

# **Al Kalfus Long Island Math Fair**

## **April 20, 2018**

### **Final Round**

### **Hofstra University**

#### **Long Island Math Fair Committee**

**Alan Blayne, Christine Brown, Jerry Chen, Ian Dunst, Arulappah Eswarathasan, Martha Green, Lynda Hennig, Lucille Hunter, Richard Hunter, Nat Janoff, Marlene Kalfus, Myung-Chul Kim, Maxine Lifshitz, Christine Pette, Joseph Quartararo, Paulette Quartararo, Jane Sessler, Sylvia Silberger, Terry Springer, Charles Windwer**

**In Memory of our Founder Alfred Kalfus**

#### **Long Island Math Fair Sponsors**

**Hofstra University and the Suffolk County Mathematics Teachers Association, the Nassau County Mathematics Teachers Association, and the Nassau County Association of Mathematics Supervisors**

#### **Program**

**2:30PM Judges check in at Student Center Room 145**

**3:00PM Judges pick up students at Student Center and walk to assigned room**

**3:30-6:00PM Judging**

#### **Building Key**

<b>A</b>	<b>Adams</b>	<b>25</b>	<b>BR</b>	<b>Breslin</b>	<b>23</b>	<b>C</b>	<b>Calkins</b>	<b>33</b>
<b>CHP</b>	<b>Berliner</b>	<b>59</b>	<b>D</b>	<b>Davison</b>	<b>28</b>	<b>GAL</b>	<b>Gallonwing</b>	<b>5</b>
<b>HE</b>	<b>Heger</b>	<b>4</b>	<b>L</b>	<b>Lowe</b>	<b>24</b>	<b>MA</b>	<b>Mason</b>	<b>5</b>
<b>N</b>	<b>Netherlands</b>	<b>33</b>	<b>R</b>	<b>Roosevelt</b>	<b>19</b>	<b>S</b>	<b>Starr</b>	<b>62</b>
<b>SC</b>	<b>Student Cntr</b>	<b>31</b>	<b>W</b>	<b>Weed</b>	<b>26</b>			

#### **Special Thanks**

**We would like to give special thanks to Sylvia Silberger for all the on-site planning at Hofstra University for this year's Fair.**

<u>Judge's Name</u>		<u>School</u>
Alt	Matthew	HAFTR
Ambrose	Maryrose	The Wheatley School
Andrejkovics	Mike	Northport High School
Arengo	Sebastian	Long Beach Middle School
Atwood	Dr. Alexander	Suffolk County Community College
Augenblick	Rebecca	Kennedy High School
Barbarett	Rick	Lawrence High School
Barrera	Christina	Manhasset Schools
Beach	Bryan	Schreiber High School
Bean	Anne	Udall Road Middle School
Beleckas	John	The Wheatley School
Berrios	Melinda	Hicksville Schools
Berry	Greg	Jericho High School
Bohlen	Bradie	Stimson Middle School
Boyle	Jim	Hauppauge Schools
Braunstein	Tom	Woodland Middle School
Breckner	Stephen	Nassau Community College
Bruno	Josephine	Herricks Middle School
Burke	Jack	Oyster Bay High School
Calderara	Lauren	Hicksville Schools
Callahan	Chris	Roslyn High School
Cannatta	Matt	Herricks Middle School
Cappiello	Amy	Commack High School
Carlson	Mike	East Moriches School
Carman	Mark	Roslyn High School
Castillo	Belen	Roslyn Middle School
Cetron	Jason	Hicksville Schools
Chae	John	Syosset High School
Ciolfi	Tom	Half Hollow Hills High School East
Cirisano	Anthony	Herricks High School
Coe	Dr. Russell	Suffolk County Community College
Considine	Christine	North Shore High School
Contrada	Nicole	Manhasset Schools
Cooper	Dave	Herricks Middle School
D'Agostino	Joe	Freeport High School
DelGuidice	Joe	Half Hollow Hills High School East
DeMaio	Karen	Hauppauge Schools
DeMarinis	Matt	Jericho High School
DiMeola	Amy	North Shore Middle School
DiVenuto	Ray	Schreiber High School
D'Onofrio	Amanda	Candlewood Middle School

<u>Judge's Name</u>		<u>School</u>
Downer	Matt	Half Hollow Hills High School East
Dunaieff	Stephanie	Half Hollow Hills High School East
Dunst	Ian	Half Hollow Hills High School East
Edlin	Naomi	Northport High School
Estrada	Alvin	Nassau Community College
Falcone	Tiffany	North Shore Middle School
Felazzo	Brittini	Copiague Middle School
Flannery	Katie	Half Hollow Hills High School East
Fonseca	Loretta	Roslyn Middle School
Fox	Patti	Half Hollow Hills High School West
Frayler	Kristen	North Shore Middle School
Fricke	Danielle	West Hollow Middle School
Gallagher	Tina	Schreiber High School
Gaynor	Deborah	The Wheatley School
Gazzola	Debi	Thompson Middle School
Gerver	Rob	ICPS
Giacchetto	Michael	Udall Road Middle School
Gill	Colleen	Holy Trinity High School
Gizzi	Gabriella	Roslyn Middle School
Goldbeck	Daniel	Syosset High School
Goldman	Steve	Half Hollow Hills High School East
Gorman	Bryan	Schreiber High School
Greene	Nora	North Shore Hebrew Academy
Grimaldi	John	Northport Middle School
Gunn	Ronnie	Herricks High School
Halpin	Pam	North Shore Middle School
Hansen	Kevin	Trinity Regional School
Hart	Stacy	Herricks Middle School
Hayes	Peter	ICPS
Holland	Wendy	Hicksville Schools
Javadi	Mohammad	Nassau Community College
Joseph	Kathy	Northport Middle School
Kalish	Art	ICPS
Khan	Alyssa	Herricks Middle School
Khan	Nasir	Freeport High School
Kugler	Dorothy	Nassau Community College
Labrocca	Ron	Hicksville Schools
LaRose	Matt	Manhasset Schools
Lee	Soowook	Roslyn High School
Lesser	Jeff	North Shore Hebrew Academy
Lester	Terri	East Meadow High School

<b><u>Judge's Name</u></b>	<b><u>School</u></b>	
Leverone	Stephanie	East Meadow High School
Mann	Lavleen	Garden City High School
Mantell	Abe	Hofstra University
Marcellino	Ally	South Woods Middle School
Marin	Elisa	South Woods Middle School
Maritato	Karen	Northport Middle School
Marks	Casey	Schreiber High School
Martin	Jay	Nassau Community College
Martinek	Barry	Kennedy High School
Mauer	Tara	Oceanside Schools
Maus	John	North Shore High School
Mazza	Janice	Nassau Community College
Mazzarino	Christine	Lawrence High School
McBride	Heather	Half Hollow Hills High School East
McBurnie	Mark	Syosset High School
McDonagh	Christine	Northport Middle School
McGinn	Donna	Northport Middle School
McGlynn	Cassandra	Woodmere Middle School
McNally	Kevin	Syosset High School
McNamara	Paul	Thompson Middle School
Melaniff	Natalie	Roslyn Middle School
Minnigan	Tom	Northport Middle School
Modafferi	Samantha	West Hollow Middle School
Modiano	Jeffrey	Garden City High School
Mojocoa	Ana	Elmont Memorial High School
Montera	Timothy	Copiague High School
Monterrosa	Miguel	The Wheatley School
Moore	Kathleen	Northport High School
Moss	William	Lawrence High School
Murthy	Geetha	Herricks High School
Navarra	Mary	Half Hollow Hills High School East
Ninan	Melissa	Lawrence Middle School
Nordstrom	Ed	West Hollow Middle School
O'Rourke	Erin	Syosset High School
Osuno	Uzo	Nassau Community College
Palatucci	Chris	Kennedy High School
Parisi	Grace	Long Beach Middle School
Pellett	MaryClare	Holy Trinity High School
Perico	Anthony	Northport High School
Petras	Laura	Manhasset Schools
Pournazari	Mahmood	Nassau Community College

<b><u>Judge's Name</u></b>		<b><u>School</u></b>
Quengua	Lindsey	Herricks High School
Ring	Paul	Clarke High School
Ringhoff	Lisa	East Moriches School
Roethel	Chris	Nassau Community College
Rogala	Brook	North Shore High School
Rosado	Judy	Nassau Community College
Rountos	Muriel	East Moriches School
Santoro	Peter	Garden City High School
Scala	Mary Ellen	Garden City High School
Scheuerman	Greg	South Woods Middle School
Schorn	Alan	Great Neck North High School
Scott	Eric	Roslyn Middle School
Shaw	Gwen	Candlewood Middle School
Silagy	Alyson	Jericho High School
Silverstone	Robert	Hofstra University
Simon	Sami	Roslyn Middle School
Simpson	Juanita	Half Hollow Hills High School East
Sinclair	Marissa	Jericho High School
Skurnick	Ron	Nassau Community College
Smith	Carolyn	Roslyn Middle School
Soto	Marisol	Lawrence High School
Spriggs	Marguerita	Clarke High School
Steffens	Josh	Roslyn Middle School
Stramiello	Dennis	Nassau Community College
Sturchio	Alison	West Hollow Middle School
Survilla	Nicole	West Hollow Middle School
Talibon	Janelle	South Woods Middle School
Tantleff	Sue	Oceanside Schools
Temme	Stephen	Copiague Middle School
Teseo	Rob	The Wheatley School
Titolo	John	Kennedy Middle School
Toppi	Mike	Northport Middle School
Varriale	Aliceia	Lynbrook High School
Vartelatos	Speros	Freeport High School
Vollaro	Alexandra	Oceanside High School
Walsh	Patrick	East Meadow High School
Wankel	Charles	North Shore High School
Ward	Brittany	Half Hollow Hills High School East
Wayne	David	Hofstra University
Winter	Patrick	Northport High School
Young	Diana	Garden City High School

<b>Last Name</b>	<b>First Name</b>	<b>Grade</b>	<b>Team</b>	<b>Topic</b>	<b>Room #</b>
<b>Bethpage High School</b>					
Maiti	Soham	11		Abstract Algebra/Group Theory	BR112
<b>Candlewood MS</b>					
Chandra	Viti	7		Mandelbrot Set	BR20
Felber	Rebecca	7		Codes and Cyphers with Math	BR25
Ju	Arra	8		Math in Life	BR203
McKinney	Marlene	8		Equations in Biochemistry	BR208
Seid	Sydney	8		Math in Tennis	BR209
Su	Nina	8		Math in Music	BR216
Osborn	Victoria	8	Team A	Integers	MA20
Rogers	Olivia	8	Team A	Integers	MA20
<b>Clarke HS</b>					
Ahmed	Sanjana	10		Infinity	S202
Panickssery	Arjun	10		Graph Theory	S201
Sayed	Ankit	10		The Mobius Strip	R15
Huda	Shayan	11		Solving Rubik's Cube Using Algorithms	GAL13
Phillips	Joshiah	12		Time Dilation near Black Holes	N18
<b>Cold Spring Harbor HS</b>					
Davis	Stephen	11		Trisecting An Angle	L203
<b>Commack HS</b>					
Robinson	Paige	10		Conic Sections	R101
Hohne	Siena	12		Modelling a Real-Life Parallellipiped With Vectors	N19
Nieto	Jake	12		What Trigonometric Relationships can be Derived by	N20
Schuval	Cayla	12		Finding the Complex Roots of an Equation	N21
<b>Copiague HS</b>					
Antosiak	Adam	9		Sexagesimal System	C306
Bennett	Kiara	10		Theme Park Math	S107
<b>Copiague MS</b>					
Cortes	Stephanie	8		Statistics and the Business World	BR217
Dobrowolski-Kosior	Jakub	8		Trachtenberg Speed System	BR202
Neger	Gwendolyn	8		The Fantastic Fibonacci Numbers	BR208
Rhoden	Devonie	8		Pascal's Triangle	BR209
Szulejko	Kuba	8		The Golden Ration	BR216
<b>East Meadow HS</b>					
Chinnadurai	Nishanth	9		Basic Differentiation and Integration	D101
Levy	Elizabeth	9		Real World Applications of Matrices	D14
Caceres	Joaquin	10		Mathematics in Chess	S204
Fong	Alyssa	10		Probability and Population Genetics	S204A
Froehlich	Vanessa	10		Arc length, volume and polar graphs	S109
Kuruvilla	Alvin	10		Newton's Law of Cooling	SC141
Pandey	Ikshu	10		Catalan Numbers	S203
Pienkowski	Mateusz	10		Math behind NYC stoplights and traffic	S108
Cang cuesta	Christian	11		Golden Ratio and Art	CHP114
Giles	Taylor	11		Identifying individuals Using Voice Analyzation	CHP117
Ali	Mehrin	12		The Laffer Curve	S304

<u>Last Name</u>	<u>First Name</u>	<u>Grade</u>	<u>Team</u>	<u>Topic</u>	<u>Room #</u>
<b>East Moriches MS</b>					
Durgan	Bryan	7		The Fundamentals of Pi	BR26
Hoffman	Shane	7		Kepler's Laws	BR20
Verrelli	Laura	7		Game Theory	BR25
Sitzmann	Meghan	7	Team A	Fractals	HE100
Tully	Emily	7	Team A	Fractals	HE100
Allen	Avery	8		How do Satellites Orbit the Earth?	BR217
Ciappa	Gianna	8		Pascal's Triangle	BR202
Daniels	James	8		Using Statistics to Predict NHL Playoff Series	BR203
Dunn	Jessica	8		Reflection, Refraction and Snell's Law	BR208
Ma	Anqi	8		Math and Music	BR209
Renna	Sophia	8		Mathematical Algorithms behind Snapchat Filters	BR216
Ribeiro	Gisela	8		History of Numbers	BR217
Albert	Amanda	8	Team A	Probability and Genetics	SC142
Kretsch	Candice	8	Team A	Probability and Genetics	SC142
McKeon	Aidan	8	Team A	Probability and Genetics	SC142
<b>East Northport MS</b>					
DeCaro	Jason	7		The Pythagorean Theorem	BR25
Mara	Anne	7		Fibonacci Sequence	BR26
D'Souza	Joshua	7	Team D	Sine, Cosine and Tangent	HE100
Mainetti	Victor	7	Team D	Sine, Cosine and Tangent	HE100
Dalton	Eli	8	Team A	Matrices	SC143
Farrell	Patrick	8	Team A	Matrices	SC143
McGlone	Shane	8	Team A	Matrices	SC143
Ahlstrand	Jason	8	Team B	Complex and Imaginary Numbers	SC218
Hipper	Stephanie	8	Team B	Complex and Imaginary Numbers	SC218
Masone	Valentina	8	Team B	Complex and Imaginary Numbers	SC218
Greenstein	Lianna	8	Team C	Pascal's Triangle	MA20
Mescallado	Julia	8	Team C	Pascal's Triangle	MA20
Urevich	Katelyn	8	Team C	Pascal's Triangle	MA20
Basrai	Soraya	8	Team D	Fibonacci Sequence	SC142
Cierski	Madeleine	8	Team D	Fibonacci Sequence	SC142
Loring	Esther	8	Team E	Dual Polyhedra	SC143
Ryan	Audrey	8	Team E	Dual Polyhedra	SC143
Fedik	Victoria	8	Team F	Game Theory	SC218
Heckman	Madison	8	Team F	Game Theory	SC218
Leonick	John	8	Team G	Golden Ratio	MA20
McEnroe	Ryan	8	Team G	Golden Ratio	MA20
McGraw	Cade	8	Team G	Golden Ratio	MA20
<b>Elmont Memorial HS</b>					
Alexander	Chrsitopher	9		Non-Euclidean Geometry	D11
Hooke	Keilia	9		Binomial Theorem	D15
Adiele	Bethel	11		Taylor Series	L201
Jean Michel	Myrna	11		Heron's Triangle	CHP117

Last Name	First Name	Grade	Team	Topic	Room #
<b>Garden City HS</b>					
Pappas	Sydeny	9		Sudoku/Shapedoku	C306
Liberopoulos	Jessica	10		Math behind Lacrosse	S204
McDonald	Dylan	10		Brachistochrone Problem	S103
Zheng	James	10		The Birthday Paradox	SC141
McGannon	Christian	11		Determination of Pitching Velocity	S209
Reifler	Thomas	11		Math in Gambling	BR200
Baker	Lukas	12		The Flight of a Baseball	S304A
Choi	Julia	12		Monty Hall Problem	S305
Donohue	Christopher	12		Euler's Formula and it Connection to Differential Equations	S308
Germano	George	12		Movement of a Football	S309
Gong	Brandon	12		On the Origin and Aoolications of the Fourier Series	S310
Granville	Matthew	12		The Four Color Theorem	N18
Grlic	Thomas	12		Bertrand's Box Paradox	N19
Liberopoulos	Michael	12		Pythagorean Expectation	N20
O'Hare	John	12		Unit Circle	N21
Rieger	Caroline	12		Correlation Between Test Scores and Income	S304
<b>Great Neck North HS</b>					
Fine	Aliza	9		Unveiling the Variables of Video Virality	D18
Gruber	Danielle	9		How do Catenary Parameters affect the Taylor Series	D14
Rothbaum	Joshua	11		Who's on Top?: Linear Algebraic Approach to Tournament	BR200
<b>HAFTR</b>					
Friedman	Daniel	12		A Critical Evaluation of Prime Numbers	S304A
Hilsenrath	Erica	12		Cardinality Viewed Through a Hierarchy	S305
Kopyto	Miriam	12		The Construction of n - gons	S308
Neumann	Efrat	12		Fractals	S309
Schorr	Amanda	12		Knot Theory	S310
<b>Half Hollow Hills HS East</b>					
Goldstein	Rachel	9		Population Growth	A109
Hoxha	Kevin	9		Mathematics of Cryptocurrencies	A200
Keskinyan	Dylan	9		Math of Cryptocurrencies	A212
Moon	Elizabeth	9		Math and Music	C332
Sharma	Suraj	9		The Trectangular Approximation Method	A109
Shetty	Sohan	9		The Josephus Problem	A200
Tong	Victoria	9		String Theory	A212
Abrams	Sarah	10		The Mathematics of Perception	R102
Bocian	Rachel	10		Fractals	R109
Chen	Mellissa	10		Euler's Totient Function in RSA encryption	R110
Choudhury	Sargam	10		Propositional Logic and Truth Tables	R111
Gole	Megan	10		The Math of Web Search: Analyzing the Page Rank Algorithm	R112
Herath	Ramin	10		Prisoners Dilema	R206
Huo	Peter	10		Special Relativity	R213
Krishna	Ishwarya	10		Goldbachs Conjecture	W100B
Kugler	Calia	10		The Cevian Problem	R15
LaBianca	Sophia	10		The Koch Snowflake	R101



Last Name	First Name	Grade	Team	Topic	Room #
Likos	Nicholas	10		Deruvatives	R102
Malhotra	Dhruv	10		Pascals Triangle	R109
Rizvi	Sarah	10		Taxicab Geometry	R110
Stern	Emily	10		Matrices	R111
Strizik	Sari	10		The Birthday Problem and Hash Functions	R112
Suneja	Shreya	10		The Fibonacci Sequence	R206
Ye	Cassandra	10		Gausses Bell Curve	R213
Ahmed	Arooba	11		Neurology and Mathematics	GAL14
Bank	Jared	11		Summation of x squared	GAL16
Berkenfeld	Sydni	11		Riemann Sum	GAL17
Blatt	Ashley	11		The Calculus of Amusement Parks	GAL18
Bordwin	Isabella	11		Ceva and Menelaus Theorems	GAL242
Clark	Sophia	11		Error Detecting Barcodes	GAL13
Goldstein	Samantha	11		Math of Lenses	GAL14
Hoxha	Kaitlyn	11		Chaos Theory	GAL16
Krasin	Marlee	11		Linear Algebra in Genetics	GAL17
Krishnan	Shreya	11		The Math Behind Blockchain	GAL18
Lee	Jiachen	11		Cryptography: Introduction to RSA	GAL242
Pisipati	Anish	11		Weather Prediction	GAL13
Rao	Kavya	11		Mass Point Geometry	GAL14
Raphaelson	Rebecca	11		Math in Art	GAL16
Rappaport	Cole	11		Perfect Squares	GAL17
Rappaport	Cory	11		Techniques of Dirrerential Equations (Derivatives)	GAL18
Rothman	Samantha	11		The Mathematics of Lenses	GAL242
Schwarz	Alexandra	11		Integral Calculus	GAL13
Weltmann	Matthew	11		The Graphical and Tableau Procedures for the Simplex	GAL14
Wild	Leo	11		Differential Calculus	GAL16
Winakor	Jessica	11		Math of Lenses	GAL17
Braun	Alexi	12		Optical Illusions	N18
Fogel	Lauren	12		The Traveling Salesman Problem	N19
Nelson	Sonia	12		Math of Lenses throuh the Human Eye	N20
Half Hollow Hills HS West					
Chaudry	Yashita	9		Astronomy in Math	C332
Gupta	Yash	9		Pythagoren Thm	A109
Kim	Suejin	9		Pythagoren Thm Identities	A200
Pomerantz	Sarah	9		Math in the Solar Systems	A212
Barakzai	Sabrina	10		Fibonacci Numbers	W100B
Blasi	Vanessa	10		Optical Illusions	R15
Khan	Lamisa	10		Quarternians	R101
Lanton	Brooke	10		Optical Illusions	R109
Romero	Jia-Marie	10		Chi Squared	R102
Sacchetti	Sophia	10		Probability and Gambling	R110
Sehgal	Aditya	10		Fractal	R111
Stein	Hannah	10		Stoichiometry	R112
Stern	Jayson	10		Celestial Navigation	R206

	Last Name	First Name	Grade	Team	Topic	Room #
	Varma	Sunjana	11		Mathematics behind Music Theory	GAL18
	Antony	Irene	12		The Subtleties of String Theory	N21
Hauppauge HS						
	Capece	Devin	10		Mathematics and Science	R213
Hauppauge MS						
	Mallisetty	Sreenand	7		Why are honey bee cells Hexagons	BR20
	Peddireddy	Saharsh	7		The Study of Linear Equations	BR25
	Adabala	Snehal	8		Integer Triangles with Trigonometry	BR202
	Karanam	Satvik	8		Elliptic Curve Cryptography - The Math Behind Block-Chain	BR203
	Singireddy	Srihitha	8		Linear Equations	BR208
	Mariseti	Abhiram	8	Team A	Trigonometry	SC142
	Sagiraju	Sahishnu	8	Team A	Trigonometry	SC142
Herricks HS						
	Koe	Justin	9		Game Theory	C306
	Krishnamoorthy	Preethi	9		Solving a Heat Transfer Equation Using the Finite Difference	C332
	Lakshmanan	Haritha	9		Non-Euclidean Geometry	D16
	Rasheed	Arfan	9		Curved Lines	D14
	Vinod	Arpitha	9		Codes and Ciphers	D18
	Chaudhary	Prerit	10		The Math Behind Music	W100B
	Chen	Derek	10		Set Theory	S202
	Gupta	Rohan	10		Differential Equations Applied to Population Growth	R15
	Hsu	Carrie	10		Graph Theory: Cage Graphs	S204A
	Lo	Christopher	11		Countering Unauthorized Breaches by Remodeling the RSA	GAL13
	Patel	Utsav	11		The Creation of Epidemiological Models via Calculus	L201
	Soni	Hita	11		Matrices in Cryptography	S302
	Sawhney	Aman	12		The Mathematical Model and Construction of a Neural	S304
	Singla	Anisha	12		Related Rates Problems in Real Life	S304A
Herricks MS						
	Jalwan	Ashish	7		Sequences and Series	BR12
	Jha	Ankita	7		Probability of genetics	BR18
	Lau	Carolyn	7		Golden Ratios	BR18
	Lee	Jeylin	7		Sierpinski Triangle	BR15
	Mendez	Alexa	7		Cell Phone Usage	BR12
	Nabi	Sanyah	7		Pythagorean Theorem	BR13
	Saini	Rushil	7		Wave Functions	BR15
	Soni	Tanush	7		Math and Music	BR16
	Tan	Liam	7		Parabolas	BR13
	Abraham	Priya	8		Projectile Motion and Basketball	BR29
	Balasubramanian	Aadithyaa	8		Fibonacci Numbers	BR105
	Goel	Aanya	8		Matrices	BR103
	Kang	Genesis	8		Golden Rectangle	BR106
	Khondkar	Wafiq	8		Differential Calculus	BR111
	Kong	Stanley	8		Kepler's Laws	BR28
	Menrinetsang	Tenzin	8		Platonic Solids	BR111
	Min	Esther	8		Matrices and Determinants	BR28

<b>Last Name</b>	<b>First Name</b>	<b>Grade</b>	<b>Team</b>	<b>Topic</b>	<b>Room #</b>
Mujtaba	Moniza	8		Genetics and Probability	BR103
Sohn	Kayla	8		Hex Codes	BR100
Soni	Keneil	8		Math in Music	BR29
Zovko	Chris	8		Abucus & Computer Abucus	BR106
<b>Hicksville Schools</b>					
Zhen	Sam	8	Team A	Aeronautics and Aerodynamics	ME10A
Zhen	Sean	8	Team A	Aeronautics and Aerodynamics	ME10A
Kohli	Jaskaran	8	Team B	Pascal's Triangle	ME10B
Singh	Ekum	8	Team B	Pascal's Triangle	ME10B
Anugu	Adith	9		The Math Behind The Rubik's Cube	D20
Singh	Navpreet	9		Euler's Identity	D14
Gupta	Sejal	10		The Frog Problem	R101
Sivasnkaran	Dhanush	10		Probability in Bingo	S204
Agarwal	Rohil	11		Four-dimensional geometry	L201
Cheng	Cindy	11		Game Theory	GAL242
Das	Snehadri	11		Non-Euclidean Geometry	GAL14
Lewkowicz	Michal	11		The Mathematics of Neural Networks	CHP117
Patel	Ohm	11		Infinite Series	BR112
Shah	Asghar	11		Magnetic Resonance Imaging (MRI)	CHP31
Varghese	Daniel	11		Predicate Logic	S302
<b>Holy Trinity HS</b>					
Mathew	Thomas	9		Pascal's Triangle	D16
Saini	Yash	9		Catalan Numbers	D14
Antropov	William	10		Cryptography	S201
Florio	John	10		Math in Bubbles	R102
Patterson	Jaiden	10		The Rubik's Cube	S205
Schocken	Sela	10		Probability Theory	S109
Shebar	Alyssa	10		Infinite Series	SC141
Sullivan	Emily	10		Math and Tessellations	S203
Williamsen	Stephen	10		Boolean Algebra, Logic Tables, and Circuits	R109
Bilello	Katelin Ann	11		Nonlinear Dynamics and Chaotic Butterflies	BR112
<b>ICPS</b>					
Gupta	Arjun	10		Heron's Formula	S202
Karthic	Suraj	10		Pascal's Triangle	R110
Karthic	Tarun	10		Pythagorean Triples	R111
Kengari	Pranav	10		Goldbach Conjecture	S203
Patel	Anushka	10		Area Formula	S103
Patel	Riya	10		Factoring Trinomials	R112
Vilensky	David	10		Divisibility Patterns	R206
Wong	Trenton	10		Approximating Pi	S205
Zachariah	Aaron	10		Ptolemy's Theorem	S204A
Zhang	Rebecca	10		Wind Turbine Power Output	R213

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<b>Jericho HS</b>					
Kim	Catherine	9		The Mathematics Behind Autonomous Vehciles	D11
Chang	Logan	10		How Group Theory can be Used to Find Invalid Rubiks Cube	S103
Jiang	Haoren	10		The Missing 8 (12345679)	S203
Li	Hongyi (Miles)	10		Calculating Probability Using Function of Area	S107
Lin	Jennfier	10		Using Planar Graphs and Euler's Theorem in Coloring	W1008
Shanmugavel	Sanjana	10		Solving the 4 Square 3 Square Problem using Finabonacci	R15
Wang	Zipeng (Richard)	10		A Consideration of Banach Tarski Paradox Regarding Other	S204A
Weinberger	Brian	10		Using Pascal's Triangle to Factor High Degree Polynomials	S204
Chen	Zhuolin	11		Deriving an Algorithm for Constructing an Election Based on	BR112
Lipman	Asher	11		Group Manipulations of the Gale-Shapely College	CHP31
Malik	Hamza	11		Reinterpretation of the Josephus Problem	L203
Shekar	Shruthi	11		Data Mining: Derivation and Application of an Intricate	S209
Singh	Japeshwar	11		Cell Phone Usage and its Effect on the Grades of High School	CHP114
Subramanian	Madhav	11		Exploring God's Number in Rubik's Cube	GAL16
<b>Kennedy HS POB</b>					
Varghese	Eshwin	10		Using Droz-Farny Line Theorem to Create Droz-Farny Circles	S108
Bhasin	Saurav	11		Derivatives	L203
Bloom	Ethan	11		Using Probability and Mendel's Laws to Predict the	BR200
Brandenstein	Julia	11		Utilization of Mathematical Models to Maximize Cancer	S302
Ferretti	Zachary	11		Statistical Prediction of Seismological Trends Using Julia and	L201
Girsky	Avery	11		Applications of Derivatives: Newton's and Raphson's	S209
Goldstein	Jessica	11		An Investigation of the Homotopy Between Roman Surface	CHP31
Huang	Princeton	11		An Analysis of Car Buying Strategies	L211
Indek	Mitchell	11		Using Kepler's Laws to Investigate the Possibility of a Trans-	CHP114
Kyriacou	Harrison	11		Computer Simulation	L203
Liner	Sean	11		An Application of the Queens Problem in Defining Strategic	S302
Philip	Stefan	11		Investigation of the Use of Hamming Distancesto Detect and	CHP117
Tivakaran	Eshan	11		Application of Levels to Prove Angle Bisector Theorem,	BR112
<b>Kennedy MS Bethpage</b>					
Bhatia	Aurrel	8		A Mathematical Approach to Predicting Movie Revenues	BR105
Thulasidas	Theresa	8		Gothic Architecture	BR106
Channapatna	Ruchitha	8	Team A	Playing with Probability	ME10A
Channapatna	Suchitha	8	Team A	Playing with Probability	ME10A
<b>Lawrence HS</b>					
Andrade	Daniela	9		Physics and Math	A109
Gonzalez	Meivelin	9		Mathematics and Music	D11
Hance	Danielle	9		Matrix Algebra	A200
Melgar	Angie	9		Spidrons	D20
Sharin	Amy	9		Mathematical Paradoxes	A212
Rampersaud	Deven	10		Pi	R101
Scroppo	Noah	10		The Zipf Mystery	R102
Chen	John	11		Determining the Molecular Weight of Polystyrene	L211
Guha	Anoushka	11		Empirical Equations: Calculating the Molecular Weight of a	GAL17
Arzu	Heavan	12		Is Speed Affected by Weight or Training?	S305

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Khader	Fiza	12		What Affects Sleep More?	S308
Merchan	Kellyn	12		Diphantine and Diophantus	S309
Portillo	Stacy	12		Chaos Theory	S310
Ramirez	Jean Joshua	12		Exponents	N18
Rosales	Jacquelin	12		Netflix and Social Media vs. GPA	N19
Lawrence MS					
Dagrin	Ileana	8		The Binomial Theorem	BR28
Long Beach MS					
Arengo	Rio	7		Pascal's Triangle	BR16
Lynbrook HS					
Hausknecht	Kaylie	11		Integer Chebyshev Polynomials	CHP114
MacArthur HS					
Yuan Li	Jin Guo	10		The Concept of Pi	R109
Yuan Li	Jing Ying	10		The Concept of Pi	R110
Chowdhury	Saajid	11		Evenly Spreading n Points Within a Unit Square	GAL18
Fischer	Emily	12		Theory of Relativity and The Fourth Dimension	N20
Manhasset Secondary School					
Beil	Mackenzie	9		The Hidden Beauty of Multiplication Tables	D15
Gauld	Kevin	10		Hashes and Cryptocurrency	SC141
Hill	Megan	10		The "Magic" of Magic Squares	S201
Orthos	Kayla	10		Game Theory	S203
Park	Dohyeon	10		Game Theory	S108
Ryan	Charlotte	10		The Mathematics of Network Traffic	S205
Zhang	Rendie	10		Knot Theory	S109
Khatoria	Sidhanth	11		Surreal Numbers	L211
Mondiello	Caroline	11		Matrix Representations of Edge Graphs	S209
Gold	Daniel	12		The Formula that Plots (Almost) Everything	N21
Haigian	Claudine	12		Proving and Applying Pick's Theorem	S304
Kiley	Emily	12		Applications of Vectors	S304A
Locurto	Marissa	12		The Pell Equation	S305
Petras	Katherine	12		Derivative Applications to Business and Economics	S308
North Shore Hebrew Academy					
Applebaum	Jack Henry	9		Game Theory	D101
Basaleli	Benjamin	11		Boat Stability	S302
Gilman	Benjamin	12		Gravitational Time Dilation	S309
North Shore HS					
Blumenthal	Sophie	9		The Inscribed and Escribed Circle of a Right Triangle	C306
Efstathiadas	Christina	9		Geometric Transformations in the Coordinate Plane	D18
Hunt	Katherine	10		The Discounted Cash Flow Valuation	S107
Lavenda	Louis	10		Conic Sections	S103
McCreery	Kyra	10		Mathematics of Map Projections	R111
Reilly	Esme	10		The Continuum Hypothesis	S201
Leventhal	Hanah	11		Formulas Involved in the Motion of an Arrow	BR200
Ruisi	Michael	12		Limits and Epsilon-Delta Proofs	N18
Sharkey	Robert	12		Geometric Solutions of a Quadratic Equation	N19

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Zaffiro	Gabrielle	12		Rotation of Axes Involving Conic Sections	N20
<b>North Shore MS</b>					
Buschfrers	Matias	7		Patterns and Sequences	BR16
Fleming	Michael	7		Coding and Binery Code	BR12
Rush	Rebecca	7		Magic Squares	BR18
Frangopoulos	Angelica	7	Team A	Math in Roller Coasters	MA22
Nochowitz	Matthew	7	Team A	Math in Roller Coasters	MA22
Borom	Brandon	8		Fractals	BR111
Ditrano	Katie	8		Math in Music	BR28
McCreery	Evelyn	8		The Four Color Theorem	BR100
<b>Northport HS</b>					
Connor	James	9		Mathematics in Digital Communications	C332
Giuliano	Elias	9		Lewis Carroll and Mathematics	A109
McDonagh	Thomas	9		General Relativity	A200
Murdock	Gavin	9		The Golden Ratio	A212
Schuvart	McKenzie	9		Zero	C332
Stratton	Derek	9		Game Theory	A109
Borovikova	Sophia	10		Sierpinski Fractals	R112
Cacic	Luke	10		Complex Numbers	R206
Krantz	Teddy	10		Ciphers and Cryptography	R213
Levanti	Danielle	10		Ramachandran Plots	W100B
Mitard	Kyle	10		Epitrochoids and Wankel Engines	R15
Patel	Harsh	10		The Monty Hall Problem	R101
Penrose	Kevin	10		Derivatives	R109
Basel	Ashleigh	11		How does posture affect a singer?	GAL242
Doyle	William	11		The Mathematics Behind Boomerangs	GAL13
Jung	David	11		Real Life Applications of Math	GAL14
<b>Northport MS</b>					
Meadows	Zoe	7		Pascal's Triangle	BR13
Foley	Aidan	8		Math in Music	BR203
Rogers	Lauren	8		The Abacus	BR209
Vogt	Clare	8		Conic Sections	BR216
Breckling	Jack	8	Team A	Math in Natural Disasters	SC143
Ciszek	Braden	8	Team A	Math in Natural Disasters	SC143
<b>Oceanside HS</b>					
Visconti	Sarah	10		The Four Color Theorem	S107
Haertig	Vanessa	11		Acing a Serve in Tennis Using Physics	CHP117
James	Danielle	11		The Math in Art	L211
Utrecht	Alexander	11		Analytics Behind hitting a Home Run in the MLB (Part II)	GAL16
Dauber	Jack	12		Algorithms in Group Theory	N21
Dimitrakas	Nickolas	12		Making a College Acceptance Calculator	S304
Javillo	Jude I	12		An Application of the Curve of Quickest Descent	S304A
Meyerowitz	Alexander	12		Image Recognition	S305
Pagona	Nina	12		The Rational Expectation Theory and it's Applications	S308
Wright	Jacqueline	12		Modeling a Zombie Apocalypse Using the SIR Model	S309

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<b>Oyster Bay HS</b>					
Hom	Jason	11		Trachtenberg Speed System	BR200
<b>Roslyn HS</b>					
Chu	Laura	9		The flow with tennis rankings	D11
Fein	Hannah	9		Math and Marching band	D16
Garmise	Hannah	9		Math is going viral	C306
Kumar	Chelsea	9		Sine and Cosine waves	D15
Lam	Katie	9		The mathematics of equestial?	D20
Lee	Faith	9		Speed of a softball pitch	D101
Lok	Sara	9		The perfect lob	D16
Mashkevich	Joselle	9		Math in tennis serves	D18
Matarangas	Ariana	9		The mathematics of the perfect three point shot	D11
Weiss	Luke	9		Golden ratio in art and architecture	D15
Weissman	Sydney	9		The math of pottery	D101
Zarrini	Yael	9		Unsolved Problem How to fit one triangle inside another	C306
Zucker	Jordon	9		Triangluar Numbers	D14
<b>Roslyn MS</b>					
Fasanello	Robert	7		Random numbers	BR15
Lam	Kristi	7		Where math meets music	BR12
Mashkevich	Lemmy	7		Heron's shortest distance problem	BR16
Nguyen	Emelie	7		Trig	BR18
Sinha	Arya	7		The golden ratio	BR13
Anscher	Emma	8		The monty hall problem	BR29
Christenson	Luke	8		Cavalieri's principal	BR29
Corey	Dani	8		Tessellations	BR103
Fein	Brooke	8		Math in Music	BR103
Grewal	Jaideep	8		Clock Angles	BR29
Guillon	Luca	8		Area of a regular polygon w/ n sides	BR105
Hoffman	Jake	8		Angle of incidence	BR28
Levine	Bennett	8		Conic sections	BR105
Lind	Liam	8		bayes Theorem	BR100
Lui	Daniel	8		3d vector paper	BR105
Mazarin	Ashley	8		High Frequency Trading	BR106
Nercessian	Olivia	8		Riemann Sum	BR111
Rice	Mikey	8		The uses of trig in areospace engineering	BR111
Sehgal	Harshita	8		Calculating the sides of the largest equilateral triangle that	BR28
Valauri	Sophia	8		Imaginary numbers	BR100
Xu	William	8		The relationship between the incinde and circumcinde of	BR106
Youn	Hailee	8		Calculating the quality of squares and rectangles within an	BR103
Chandra	Sonia	8	Team A	Fractals	ME108
Stam	Rylie	8	Team A	Fractals	ME108
Litvack	Ian	8	Team B	Eulers paths and circuits	ME108
Schwartz	Mac	8	Team B	Eulers paths and circuits	ME108

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Berlent	Dylan	8	Team C	Cryptology	ME10A
Burnt	Jared	8	Team C	Cryptology	ME10A
Kessler	Ethan	8	Team D	Game theory	ME10A
Milholland	Aidan	8	Team D	Game theory	ME10A
<b>Schreiber HS</b>					
Fried	Harrison	10		Data Analysis	S201
Guo	Tiffany	10		Atmospheric Statistics	S204
Helman	Benjamin	10		Physics and Data Analysis	S205
Kobayashi	Wakato	10		Data Analysis	S109
Muratore	Julia	10		Statistics and Data Analysis	S108
O'Neill	Ashley	10		Mathematical Modeling	SC141
Ren	Jeannie	10		Machine Learning	S203
Rosaya	Sabine	10		Statistics and Data Analysis	S107
Shroff	Maansi	10		Data Analysis	S202
White	Julian	10		Statistics	S103
Fain	Jacob	11		Statistics and Data Analysis	L211
Gruber	Zachary	11		Biomedical Devices	CHP117
Kapoor	Nicolas	11		Semiconductors	BR200
Leong	Maya	11		Statistics	S209
Levin	Emma	11		Mathematical Modeling	L203
Melkonian	Joseph	11		Game Theory	S302
Romanski	Lucas	11		Linear Algebra	L201
Shields	Carter	11		Data Analysis	CHP31
Smith	Hannah	11		Data Analysis	BR112
<b>South Woods MS</b>					
Dadi	Shivane	7		Magic Squares	BR16
Dapice	Kyle	7		Math in Roller Coasters	BR12
Dunn	Willow	7		Genetics and Probability	BR15
Raghu	Ketan	7		Chaos Theory	BR13
Mepani	Aarian	7	Team A	Pascals Triangle	MA22
Mutyala	Ashok	7	Team A	Pascals Triangle	MA22
Lin	Rachel	7	Team B	Optical Illusions	MA22
Qian	Tiffany	7	Team B	Optical Illusions	MA22
Guo	Sabrina	8		Conic Sections	BR106
Wang	Alex	8		Zeno's paradox	BR100
Jung	Ashley	8	Team A	Photography	ME10A
Shleimovich	Michele	8	Team A	Photography	ME10A
Desai	Siddarth	8	Team C	Math in Sports: Golf	ME10B
Park	Anthony	8	Team C	Math in Sports: Golf	ME10B
<b>Stimson MS</b>					
Buckshaw	Kate	7		What are the Real Chances of Winning the Lottery?	BR26
Long	Dylan	7		Statistics "The Changeup Effect"	BR20
Slunsky	Grayson	7		Math in Hockey	BR25
Tuony	Matthew	7		Math in Baseball	BR26



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<b>Syosset HS</b>					
Chu	Michael	9		Proofs in Number Theory	D18
Dapice	Jennie	9		Fair Division	D20
Li	Kevin Y	9		Change Making Problem	D11
Rasquinha	Giselle	9		Mathematics of Voting	D16
Elenowitz	Joshua	10		Stock Market	S204A
Gangat	Azim	10		Stock Market	R102
Jang	Sophia	10		Voting	R110
Luo	Yan	10		Sleep-Wake Cycle	S103
Mastandrea	Nicholas T	10		BCS Theory	S108
Mittal	Arushi	10		Fractals Geometry	S109
Wang	Kai	10		Graph Theory	R111
Zhao	Lingfei	10		Genetic Algorithms	S205
Hsu	Allison L	11		Computer Image Analysis	L211
Lam	Thomas	11		Lights Out Puzzle	CHP114
Younus	Suhail	11		Cryptography	CHP31
Arora	Jahnavi	12		Four Color Theorem	S310
Lefkowitz	Ryan	12		Computer Graphics	N18
Weiss	Jeremy	12		Cloud Computing	N19
<b>The Wheatley School</b>					
Bansal	Manav	9		Taylor, Power and Geometric Series	D20
Chabria	Anya	9		Fractal Geometry: The Mathematics uniting the Universe	D101
Hassan	Sarah	9		The Biostatistics and Epidemiology Involved in Determining	A200
Jayam	Viraj	9		Projecting onto the n-Sphere via Stereographic Projections	A212
Ness	Eric	9		System of Numerations through Histroy	D15
Ramos	Madison	10		The Mathematics Behind Magic	SC141
Shah	Diya	10		Boolean Algebra	S107
Sparacio	Rebecca	10		Determining the Association between Extracurricular Activity	R112
Yagoda	Emily	10		The Math Behind Bitcoin and Cryptocurrencies	S204A
Zhong	Sharon	10		Foundation / Support Mathematics	S202
Shukla	Manan	11		The Banach-Tarski paradox	GAL17
Singh	Vedant	11		Using Optimization to Increase Production Efficiency	S209
Ainechi	Sufia	12		The Tipping Point of Buildings	S310
Balboni	Michaela	12		The Fractal Component of Fibonacci's Spiral and the Balboni	N20
Kumar	Abhishek	12		Performance of a Parallelized Restricted Boltzman Machine	N21
Vega	Justin	12		Using Mathematical Modeling to Calculate Neutron Cross-	S304
<b>Thompson MS</b>					
Hon	Griffin	7		Stastics and the Stock Market	BR18
Mehta	Ria	7		Mobius Strip	BR15
Su	Emily	7		Magic Squares	BR16
Chaudri	Sophia	7	Team C	Golden Ratio	MA22
Rishi	Anoushka	7	Team C	Golden Ratio	MA22
Jain	Aryan	8		Pascal' Geometry	BR100

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<b>Trinity Regional School</b>					
Finnegan	Christian	8	Team A	Trigonometry	SC218
Kabacinski	Simon	8	Team A	Trigonometry	SC218
Smithwick	Daniel	8	Team A	Trigonometry	SC218
D'Alonzo	Aidan	8	Team B	The 10 Dimensions	MA20
Turner	Michael	8	Team B	The 10 Dimensions	MA20
Whitcomb	Stephen	8	Team B	The 10 Dimensions	MA20
<b>Udall Road MS</b>					
Jablonski	Catroina	8		3D	BR217
Saures	Kayla	8		The Golden Ratio and Pi	BR202
Stueber	Thomas	8		Statistics in Baseball	BR208
Balkunas	Amanda	8	Team A	4D Dimensions	SC142
Bernstein	Ashley	8	Team A	4D Dimensions	SC142
Gaffney	Emma	8	Team A	4D Dimensions	SC142
Cappadora	Hailey	8	Team B	Trigonometry and Crimes	SC143
Comolli	Alyssa	8	Team B	Trigonometry and Crimes	SC143
Castellino	Nicholas	8	Team C	Architecture	MA20
Miller	Alec	8	Team C	Architecture	MA20
Stueber	Matthew	8	Team C	Architecture	MA20
Gustavson	Hope	8	Team D	Golden Ratio	SC218
Robiglio	Vincenza	8	Team D	Golden Ratio	SC218
Veiga	Kristina	8	Team D	Golden Ratio	SC218
<b>West Hollow MS</b>					
Oumer	Sinna	7		Cryptography	BR20
Rudes	Ryan	7		Non-Standard Analysis - Infinitesimals and Zeno's Paradox	BR25
Shapiro	Mark	7		Propoerties of Euler's Number	BR26
Wu	Jason	7		Math in Paper Folding	BR20
Curtis	Leila	8		Mathematical Paradoxes	BR203
Hsiao	Chloe	8		Pyramids	BR209
Kim	Max	8		Binomial Theorem	BR216
Kugler	Jolie	8		Logic	BR202
Lerebours	Sophia	8		SIR Model in Epidemiology	BR203
Madaan	Meher	8		Pascal's Triangle	BR208
Nambiar	Anand	8		Fractal Geometry	BR209
Parkes	Kaitlyn	8		Complex Numbers and Quadratic Equations	BR216
Serlin	Dylan	8		Nuclear Physics	BR217
Zinkin	Alana	8		Complex Numbers	BR202
Keskinyan	Chase	8	Team A	Trachtenberg System	SC218
Patel	Rohan	8	Team A	Trachtenberg System	SC218
Garellick	Alexandra	8	Team B	Genetics	SC143
Garellick	Julia	8	Team B	Genetics	SC143
Blumberg	Emma	8	Team C	Pi	SC142
Kalina	Brianna	8	Team C	Pi	SC142

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Woodland MS					
Joode	Sachin	8		Binary Numbers	BR103
Woodmere MS					
Pathiranage	Sasiru	8		Cryptography	BR29