10^e année – Sec. IV au Québec)

Concours Hypatie
(11^e année – Sec. V au Québec)

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



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



Canadian Institute of Actuaries
Institut canadien des actuaires



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



Sybase
Inc. (Waterloo)



iAnywhere Solutions

C.M.C. Contributors:
Avec l'appui de :

Manulife Financial
Financière Manuvie

Table of Contents

Table des matières

Foreword / Avant-propos	1
Comments on the Paper / Commentaires sur l'épreuve	1
Fryer Gold Standard / Palmarès individuel Fryer	2
Distribution of Marks - Fryer / Distribution des points - Fryer	4
Averages - Fryer / Moyenne - Fryer	4
Galois Gold Standard / Palmarès individuel Galois	5
Distribution of Marks - Galois / Distribution des points - Galois	7
Averages - Galois / Moyenne - Galois	7
Hypatia Gold Standard / Palmarès individuel Hypatie	8
Distribution of Marks - Hypatia / Distribution des points - Hypatie	10
Averages - Hypatia / Moyenne - Hypatie	10
Student Rankings / Classement des élèves	11
Enrolment by Province / Inscription par province	11

The Competition Organization

Organisation du Concours

Executive Committee / Comité exécutif	Barry Ferguson (Director / Directeur), Peter Crippin, Ruth Malinowski, Ian VanderBurgh
Fryer Galois Hypatia Committee / Comité Fryer Galois Hypatie	Jim Nakamoto (Chair / président), Sir Winston Churchill Secondary School, Vancouver Don Curran, (retired / retraité), Oshawa Rad de Peiza (retired / retraité), Agincourt André Ladouceur (retired / retraité), Gloucester Tino Lenti, Lo Ellen Park Secondary School, Sudbury Peter O'Hara, Glendale High School, Tillsonburg
Chief Markers / Correcteurs en chef	Ed Anderson, (retired / retraité), University of Waterloo Lloyd Auckland, (retired / retraité), University of Waterloo Larry Rice, (retired / retraité), Scarborough
Computer Operation / Ordinateur	Steve Breen, University of Waterloo Don Cowan, University of Waterloo
Publications / Publications	Bonnie Findlay, University of Waterloo
Preparation of Materials / Documentation	Bonnie Findlay, University of Waterloo
French Edition / Version française	André Ladouceur, Réseau de l'est, Vanier Robert Laliberté, École secondaire publique Louis-Riel, Gloucester Gérard Proulx, Collège Catholique Franco-Ouest, Ottawa Rodrigue St-Jean, École secondaire Embrun, Embrun
Technical Assistants / Adjoint à la technique	Joanne Kursikowski, Linda Schmidt, Kim Schnarr, Jennifer Kitchen, Kendra Sanders, Judy Fox
Validation Committee / Comité de validation	John Barsby, St. John's-Ravenscourt School, Winnipeg Jean Collins, (retired / retraité), Thornhill Tom Griffiths, (retired / retraité), London Frank Rachich (retired / retraité), Ingersoll

The Executive Committee of the Canadian Mathematics Competition is very pleased to announce the results of the first Fryer, Galois and Hypatia Contests. Creating a new set of Contests was a very exciting project for us, and we were very happy with the response that we received with just over 10000 students registering to write these Contests. Marking these Contests in their first year was an interesting task for all of those who participated - it was fascinating to see the variety of approaches and techniques used by students in Grades 9, 10 and 11.

We strongly believe that the writing of mathematics by students is a very important part of learning mathematics, as is problem solving. We hope that these new Contests present students with a combination of these two aspects that they will enjoy and continue to work at. We also decided to include the Extensions in the Contests as activities that can be used after the Contest by teachers to build on what students have worked on. For us, writing these Contests should be part of an ongoing enrichment activity that could include using our online FGH Workshops, writing the FGH Contests, going back over the Contest problems with students, and then letting students try the Extensions when they have more time.

Thank you for your continued support of the Canadian Mathematics Competition. We hope that you enjoyed and learned from these new Contests as much as we did.

Executive Committee
Canadian Mathematics Competition

Le comité exécutif du Concours canadien de mathématiques a l'honneur d'annoncer les résultats des premiers concours Fryer, Galois et Hypatia. La création d'un nouvel ensemble de concours était pour nous un projet très excitant, et nous étions très heureux de la réaction obtenue, un peu plus de 10 000 élèves s'étant inscrits à ces concours. La correction de ces concours, au cours de leur première année d'existence, constituait une tâche intéressante pour tous ceux qui y ont participé; il était fascinant de voir la diversité des approches et des techniques utilisées par des élèves de 9^e, de 10^e et 11^e année.

Nous croyons fermement que le fait que les élèves écrivent des mathématiques constitue une part très importante de l'apprentissage des mathématiques, tout comme la résolution de problèmes. Nous espérons que ces nouveaux concours présentent aux élèves un agencement de ces deux aspects qu'ils sauront apprécier et qu'ils continueront d'étudier. Nous avons également décidé d'inclure les extensions dans les concours à titre d'activités que les enseignants peuvent utiliser après le concours pour renforcer les exercices accomplis par les élèves. Pour nous, la rédaction de ces concours devrait s'inscrire dans le cadre d'une activité d'enrichissement continue qui pourrait notamment être constituée de nos ateliers FGH en ligne, de la rédaction des concours FGH et du retour, avec les élèves, sur des problèmes posés pendant le concours. S'il reste du temps aux élèves, ils pourraient tenter de résoudre les extensions.

Merci de votre soutien constant envers le Concours canadien de mathématiques. Nous espérons que vous avez apprécié ces nouveaux concours autant que nous et que vous avez eu l'occasion d'en tirer parti autant que nous.

Comité exécutif
Concours canadien de mathématiques

Comments on the Paper

Commentaires sur l'épreuve

Detailed comments on the problems from the 2003 Fryer, Galois and Hypatia Contests will be available in the early Fall.

Des commentaires détaillés sur les problèmes des concours Fryer, Galois et Hypatia 2003 seront disponibles au début de l'automne.

The top 25% of the competitors in each of the three Contests were divided into three categories: Gold Standard, Silver Standard and Bronze Standard, in the ratio 1:2:3. The names of those students achieving the Gold Standard (that is, scoring in roughly the top 4%) are listed alphabetically below for each Contest.

Les candidats qui se classent dans le premier quart du classement dans chacun des trois concours ont été répartis en trois catégories : le niveau « or », le niveau « argent » et le niveau « bronze », selon le ratio 1:2:3. Le nom des étudiant qui ont obtenu le niveau « or » (c'est-à-dire ceux qui se classent globalement parmi les premiers 4 p. 100) est donné par ordre alphabétique ci-dessous pour chaque concours.

SUNIL	AGARWAL	ICAE	TROY, MICHIGAN
JOAN	ANG	A.B. LUCAS S.S.	LONDON, ON
STEPHEN	AUGENSTEIN	ICAE	TROY, MICHIGAN
PETER	BADEA	RICHMOND HILL H.S.	RICHMOND HILL, ON
JEFFREY	BAER	ACADEMY FOR GIFTED CHILDREN	RICHMOND HILL, ON
VIVEK	BEHERA	ICAE	TROY, MICHIGAN
LAUREN	BLAKE	ANNANDALE SCHOOL	TILLSONBURG, ON
JOEY	BOLDUC GILBERT	ECOLE POLYVALENTE ST-FRANCOIS	BEAUCEVILLE-OUEST, QC
DAVID	BOUCHARD	LAKE OF TWO MOUNTAINS H.S.	DEUX MONTAGNES, QC
BORIS	BRAVERMAN	BRANTON J.H.S.	CALGARY, AB
CIAN	CASSIDY	COLAISTE AN SPIORAID NAOIMH	CORK, IRELAND
JONATHAN	CHAN	UPPER CANADA COLLEGE	TORONTO, ON
KEN	CHAN	MARKHAM D.H.S.	MARKHAM, ON
NICHOLAS	CHAN	UPPER CANADA COLLEGE	TORONTO, ON
SHELLEY	CHAN	HAVERGAL COLLEGE	TORONTO, ON
SHANNON	CHANG	HANDSWORTH S.S.	NORTH VANCOUVER, BC
MO	CHEN	WINDERMERE S.S.	VANCOUVER, BC
RICK	CHEN	DR. NORMAN BETHUNE C.I.	SCARBOROUGH, ON
ALFONSO	CHENG	UPPER CANADA COLLEGE	TORONTO, ON
HANG	CHENG	E.S. ST-LUC	MONTREAL, QC
YOLANDA	CHEUNG	DON MILLS C.I.	DON MILLS, ON
MICHAEL	CHITAYAT	LOWER CANADA COLLEGE	MONTREAL, QC
SALLY	CHIU	DR. NORMAN BETHUNE C.I.	SCARBOROUGH, ON
JEONGWOO	CHOI	HANDSWORTH S.S.	NORTH VANCOUVER, BC
SIMON	CHOY	UPPER CANADA COLLEGE	TORONTO, ON
JUNIOR	CHUANG	SEAQUAM S.S.	NORTH DELTA, BC
BENJAMIN	CHUNG	UPPER CANADA COLLEGE	TORONTO, ON
ALEXANDRA	CLARK	PINE RIDGE S.S.	PICKERING, ON
EMILY	CLIFF	KENILWORTH J.H.S.	EDMONTON, AB
ALEX	COLLINS	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
JOHNNY	COTOC	ERINDALE S.S.	MISSISSAUGA, ON
SHANE	D'SOUZA	ST. FRANCIS XAVIER S.S.	MISSISSAUGA, ON
VLAD	DZHABAROV	DAVID THOMPSON S.S.	VANCOUVER, BC
LIAM	EDGINTON GREEN	ST. JOHN'S-RAVENSCOURT SCHOOL	WINNIPEG, MB
SIMON	FARNELL	QUEBEC H.S.	QUEBEC CITY, QC
JOEL	FOX	MOSCROP S.S.	BURNABY, BC
PETER	GEORGAS	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
LAUREN	GORDON	ACADEMY FOR GIFTED CHILDREN	RICHMOND HILL, ON
YE	GU	SECONDAIRE ANTOINE BROSSARD	BROSSARD, QC
SHEEVA	HAGHIGHAT	ACADEMY FOR GIFTED CHILDREN	RICHMOND HILL, ON
CALVIN	HO	F. E. OSBORNE H.S.	CALGARY, AB
CONRAD	HO	UPPER CANADA COLLEGE	TORONTO, ON
BRIAN	HOU	ICAE	TROY, MICHIGAN
KEVIN	HUANG	HANDSWORTH S.S.	NORTH VANCOUVER, BC
MIKE	HUANG	ICAE	TROY, MICHIGAN

STEVEN	HUANG	WOODBINE J.H.S.	NORTH YORK, ON
KENT	HUYNH	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
JEMIN	HWANGBO	LANGLEY S.S.	LANGLEY, BC
TUDOR	IATAN	ECOLE INTER. DE MONTREAL	WESTMOUNT, QC
ROGER	JIA	ICAE	TROY, MICHIGAN
HELEN	JIANG	ICAE	TROY, MICHIGAN
UROS	KALABIC	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
HELENA	KANG	ICAE	TROY, MICHIGAN
STEVEN	KARP	LORD BYNG S.S.	VANCOUVER, BC
HUN TAE	KIM	ST. JOHN'S-RAVENSCOURT SCHOOL	WINNIPEG, MB
TEDDY	KO	SEAQUAM S.S.	NORTH DELTA, BC
EBRAHIM	KOHANDEL	F. E. OSBORNE H.S.	CALGARY, AB
MICHAEL	KWAN	CRESCENT SCHOOL	WILLOWDALE, ON
KEVIN	LAI	ICAE	TROY, MICHIGAN
DAVIE	LAM	PORT MOODY S.S.S.	PORT MOODY, BC
CHRIS	LANGAN	WOBURN C.I.	TORONTO, ON
AMY	LAU	HAVERGAL COLLEGE	TORONTO, ON
CHONGHOON	LEE	STREETSVILLE S.S.	MISSISSAUGA, ON
JASON	LEE	SOUTHBRIDGE SCHOOL	SURREY, BC
KEVIN	LEE	SOUTHBRIDGE SCHOOL	SURREY, BC
MICHAEL	LEE	THE WOODLANDS S.	MISSISSAUGA, ON
GARY	LI	PIERRE ELLIOTT TRUDEAU H.S.	MARKHAM, ON
SCOTT	LIN	MOSCROP S.S.	BURNABY, BC
ELLIOT	LIPNOWSKI	ST. JOHN'S-RAVENSCOURT SCHOOL	WINNIPEG, MB
LUCY	LIU	SIR WINSTON CHURCHILL S.S.	VANCOUVER, BC
SHERRY	LIU	DAVID THOMPSON S.S.	VANCOUVER, BC
TUO	LIU	ECOLE INTER. DE MONTREAL	WESTMOUNT, QC
YINGWEI	LIU	LISGAR C.I.	OTTAWA, ON
TYLER	LONGO	UPPER CANADA COLLEGE	TORONTO, ON
MATTHEW	LOW	STEVESTON S.S.	RICHMOND, BC
THEODORE	LUI	UPPER CANADA COLLEGE	TORONTO, ON
BENSON	LUNG	ACADEMY FOR GIFTED CHILDREN	RICHMOND HILL, ON
STEVEN	LUO	MAGEE S.S.	VANCOUVER, BC
MICHELLE	LUONG	CEDARBRAE C.I.	SCARBOROUGH, ON
JINGJING	MA	VINCENT MASSEY S.S.	WINDSOR, ON
NAN	MA	WOODBINE J.H.S.	NORTH YORK, ON
RICHARD	MA	VINCENT MASSEY S.S.	WINDSOR, ON
KIRK	MACTAVISH	PORT PERRY H.S.	PORT PERRY, ON
JOHN	MAIDENS	KENILWORTH J.H.S.	EDMONTON, AB
DAI	MICHAEL	EARL HAIG S.S.	NORTH YORK, ON
THOMAS	MORRIS	JOHN TAYLOR C.I.	WINNIPEG, MB
ARNAU	MOUDGIL	ICAE	TROY, MICHIGAN
KATHLEEN	MOXLEY	ALL SAINTS CATHOLIC H.S.	KANATA, ON
WILL	NEDIGER		LONDON, ON
ELDO	NG	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
SAMEER	NURMOHAMED	JOHN WARE J.H.S.	CALGARY, AB
ZACHARY	OBRONT	CRESCENT SCHOOL	WILLOWDALE, ON
DAVID	PARK	T.A. BLAKELOCK H.S.	OAKVILLE, ON
LAURA	PARK	LORETTO ABBEY	TORONTO, ON
YONGHO	PARK	RICHMOND HILL H.S.	RICHMOND HILL, ON
PIERRE	PASCONE	LAKE OF TWO MOUNTAINS H.S.	DEUX MONTAGNES, QC
LIAM	PEUCKERT	ECOLE INTER. DE MONTREAL	WESTMOUNT, QC
ALAN	PEZESHKI	ICAE	TROY, MICHIGAN
TANMAY	PRAKASH	ICAE	TROY, MICHIGAN
DAVID	QAN	VINCENT MASSEY S.S.	WINDSOR, ON
SASHA	RAMANI	GORDON GRAYDON MEMORIAL S.S.	MISSISSAUGA, ON

ADAM	RAY	ST. MATTHEW H.S.	ORLEANS, ON
NISANTH	REDDY	ICAE	TROY, MICHIGAN
ALEX	RICHARDS	PORT PERRY H.S.	PORT PERRY, ON
ONEN	RIPPEL	MAGEE S.S.	VANCOUVER, BC
KRISTEN	SABOURIN	ST. HELENA SCHOOL	CALGARY, AB
ASRA	SHAIK	ICAE	TROY, MICHIGAN
PENG	SHI	HIGHLAND J.H.S.	NORTH YORK, ON
MICHELLE	SIU	STEVESTON S.S.	RICHMOND, BC
STANLEY	SO	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
DUSTIN	STYNER	QUEEN ELIZABETH H.S.	CALGARY, AB
JOHNNY	SU	ERIC HAMBER S.S.	VANCOUVER, BC
DANNY	SUH	BARRIE NORTH C.I.	BARRIE, ON
KEVIN	TITUS	ANNANDALE SCHOOL	TILLSONBURG, ON
NICHOLAS	TRIANAFILLOU	INST. FOR ACADEMIC EXCELLENCE	SAGINAW, MICHIGAN
ALAN	TSENG	WOODBINE J.H.S.	NORTH YORK, ON
CLARENCE	TSO	UPPER CANADA COLLEGE	TORONTO, ON
SINAN	ULUSOY	WOBURN C.I.	TORONTO, ON
OLIVER	WATT MEYER	UPPER CANADA COLLEGE	TORONTO, ON
RACHEL	WHITTY	BRACEBRIDGE & MUSKOKA LAKES S.S.	BRACEBRIDGE, ON
ALEX	WICE	LEASIDE H.S.	EAST YORK, ON
ALAN	WONG	DAVID THOMPSON S.S.	VANCOUVER, BC
ZHIYUAN	WU	VINCENT MASSEY S.S.	WINDSOR, ON
SIYUAN	XING	VINCENT MASSEY S.S.	WINDSOR, ON
DANIEL	YE	SIR WINSTON CHURCHILL S.S.	VANCOUVER, BC
JUSTIN	YOUNG	WOBURN C.I.	TORONTO, ON
LEON	YUEN	ERIC HAMBER S.S.	VANCOUVER, BC
ALLEN	ZHANG	BURNABY SOUTH S.S.	BURNABY, BC
ANDREW	ZHENG	WOBURN C.I.	TORONTO, ON
JOHN	ZHOU	ICAE	TROY, MICHIGAN

Distribution of Marks - Distribution des points

Averages - Moyenne

Distribution	Number	cumm. %	Question	Average
35-40	83	2.88	1	6.2
30-34	156	8.30	2	3.7
25-29	298	18.65	3	4.6
20-24	436	33.78	4	2.3
15-19	622	55.38	score	16.8
10-14	700	79.69		
0-9	585	100.00		

2880

Please visit our web site at:

www.cemc.uwaterloo.ca

to download the 2003 Fryer, Galois and Hypatia Contests, plus full solutions.

Veuillez visiter notre site Web à

www.cemc.uwaterloo.ca

pour télécharger les concours Fryer, Galois et Hypatia 2003, avec solutions complètes.

The top 25% of the competitors in each of the three Contests were divided into three categories: Gold Standard, Silver Standard and Bronze Standard, in the ratio 1:2:3. The names of those students achieving the Gold Standard (that is, scoring in roughly the top 4%) are listed alphabetically below for each Contest.

Les candidats qui se classent dans le premier quart du classement dans chacun des trois concours ont été répartis en trois catégories : le niveau « or », le niveau « argent » et le niveau « bronze », selon le ratio 1:2:3. Le nom des étudiants qui ont obtenu le niveau « or » (c'est-à-dire ceux qui se classent globalement parmi les premiers 4 p. 100) est donné par ordre alphabétique ci-dessous pour chaque concours.

LIONAL	AUSTIN	PRESENTATION COLLEGE	SAN FERNANDO, TRINIDAD
ANDREI	BORAC	DON MILLS C.I.	DON MILLS, ON
NATALIE	CHAN	DR. NORMAN BETHUNE C.I.	SCARBOROUGH, ON
ERIN	CHANG	BRANKSOME HALL SCHOOL	TORONTO, ON
ANTHONY	CHIU	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
EUNAE	CHO	PORT CREDIT S.S.	MISSISSAUGA, ON
ANITA	CHOI	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
DIANA	CHOI	BRANKSOME HALL SCHOOL	TORONTO, ON
HON SAN	CHONG	PINETREE S.S.	COQUITLAM, BC
YONJOON	CHOO	PINE RIDGE S.S.	PICKERING, ON
MARINE	CLARACQ	SECONDAIRE ANTOINE BROSSARD	BROSSARD, QC
TOM	COVO	LOWER CANADA COLLEGE	MONTREAL, QC
SURRIN	DEEN	PRESENTATION COLLEGE	SAN FERNANDO, TRINIDAD
JIMMY	DENG	EARL HAIG S.S.	NORTH YORK ON
CORINNE	DEWAR	DR. JOHN HUGH GILLIS SCHOOL	ANTIGONISH, NS
ALEXANDER	DURAND	ROYAL ST. GEORGE'S COLLEGE	TORONTO, ON
ERNIE	EBERT	VINCENT MASSEY S.S.	WINDSOR, ON
JASON	ELLIS	PRESTON H.S.	CAMBRIDGE, ON
ROBERT	EMBREE	DR. JOHN HUGH GILLIS SCHOOL	ANTIGONISH, NS
MICHAEL	FU	UPPER CANADA COLLEGE	TORONTO, ON
BOWEN	GAO	PORT MOODY S.S.S.	PORT MOODY, BC
YANING	GAO	E.S. ST-LUC	MONTREAL, QC
ELYOT	GRANT	CAMERON HEIGHTS C.I.	KITCHENER, ON
DEEP	GUHA	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
ELISABETH	HAN	CATHOLIC CENTRAL H.S.	LONDON, ON
POLLY	HAN	WESTERN CANADA H.S.	CALGARY, AB
VIVIAN	HUANG	HANDSWORTH S.S.	NORTH VANCOUVER, BC
IOANA	IVAN	DON MILLS C.I.	DON MILLS, ON
HYUNJONG	JIN	PORT MOODY S.S.S.	PORT MOODY, BC
PATRICK	KAIFOSH	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
PATRICK	KANG	EARL HAIG S.S.	NORTH YORK, ON
AIDIN	KASHIGAR		LONDON, ON
AUDREY	KERTESZ	HENRY WISE WOOD S.H.S.	CALGARY, AB
STEVE	KIM	PORT MOODY S.S.S.	PORT MOODY, BC
MIKE	KLASSEN	STRATFORD CENTRAL S.S.	STRATFORD, ON
RUSI	KOLEV	BURNABY SOUTH S.S.	BURNABY, BC
IFEDAYO	KUYE	UPPER CANADA COLLEGE	TORONTO, ON
DANIEL	KWAK	LOWER CANADA COLLEGE	MONTREAL, QC
KENNETH	LAM	UPPER CANADA COLLEGE	TORONTO, ON
KEVIN	LAM	ST. JOHN'S-RAVENSCOURT SCHOOL	WINNIPEG, MB
ALEXANDRE	LANG	SECONDAIRE ANTOINE BROSSARD	BROSSARD, QC
ERIC	LAU	SIR JOHN A. MACDONALD C.I.	AGINCOURT, ON
CALVIN	LEE	UPPER CANADA COLLEGE	TORONTO, ON
HYUP	LEE	ERIC HAMBER S.S.	VANCOUVER, BC
JIYOUN	LEE	RIVERSIDE S.S.	PORT COQUITLAM, BC
TAEHYOUNG	LEE	EARL OF MARCH S.S.	KANATA, ON
DADID	LEUNG	DAVID THOMPSON S.S.	VANCOUVER, BC

CHENEN	LIANG	WATERLOO C.I.	WATERLOO, ON
WEI	LIANG	JARVIS C.I.	TORONTO, ON
MEGAN	LICKLEY	LO-ELLEN PARK S.S.	SUDBURY, ON
PENG	LIU	GLEBE C. I.	OTTAWA, ON
TAOTAO	LIU	VINCENT MASSEY S.S.	WINDSOR, ON
HO MAN	LO	TRADITIONAL LEARNING ACADEMY	COQUITLAM, BC
PETER	LOBSINGER	TWIN LAKES S.S.	ORILLIA, ON
WILLIAM	MA	WATERLOO C.I.	WATERLOO, ON
MIKE	MCDONALD	WATERLOO C.I.	WATERLOO, ON
STEVEN	MELENCHUK	HENRY WISE WOOD S.H.S.	CALGARY, AB
PIERRE ALE	MENARD	COLLEGE LAVAL	LAVAL, QC
DARRYL	METCALF	LEASIDE H.S.	EAST YORK, ON
PAUL	MITASSOV	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
NICK	MURDOCH	LONDON CENTRAL S.S.	LONDON, ON
MADISON	MYRFIELD	PORT MOODY S.S.S.	PORT MOODY, BC
ADITYA	NATARAJAN	WILLIAM LYON MACKENZIE C.I.	TORONTO, ON
SEUNG	PARK	WESTERN CANADA H.S.	CALGARY, AB
JOANNA	PATTERSON	HOLY TRINITY SCHOOL	RICHMOND HILL, ON
CATALIN	PATULEA	COLL. CATH. FRANCO-OUEST	NEPEAN, ON
LINDEN	PETERS	QUEEN ELIZABETH H.S.	CALGARY, AB
AMY	PIKE	BISHOPS COLLEGE	ST. JOHN'S, NL
KEVIN	POON	DON MILLS C.I.	DON MILLS, ON
ERIC	POSPISIL	MOSCROP SECONDARY SCHOOL	BURNABY, BC
NISSAN	POW	PRESENTATION COLLEGE	SAN FERNANDO, TRINIDAD
YUAN	QI		LONDON, ON
KO	RONNY	TRINITY COLLEGE SCHOOL	PORT HOPE, ON
LASHA	SHAW	FORT RICHMOND C.I.	WINNIPEG, MB
JEN HSIANG	SHEN	LORD BYNG S.S.	VANCOUVER, BC
JENNIFER	SHON	HANDSWORTH S.S.	NORTH VANCOUVER, BC
DAVINDER	SINGH	ST. JOHN'S-RAVENS COURT SCHOOL	WINNIPEG, MB
GEOFFREY	SIU	LONDON CENTRAL S.S.	LONDON, ON
ALLEN	SU	SEAQUAM S.S.	NORTH DELTA, BC
YUJIA	SUN	GORDON BELL H.S.	WINNIPEG, MB
TSUNG YIN	TAI	E.S. ST-LUC	MONTREAL, QC
ERIC	TRAN	WESTERN CANADA H.S.	CALGARY, AB
CHUNG MIN	TSE	FIELDSTONE DAY SCHOOL	TORONTO, ON
JENNY	WANG	DON MILLS C.I.	TORONTO, ON
ZHUO	WANG	EARL HAIG S.S.	NORTH YORK, ON
ANGELA	WHANG	MOSCROP S.S.	BURNABY, BC
JOSHUA	WONG	ST. FRANCIS XAVIER S.S.	MISSISSAUGA, ON
VINCENT	WOO	ERIC HAMBER S.S.	VANCOUVER, BC
ALEX	XU	ICAE	TROY, MICHIGAN
WENXIN	XU	DON MILLS C.I.	DON MILLS, ON
JENNY	YANG	WESTDALE S.S.	HAMILTON, ON
KAI	YANG	DR. NORMAN BETHUNE C.I.	SCARBOROUGH, ON
JASON	YAU	MILLIKEN MILLS H.S.	UNIONVILLE, ON
JIMMY PENG	YE	SIR JOHN A. MACDONALD C.I.	AGINCOURT, ON
LOK KIN	YEUNG	ST. FRANCIS XAVIER S.S.	MISSISSAUGA, ON
RANI	YEUNG	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
JOE	YU	EARL OF MARCH S.S.	KANATA, ON
KEVIN	YU	UPPER CANADA COLLEGE	TORONTO, ON
YUFEI	ZHAO	DON MILLS C.I.	DON MILLS, ON
CHENCHEN	ZHANG	LISGAR C.I.	OTTAWA, ON
FAN	ZHANG	GLEBE C.I.	OTTAWA, ON
KEN	ZHANG	WESTERN CANADA H.S.	CALGARY, AB
JING	ZHOU	WATERLOO C.I.	WATERLOO, ON

RYAN	ZHOU	ADAM SCOTT C.&V.I.	PETERBOROUGH, ON
TONY	ZHOU	GLENFOREST S.S.	MISSISSAUGA, ON
YUXIANG	ZHOU	RICHMOND HILL H.S.	RICHMOND HILL, ON

Distribution of Marks - Distribution des points

Averages - Moyenne

Distribution	Number	cumm. %
35-40	50	2.20
30-34	117	7.35
25-29	245	18.14
20-24	424	36.81
15-19	543	60.72
10-14	510	83.18
0-9	382	100.00

Question	Average
1	5.4
2	5.5
3	4.3
4	2.0
score	17.2

2271

Please visit our web site at:

www.cemc.uwaterloo.ca

to download the 2003 Fryer, Galois and Hypatia Contests, plus full solutions.

Veillez visiter notre site Web à

www.cemc.uwaterloo.ca

pour télécharger les concours Fryer, Galois et Hypatie 2003, avec solutions complètes.

The top 25% of the competitors in each of the three Contests were divided into three categories: Gold Standard, Silver Standard and Bronze Standard, in the ratio 1:2:3. The names of those students achieving the Gold Standard (that is, scoring in roughly the top 4%) are listed alphabetically below for each Contest.

Les candidats qui se classent dans le premier quart du classement dans chacun des trois concours ont été répartis en trois catégories : le niveau « or », le niveau « argent » et le niveau « bronze », selon le ratio 1:2:3. Le nom des étudiant qui ont obtenu le niveau « or » (c'est-à-dire ceux qui se classent globalement parmi les premiers 4 p. 100) est donné par ordre alphabétique ci-dessous pour chaque concours.

MEHDI	ABDEH KOLAHCHI	HALIFAX WEST H.S.	HALIFAX, NS
TREVOR	ARMSTRONG	LEASIDE H.S.	EAST YORK, ON
JACOB	BASKIN	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
LI ANNE	CHAN	WOBURN C.I.	TORONTO, ON
WILLIAM	CHAN	ST. GEORGE'S SCHOOL	VANCOUVER, BC
TONY	CHEN	SEAQUAM S.S.	NORTH DELTA, BC
LEO	CHENG	DAVID THOMPSON S.S.	VANCOUVER, BC
WILLIAM	CHO	SIR WINSTON CHURCHILL S.S.	VANCOUVER, BC
MELISSA	CHOW	DR. NORMAN BETHUNE C.I.	SCARBOROUGH, ON
STEPHEN	CHOY	UPPER CANADA COLLEGE	TORONTO, ON
KAREN	CHU	DAVID THOMPSON S.S.	VANCOUVER, BC
FRANCIS	CHUNG	A.B. LUCAS S.S.	LONDON, ON
CHRIS	CODD	DON MILLS C.I.	DON MILLS, ON
ANDREW	CRITCH	CLARENVILLE INTEGRATED H.S.	CLARENVILLE, NL
BARTON	DU	SEAQUAM S.S.	NORTH DELTA, BC
NICHOLAS	ENGELKING	DON MILLS C.I.	DON MILLS, ON
FAN	FENG	VINCENT MASSEY S.S.	WINDSOR, ON
FLORINA	FENG	SIR WINSTON CHURCHILL S.S.	VANCOUVER, BC
PETER	FOLTIN	THE WOODLANDS SCHOOL	MISSISSAUGA, ON
MATT	FOLZ	PORT MOODY S.S.S.	PORT MOODY, BC
YIN	GE	ECOLE INTER. DE MONTREAL	WESTMOUNT, QC
WILL	GUEST	ST. JOHN'S-RAVENSCOURT SCHOOL	WINNIPEG, MB
EZRA	HAHN	YESHIVAT BNEI AKIVA	DOWNSVIEW, ON
LUKE	HAN	A.B. LUCAS S.S.	LONDON, ON
WEIBO	HAO	VINCENT MASSEY S.S.	WINDSOR, ON
SARAH	HOGARTH		LONDON, ON
CHEN	HUANG	SIR WINSTON CHURCHILL S.S.	VANCOUVER, BC
JOSEPH	HUANG	FRONTENAC S.S.	KINGSTON, ON
IAN	HUNG	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
JOE	HUNG	DAVID THOMPSON S.S.	VANCOUVER, BC
CHARLEY	JIANG	VINCENT MASSEY S.S.	WINDSOR, ON
WENQIAN	JIANG	JARVIS C.I.	TORONTO, ON
CHRISTOPHER	JONES	A.B. LUCAS S.S.	LONDON, ON
REBECCA	KO	ERIC HAMBER S.S.	VANCOUVER, BC
JANOS	KRAMAR	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
JIM	KUO	MARKHAM D.H.S.	MARKHAM, ON
LAURENT	LEBEAU MARTIN	E.S. ST-LUC	MONTREAL, QC
FIONA	LEE	DON MILLS C.I.	DON MILLS, ON
JOHN	LEE	THE WOODLANDS SCHOOL	MISSISSAUGA, ON
MICHAEL	LEE	HENRY WISE WOOD S.H.S.	CALGARY, AB
SANG OH	LEE	EARL OF MARCH S.S.	KANATA, ON
SUE JEAN	LEE	BISHOP STRACHAN SCHOOL	TORONTO, ON
WOORAM	LEE	HANDSWORTH S.S.	NORTH VANCOUVER, BC
ALEX	LEONG	WATERLOO C.I.	WATERLOO, ON
ADAM	LERER	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
CHRIS	LI	UPPER CANADA COLLEGE	TORONTO, ON

HONGYI	LI	SIR WINSTON CHURCHILL H.S.	CALGARY, AB
YUKAI	LI	VINCENT MASSEY S.S.	WINDSOR, ON
ZHUOFAN	LI	A.B. LUCAS S.S.	LONDON, ON
ZHUORAN	LI	E.L. CROSSLEY S.S.	FONTHILL, ON
MICHAEL	LIPNOWSKI	ST. JOHN'S-RAVENSCOURT SCHOOL	WINNIPEG, MB
ANDY	LIU	SIR WINSTON CHURCHILL H.S.	CALGARY, AB
RUI	MA	VINCENT MASSEY S.S.	WINDSOR, ON
ANDREW	MAO	A.B. LUCAS S.S.	LONDON, ON
OWEN	MATTHEWS	F.E. MADILL S.S.	WINGHAM, ON
ANDREA	MCCORMICK	WESTERN CANADA H.S.	CALGARY, AB
JIE	MENG	LISGAR C.I.	OTTAWA, ON
AMIRALI	MODIR SHANECHI	DON MILLS C.I.	DON MILLS, ON
FLORIN	MUNTEANU	ECOLE SECONDAIRE GEORGES-VANIER	MONTREAL, QC
ANDREW	NGO	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
DANIEL	PAREJA	TEMPLETON S.S.	VANCOUVER, BC
JENNIFER	PARK	BLUEVALE C.I.	WATERLOO, ON
KAROL	PRZYBYTKOWSKI	COLLEGE DUROCHER/ST-LAMBERT	ST-LAMBERT, QC
ALI REZA	SHARAFAT	GLEBE C.I.	OTTAWA, ON
NIKATE	SINGH	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
ADRIAN	SO	DON MILLS C.I.	DON MILLS, ON
ROCKY	SO	MAGEE S.S.	VANCOUVER, BC
WAI YIP	SO	L'AMOREAUX C.I.	AGINCOURT, ON
EVAN	STRATFORD	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
JOHN	SUN	VINCENT MASSEY S.S.	WINDSOR, ON
SARAH	SUN	HOLY TRINITY ACADEMY	OKOTOKS, AB
YI	SUN	EARL HAIG S.S.	NORTH YORK, ON
LE	TANG	DAVID THOMPSON S.S.	VANCOUVER, BC
MICHAEL	TAO	WATERLOO C.I.	WATERLOO, ON
EVAN	THOMPSON	ST. JOHN'S-RAVENSCOURT SCHOOL	WINNIPEG, MB
JACOB	TSIMERMAN	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
LUKE	WAN	ERIC HAMBER S.S.	VANCOUVER, BC
FRANK	WANG	VINCENT MASSEY S.S.	WINDSOR, ON
JINGWEN	WANG	LONDON CENTRAL S.S.	LONDON, ON
LINDA	WANG	VINCENT MASSEY S.S.	WINDSOR, ON
RUIQING	WANG	POLYVALENTE MGR. RICHARD	VERDUN, QC
THOMAS	WIONZEK	BLUEVALE C.I.	WATERLOO, ON
ALEX	WRIGHT	JOHN F. ROSS CVI	GUELPH, ON
NATHANAEL	WU	WESTERN CANADA H.S.	CALGARY, AB
EDWARD	XIA	WOBURN C.I.	TORONTO, ON
YANG	XIA	VINCENT MASSEY S.S.	WINDSOR, ON
CHENG WEI	XIAO	ECOLE SECONDAIRE GEORGES-VANIER	MONTREAL, QC
ROGER	YEUNG	UNIV. OF TORONTO SCHOOLS	TORONTO, ON
TI	YIN	WILLIAM LYON MACKENZIE C.I.	TORONTO, ON
KENNY	YUNG	PINETREE S.S.	COQUITLAM, BC
PETER	ZHANG	SIR WINSTON CHURCHILL H.S.	CALGARY, AB
BAOSEN	ZHANG	WATERLOO C.I.	WATERLOO, ON
MO	ZHANG	BURNABY SOUTH S.S.	BURNABY, BC
NANCY	ZHANG	SIR WINSTON CHURCHILL S.S.	VANCOUVER, BC
SI	ZHANG	ADEN BOWMAN C.I.	SASKATOON, SK
TIANXING	ZHANG	POLYVALENTE MGR. RICHARD	VERDUN, QC
YIN	ZHAO	VINCENT MASSEY S.S.	WINDSOR, ON
SHAWN	ZHOU	DAVID THOMPSON S.S.	VANCOUVER, BC

Distribution of Marks - Distribution des points

Averages - Moyenne

Distribution	Number	cumm. %
35-40	64	3.00
30-34	57	5.68
25-29	99	10.33
20-24	298	24.32
15-19	350	40.75
10-14	541	66.15
0-9	721	100.00

2130

Question	Average
1	5.9
2	3.8
3	1.0
4	3.2
score	13.9

Please visit our web site at:

www.cemc.uwaterloo.ca

to download the 2003 Fryer, Galois and Hypatia Contests, plus full solutions.

Veillez visiter notre site Web à

www.cemc.uwaterloo.ca

pour télécharger les concours Fryer, Galois et Hypatie 2003, avec solutions complètes.

**Fryer Contest
Concours Fryer**

SCORE NOTE	RANK POSITION
40	1
39	6
38	23
37	37
36	49
35	64
34	84
33	101
32	132
31	171
30	203
29	240
28	291
27	343
26	389
25	458
24	538
23	621
22	689
21	767
20	859
19	974
18	1087
17	1210
16	1342
15	1468
14	1596
13	1723
12	1877
11	2026
10	2167
9	2296
8	2411
7	2524
6	2614
5	2682
4	2748
3	2798
2	2830
1	2850
0	2868

**Galois Contest
Concours Galois**

SCORE NOTE	RANK POSITION
40	1
39	10
38	13
37	14
36	19
35	26
34	51
33	63
32	83
31	107
30	133
29	168
28	200
27	238
26	289
25	350
24	413
23	494
22	569
21	642
20	739
19	837
18	932
17	1050
16	1163
15	1281
14	1380
13	1505
12	1614
11	1706
10	1821
9	1890
8	1960
7	2026
6	2076
5	2125
4	2184
3	2197
2	2215
1	2238
0	2251

**Hypatia Contest
Concours Htpatie**

SCORE NOTE	RANK POSITION
40	1
39	21
38	27
37	39
36	47
35	58
34	65
33	77
32	83
31	99
30	108
29	122
28	133
27	155
26	175
25	194
24	221
23	282
22	319
21	393
20	456
19	519
18	585
17	649
16	724
15	797
14	869
13	1003
12	1078
11	1193
10	1304
9	1410
8	1516
7	1586
6	1676
5	1751
4	1831
3	1930
2	1989
1	2063
0	2080

The listing above pertains to all competitors. / La liste précédente s'applique à tous les concurrents.

Student Enrolment by Province

Newfoundland	293	Terre-Neuve
Nova Scotia	302	Nouvelle-Écosse
New Brunswick	269	Nouveau-Brunswick
Prince Edward Island	32	Ile-du-Prince-Édouard
Quebec	503	Québec

Inscription par province

Ontario	6351	Ontario
Manitoba	343	Manitoba
Saskatchewan	379	Saskatchewan
Alberta	614	Alberta
British Columbia	1515	Colombie-Britannique
Yukon	9	Yukon

Total number of students enrolled / Nombre d'inscriptions individuelles: 10 610