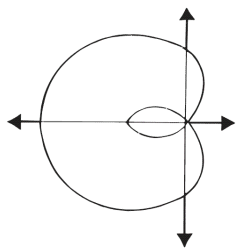


LIMACON

LIMACON, the twenty-second annual Long Island Mathematics Conference, will take place on Friday **March 28**, from 7:45 a.m. to 2:35 p.m. at SUNY College at Old Westbury Campus Center. This year's theme is "Back to the Future: New Ways to Think Old Things." The keynote speaker is James Rubillo, Executive Director of the National Council of Teachers of Mathematics and participants can choose from among 49 one-hour workshops to attend. For information on registration go to: <http://www.ncmta.net/limacon.htm> or contact Dr. Jong Pil Lee at leej@oldwestbury.edu



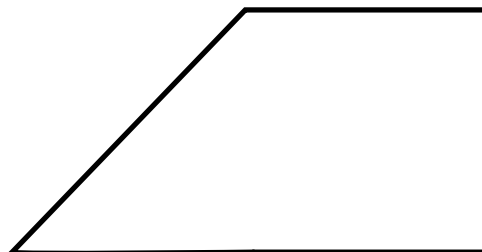
cSplash! Student Math Festival

Courant Splash! is a one-day festival of classes in the mathematical and computer sciences, designed and taught by enthusiastic graduate and undergraduate students, faculty, and others associated with the Courant Institute of Mathematics at New York University. It will be held at NYU on Saturday **March 29**, from 8:30 a.m. to 5:30 p.m. The program is free and is open to all students in grades 9-12 (or with equivalent mathematical background) with an interest in mathematical and computer sciences. During the program, students can attend as many talks as they want on topics in pure math, applied math, computer science, and related fields. Spaces are limited and are allocated on a first-come, first-served basis; registration is online at: <http://cims.nyu.edu/~csplash/index.php> and the deadline is March 22. For information contact Miranda Holmes at mirandaholmes@yahoo.ca



Puzzle of the Month

Use four lines to divide this figure into four congruent parts.



(Answer next month)

Lehman Math Conference

The New York City Mathematics Project's Seventeenth Annual Conference: "Triathlon of Knowledge: Mathematics, Science and Technology" will be held at Lehman College in the Bronx, on Saturday **April 5**, from 8:00 a.m. – 1:30 p.m.

The conference is designed to provide professional development to enhance mathematics teaching and learning. Each session is full of ideas for educators to take back to their classrooms, including hands-on and demonstration sessions for new and experienced educators. There will also be opportunities to network with other educators and to meet with sales representatives for mathematics resources. Registration (which includes breakfast and refreshments) is \$25.00 if registered by March 25. On-site and late registration will be \$30.00. Registration information is at: <http://nycmp.org/> For more information, call Suzanne Libfeld, Director of the New York City Mathematics Project at (718) 960-8416 or email SuzLi@aol.com.



Math Conference for Teachers of ELLs

The Office of English Language Learners is holding a full-day conference "Structuring Success in Mathematics for ELLs: The Academic Language Factor" on Wednesday, **April 16**, from 8:30 a.m. to 3:00 p.m. Keynote speaker and University of Miami Professor Walter G. Secada will discuss mathematics as a genre and the linguistic challenges that ELLs face in learning mathematics. In breakout sessions and panel discussions, participants will explore ways to integrate language and mathematics content for ELLs in order to gain a solid theoretical framework as well as practical strategies for the classroom. Conference registration is on ProTraxx (<http://pd.nycoit.org>) under activity code: 051-08-014-071. Conference costs are payable through FAMIS for \$50 per participant using #TLELL0056. For additional information, contact Dionisio Rodriguez in the Office of ELLs at DRodrig10@schools.nyc.gov or (212) 374-6673.

Website of the Month

SpaceTime Arcade

offers free mathematics and puzzle games. Users can play games or download them to a computer, Pocket PC, Smartphone or Palm handheld. New games are added weekly. Visit: <http://www.spacetime.us/arcade/>.



Lenses on Learning Supervision Facilitator Training

The 2008 Lenses on Learning Supervision Facilitator Training Institute will take place in the Boston area **July 6-19**, for ten days of in-depth mathematics, practice facilitation, and collegial planning.

Ideally, Institute participants come as part of a two-person team (usually a principal and a math staff developer), who then go back to teach Lenses Supervision to administrators in their district. Attending Lenses Supervision facilitator training also builds in-house capacity to provide principals with ongoing mathematics support even after the Lenses Supervision course ends.

There are full-day sessions Monday through Friday, with the weekend free for traveling and sightseeing in the Boston area. Breakfast, lunch and per person double occupancy lodging are included in the Institute fee.

Lenses Supervision utilizes a wide variety of materials (video clips, transcripts, student work samples, problem-solving activities, selected readings by prominent math educators and researchers) so that administrators taking the course can both do some mathematics and engage in mathematical discourse within their own intellectual communities. The program also introduces principals to a unique set of tools, four Observation Guides that assist administrators when observing classrooms.

Lenses Supervision was originally designed to support the supervisory practice of building principals. However, it has also been used to train non-evaluative math professionals such as coaches and math specialists, to give them both new tools and a new "lens" for classroom observations. For more information and registration form visit:

http://www2.edc.org/CDT/SI08/SI08_information.asp.

Registration deadline is March 30.

Math Glossaries for ELLs

Translated math glossaries in thirteen languages are available at this site:

<http://steinhardt.nyu.edu/metrocenter/ALBETAC/Resources/translatedglossaries.html>.

Quote of the Month:

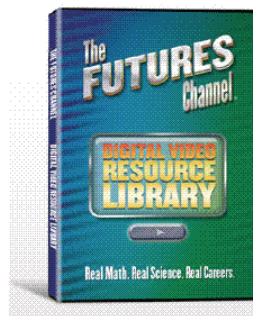
Mathematics is abstract thought, mathematics is pure logic, mathematics is creative art. All these statements are wrong, but they are all a little right, and they are all nearer the mark than "mathematics is numbers" or "mathematics is geometric shapes."

Paul R. Halmos: *Mathematics as a Creative Art*, *American Scientist*, 56, 1968

Core Curriculum Showcase

On Tuesday, **March 25** and Wednesday, **March 26**, the NYC Department of Education is hosting its 2nd Annual Core Curriculum Showcase for Principals and up to 3 additional lead staff (in Math, Literacy, Science, or Social Studies) to preview Core Curriculum materials. To register, please visit: <http://www.learningtimes.net/curriculumshowcase>.

Video Clips: Math in Careers



The Futures Channel Digital Video Resource Library helps teachers engage students in mathematics – through the use of short, high-impact video clips that connect math to various careers. The clips are searchable via very specific math concepts and the video clips can be full-screen. This resource also has extras such as the classic "Good Morning Miss Toliver" and "Math?! Who Needs It?" with Jaime Escalante. For

introductory information and to take a look, go to www.thefutureschannel.com/store/school_edition.html. The cost is \$35 per teacher per year.

Nicholas Branca 1942-2008

We've just received the sad news of the passing of Nick Branca, who died of a heart attack February 25 while canyon-rappelling in Australia. He was 65 years old. His mission was to help K-12 teachers better understand the math they teach, so that they could improve their strategies in the classroom. Although based in San Diego, he had for the past several years been working with teachers in his native Bronx and elsewhere here in New York. In a 1991 interview, Nick Branca said it was imperative for schools to move beyond drills and work sheets to teach higher-math concepts. Without connecting math to real life, he said at the time, teachers could "lose hundreds of kids along the way who never put it together." "No one does drudgery-type mathematical skills as part of their personal life," he added. For further information on his life visit: <http://www.signonsandiego.com/news/obituaries/20080306-9999-1m6branca.html>.



Stamp issued for International Mathematical Year by the Czech Republic to commemorate Wiles' solution to Fermat's problem.

Birthdays of the Month

March 3

Georg Ferdinand Ludwig Philipp Cantor (1845 –1918) was a German mathematician. He is best known as the creator of set theory, which has become a fundamental theory in mathematics. Cantor established the importance of one-to-one correspondence between sets, defined infinite and well-ordered sets, and proved that the real numbers are "more numerous" than the natural numbers. In fact, Cantor's theorem implies the existence of an "infinity of infinities". He defined the cardinal and ordinal numbers, and their arithmetic. Cantor's work is of great philosophical interest, a fact of which he was well aware.



from Wikipedia

March 14



Albert Einstein (1879 –1955) was a German-born theoretical physicist. He is best known for his theory of relativity and specifically mass-energy equivalence, $E = mc^2$. Einstein received the 1921 Nobel Prize in Physics "for his services to Theoretical Physics, and especially for his discovery of the law of the photoelectric effect." He wrote more than fifty scientific papers and also non-scientific books. Einstein is revered by the physics community, and in 1999 *Time* magazine named him the "Person of the Century". In popular culture the name "Einstein" has become synonymous with genius.

from Wikipedia

March 23

Emily Noether (1882-1935) Although most of her scholarly work involved the development of modern abstract algebra, Emily Noether proved two deep theorems, and their converses, on the connection between symmetries and conservation laws which physicists refer to collectively as Noether's Theorem. The work was done soon after Hilbert's discovery of the variational principle which gives the field equations of general relativity. The failure of local energy conservation in the general theory was a problem that concerned people at that time, among them David Hilbert, Felix Klein, and Albert Einstein. Noether's theorems solved this problem. With her characteristically deep insight and thorough analysis, in solving that problem she discovered very general theorems that have profoundly influenced modern physics.



from Wikipedia

Solution to last month's puzzle:

$$\begin{array}{r} \text{FORTY} \\ +\text{TEN} \\ +\text{TEN} \\ \hline \text{SIXTY} \end{array}$$

Since there are ten different letters and each one represents a unique digit, all ten digits need to be used. First thing we notice is that Y is unchanged when two Ns are added to it; that means that N must be either 5 or 0. But it can't be 5 since the same thing happens in the tens column when two Es are added to T, leaving it unchanged. And this couldn't occur if we carried (apologies to those who prefer the word 'regroup', but it's how I was taught) a 1 from the ones column. So it's E that must be 5 and N that represents 0. Actually since Y doesn't affect any other numbers we don't have to give it a value yet: in fact, a useful strategy is to write all ten digits in a row and cross them off as one uses them. The last one remaining can then stand for Y. Next we notice that both F and O change (into S and I respectively). This tells us several useful things: that O must be 8 or 9 since the 2 or 1 carried from the hundreds column must push it to 10 or more for us to carry one over to change F to S; also that S is one more than F, i.e. that they are consecutive numbers. But I can't be a 0 since that has already been used (as N, remember) so I must be 1 and therefore O must be 9. Also this means that R+T+T (plus the 1 carried over from the tens column) must add up to 20 or more, so R and T must be 6 or 7 or 8. By now we've used four digits (0, 1, 5, 9) so that leaves six to be assigned (2, 3, 4 and 6, 7, 8 – let's think of them as the smaller three and the larger three). Since R and T must come from the larger three, and F and S are consecutive, then most likely F and S must come from the smaller three. That makes 3 indispensable for either F or S since you can't have a consecutive pair without it. All this sounds very complicated, but having established it, the rest of the problem falls into place.

Here's why: there's only one combination of values for R and T (7 and 8 respectively) that will not produce a value for X that has already been used (0 and 1) or cannot be used (3). The completed solution:

$$\begin{array}{r} 29786 \\ +850 \\ +850 \\ \hline 31486 \end{array}$$



National Mathematics Advisory Panel Releases Final Report

On March 13, 2008, the National Mathematics Advisory Panel presented its Final Report to the President of the United States and the Secretary of Education. Copies of these ground-breaking reports, *Foundations for Success*, rich with information for parents, teachers, policy makers, the research community, and others, are provided at this link: <http://www.ed.gov/about/bdscomm/list/mathpanel/index.html>.

Upcoming Workshops

Our department is offering numerous mathematics workshops in the next several months. For information on how to pay for any of this training in FAMIS, please click on [:http://schools.nycenet.edu/offices/teachlearn/science/Purchasing_Professional_Services.pdf](http://schools.nycenet.edu/offices/teachlearn/science/Purchasing_Professional_Services.pdf)

Integrated Algebra

This is a series of three all-day workshops, where participants will explore the wealth of ancillary materials which accompany the new Integrated Algebra book, including transparencies, graphing calculator resources, class sets of manipulatives, Spanish-language materials, review book, workbooks, assessment options and especially the new online resources, plus ExamView, TeacherExpress, and other technology that is now a part of daily instruction. They will also plan instruction for the next three chapters and practice pedagogical strategies (e.g., Think-Pair-Share, Numbered Heads, Jigsaw) to better reach our students. Breakfast inc.

Target Audience: HS Math Teachers, Math Coaches, Math APs
Grade Level: 8-12
Facilitator(s): Dr. William Farber & Gerald Haber
Dates: Apr 1, Apr 15, & May 6
Time: 9:00 a.m.–3:00 p.m.
Location: Manhattan
City College, NAC Bldg, Rm 3/218
138th St and Convent Ave 10031
Cost: \$150
FAMIS Item No: TLMATH048
To register, click on: http://www.surveymonkey.com/s.aspx?sm=8JAGy1bxokVChozH2moDjA_3d_3d

Mathematical Problem Solving

This series of two all-day workshops workshop will focus on problem solving, which is the primary standard on all standards lists, (e.g., NCTM Standards and the NYS Learning Standards). There is a critical need for students to improve their problem solving skills, identify specific problem solving strategies, and develop effective techniques for transmitting these strategies to other students. This series is designed to provide an intensive development and reinforcement of problem solving skills to teachers and ultimately to their MS students. Moreover, the model used will be group problem solving, giving participants the opportunity to interact, write, draw, view, react, pose questions, and report methodologies and alternative solutions.

Target Audience: Mathematics Teachers and Coaches
Grade Level: 6-8
Facilitator(s): Dr. William Farber
Dates: Apr 3 & Apr 10
Time: 9:00 a.m.–3:00 p.m.
Location: Manhattan
City College, NAC Bldg, Rm 3/218
138th St and Convent Ave 10031
Cost: \$100
FAMIS Item No: TLMATH050
To register, click on: http://www.surveymonkey.com/s.aspx?sm=Onl7B_2bXiWIHzk364Qmlz4Q_3d_3d

Exploring High School Mathematics with TI-Nspire Technology

Participants will be introduced to the next generation of graphing calculator, the TI-Nspire and will learn how to use this calculator within the HS mathematics classroom. Activities will support the mathematics curriculum of high school. Participants will receive materials and a TI-Nspire calculator.

Target Audience: HS Math Teachers, Coaches, Supervisors
Grade Level: 9-12
Facilitator(s): Texas Instruments with support from Elaine Carman (NYCDOE)
Dates: Apr 22, 23, & 24
Time: 8:30 a.m.–3:00 p.m.
Location: Manhattan
Stuyvesant HS
345 Chambers St 10282
Cost: \$325
FAMIS Item No: None, the vendor is paid directly by the school

To register, click on: <http://www.baskow.com/client/tinspire/>

Exploring Middle School Mathematics with TI-Nspire Technology

Participants will be introduced to the next generation of graphing calculator, the TI-Nspire and will learn how to use this calculator within the MS mathematics classroom. Activities will support the mathematics curriculum of the middle school. Participants will receive materials and a TI-Nspire graphing calculator.

Target Audience: Math Teachers, Math Coaches, Math Supervisors
Grade Level: 6-8
Facilitator(s): Texas Instruments with support from Elaine Carman (NYCDOE)
Dates: Apr 22, 23, & 24
Time: 8:30 a.m.–3:00 p.m.
Location: Manhattan
Stuyvesant HS
345 Chambers St 10282
Cost: \$325
FAMIS Item No: None, the vendor is paid directly by the school

To register, click on: <http://www.baskow.com/client/tinspire/>

How to Promote Interactive Learning in Mathematics Using Hands-On Material

This is a series of two all-day workshops, which will feature a variety of activities appropriate for MS mathematics teachers and coaches. Each workshop will provide interactive learning experiences designed to be consistent with the NYS Mathematics Standards. Samples of activities correlated to Impact Math in grades 6, 7, and 8 will be explored. The hands-on activities presented in each workshop will help participants disseminate ideas for concretization of mathematical principles promoting content-rich interactive learning in the mathematics classroom and opportunities to explore NYS and NYC assessment items. Through the use of concrete materials (manipulatives), participants will be able to plan, organize, construct, and implement their own mathematical experiences. Pertinent articles will be disseminated in each work-

shop.
Target Audience: Teachers, Coaches
Grade Level: 6-8
Dates: Apr 11 & Apr 18
Time: 9:00 a.m.–3:00 p.m.
Location: Manhattan
City College, NAC Bldg, Rm 3/218
138th St and Convent Ave 10031
Cost: \$100
FAMIS Item No: TLMATH049
To register, click on: http://www.surveymonkey.com/s.aspx?sm=4XaaqviH_2b5ED0x7g1IAJPA_3d_3d

Taking a Deeper Look at the Assessment Components of the 3rd Edition of *Everyday Mathematics*, Session 2 (This is a repeat of the Assessment Workshop Session 2, which was offered on January 8)

Prerequisite: Taking a Deeper Look at the Assessment Components of the 3rd Edition of *Everyday Mathematics*, Session 1
This is a continuation of Session 1. In addition to looking at the *Everyday Mathematics* grade-level goals and the New York State Standard grade-level performance indicators, coaches will also look at the Acuity System to learn how this assessment program can assist teachers in making informed instructional decisions while using *Everyday Mathematics*. The Quality Review process will also be discussed. Each participant will receive a CD with the presentation materials. No food will be provided. For information, contact Lisa Emond at lemond@schools.nyc.gov

Target Audience: Elementary Math Coaches
Grade Level: K-5
Facilitators: Treasrea Cornelius, Cindy DiFolco, John Christiansen
Date: April 16
Time: 9:00 a.m. to 3:00 p.m.
Location: Manhattan
Wagner Middle School (M167)
220 E 76 St., (Room B4)
New York, NY 10021
Cost: \$50
FAMIS Item No: TLMATH076
Max. No. Participants: 30

Workshop on Brain Research and Its Implications in the Classroom

Neuroscience, like pedagogy, looks at learning, but from a substantially different point of view. This difference can be illuminating and exciting in its implications for classroom practice. We'll explore the latest research in neurobiology; our emphasis throughout will be on the practical applications of this research to math instruction in all grade levels.

Target Audience: School Administrators, Coaches, Teachers
Grade Level: K-12
Facilitator(s): Ronald Schwarz & Miguel Cordero
Start Date(s): Apr 18 & May 2
Time: 8:30 a.m.–3:00 p.m.
Location: Manhattan
City College, NAC Bldg, Rm 3/218
138 St & Convent Ave 10031
Cost: \$100
FAMIS Item No: TLMATH064

To register, click on: http://www.surveymonkey.com/s.aspx?sm=mcOn8F9wuVqCNJyz8iLN_2fg_3d_3d

Teaching High School Geometry—Introducing the Next Level (Two Days)

Beginning in September 2008 students in NYS will be studying a new 10th-grade math course, Geometry. Although geometry topics have been taught in Math A and B (and Sequential Math before them), there has not been a complete Geometry course in NYC for more than 30 years. To maximize student achievement, we will be offering two full days of professional development. Participants will have an opportunity to: 1) Examine current and innovative pedagogies related to the teaching and learning of geometry. 2) Expand teachers' knowledge of geometry. 3) Integrate technology and manipulatives into the study of geometry.

Target Audience: Math APs, Coaches, Teachers
Grade Level: 9-12
Facilitator(s): Ronald Schwarz & Miguel Cordero
Dates: 4/14 & 5/5, repeated 5/12 & 5/19
Time: 8:30 a.m.–3:00 p.m.
Location: Manhattan
City College, NAC Bldg, Rm 3/218
138 St & Convent Ave 10031
Cost: \$100
FAMIS Item No: TLMATH062, TLMATH060
To register for **Apr 14 & May 5**, click on: http://www.surveymonkey.com/s.aspx?sm=k_2bbUII71_2fWHwDEaR54AdUw_3d_3d

To register for **May 12&19**, click on: http://www.surveymonkey.com/s.aspx?sm=eoHlfl9HPwCfHDIadmQ1g_3d_3d

Geometer's Sketchpad—Level 1 Professional Development (Three Days)

Participants will learn how to integrate Sketchpad Version 4 into our uniform curriculum. This will provide the participants with new strategies to assess student understanding; build dynamic, draggable constructions that lead to mathematical insights and conjectures; construct tessellations; and study concepts in algebra. Participants will also investigate trigonometry, the role of proof, conic sections, and other topics while learning how Sketchpad works as a mathematical modeling tool and an exploratory environment for mathematics across the curriculum.

Target Audience: Math APs, Coaches, Teachers
Grade Level: 2-12
Facilitator(s): TBA
Dates: Apr 22, Apr 23, & Apr 24
Time: 8:30 a.m.–3:00 p.m.
Location: Manhattan
Stuyvesant HS
345 Chambers St 10282
Cost: \$150
FAMIS Item No: TLMATH065
To register, click on: http://www.surveymonkey.com/s.aspx?sm=WxVsxETwOf_2b3BSjHMhV_2beQ_3d_3d

Geometer's Sketchpad—Level 2 Professional Development (Four Days)

Participants will learn about the features of Sketchpad Version 4 that will deepen their experience while building customized tool-kits, multi-page Sketchbooks, and dynamic fractals and graphs. Participants will learn advanced methods and begin to master Sketchpad as the tool to explore Euclidean, coordinate, transformational, analytical, and fractal geometry. They will also harness the full power of Sketchpad for algebra, trigonometry, pre-calculus, and calculus classrooms. By the end of day four participants will be ready to conduct Level 1 professional development in their schools.

Target Audience: Math APs, Coaches, Teachers
Grade Level: 2-12
Facilitator(s): TBA
Dates: Apr 22, Apr 23, Apr 24, & Apr 25
Time: 8:30 a.m.–3:00 p.m.
Location: Manhattan
Stuyvesant HS
345 Chambers St 10282
Cost: \$200
FAMIS Item No: TLMATH066
To register, click on: http://www.surveymonkey.com/s.aspx?sm=44_2fLCATLP0RMUuaXmhtxUA_3d_3d

Differentiating Math Instruction Using the 3rd Edition of *Everyday Mathematics*

The focus is on how to utilize ideas and strategies for differentiating instruction when using the 3rd Edition of *Everyday Mathematics*. Coaches will identify differentiation that is embedded in the program and also learn about features that can be readily adapted for individual children, enabling coaches to assist teachers in meeting the needs of all learners. Each participant will receive a CD with the presentation materials. No food will be provided. For information, contact Lisa Emond at lemond@schools.nyc.gov

Target Audience: Elementary Math Coaches
Grade Level: K-5
Facilitators: Virginia Love, Ilene Weiskopf
Date: May 3
Time: 9:00 a.m. to 3:00 p.m.
Location: Manhattan
City College NAC Building Room
3/218
138th Street & Convent Ave. 10031
Cost: \$50
FAMIS Item No: TLMATH077
Max. No. Participants: 60

Math/Science/Literacy Around the Pre-K Classroom

May 8 Save the date!

City College, \$50

More information to follow in the Principals' Weekly

How to Use the TI-34II Scientific Calculator for Teaching and Learning

This is a series of two all-day workshops, where participants will

explore the effective uses of the scientific calculator (TI 34II) in the MS mathematics classroom. Activities will include how the calculator can serve as a learning tool for students as well as a teaching tool for teachers. Test items from the NYS Middle School Mathematics Assessments will be explored and discussed in terms of calculator use. Breakfast will be included.

Target Audience: Math Teachers, Math Coaches, Math APs
Grade Level: 6-8
Facilitator(s): Dr. William Farber
Dates: May 16 & May 30
Time: 9:00 a.m.–3:00 p.m.
Location: Manhattan
City College, NAC Bldg, Rm 3/218
138th St and Convent Ave 10031
Cost: \$100
FAMIS Item No: TLMATH051
To register, click on: http://www.surveymonkey.com/s.aspx?sm=MMjiQnKwMFT1h5f0fHW6TQ_3d_3d

Department of Mathematics and Science

52 Chambers St. Room 208
New York, NY 10007

Tel: 212-374-0703

Fax: 212-374-5901

Visit our web page:

<http://schools.nyc.gov/Academics/Mathematics/>

Linda Curtis-Bey, *Director*
lcurtis@schools.nyc.gov

Joyce Verley, *Secretary*
jverley@schools.nyc.gov

Joe Quigley, *Research Assistant*
jquigley@schools.nyc.gov

Mathematics Staff:

Sandra Jenoure, *Math/Science Consultant*
sjenoure@schools.nyc.gov

Lisa Emond, *Elementary School Math Specialist*
lemond@schools.nyc.gov

Elaine Carman, *Middle School Math Specialist*
ecarman@schools.nyc.gov

Dr. William Farber, *Mathematics Resource Center*
wfarber@schools.nyc.gov

Miguel Cordero, *High School Math Specialist*
mcordero@schools.nyc.gov

Ronald Schwarz, *High School Math Specialist*
rschwarz@schools.nyc.gov