

# MATHCOUNTS®

## Spring Newsletter

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### Kevin Liu Wins National Champion Title at 2015 Raytheon MATHCOUNTS National Competition

*In 2014, after a remarkable year in the MATHCOUNTS Competition Series, Kevin Liu made it to final matchup of the Countdown Round. Trailing by just one point, he was so close to winning. But when his opponent buzzed in, Kevin groaned in frustration, knowing at that moment the title of National Champion had slipped beyond his grasp.*



*Eighth grader Kevin Liu at the moment he learned he was the 2015 National Champion at the 2015 Raytheon MATHCOUNTS National Competition in Boston, Mass.*

*One year and many more MATHCOUNTS accolades later, Kevin found himself at the [2015 Raytheon MATHCOUNTS National Competition](#) in a position almost identical to where he was last year...with one key difference: this time it was Kevin who was up 3-2 in the final matchup of the Countdown Round. This time, it was Kevin who was just one correct answer away from being the National Champion.*

*After multiple nail-biting questions, the eighth question of the matchup flashed on the screen.*

*How many arithmetic progressions of six increasing terms include the terms 15 and 20?*

*Kevin's opponent buzzed in immediately. Last year, this would have been the moment that Kevin had dreaded. But this year was different. His opponent answered the question incorrectly; Kevin calmly kept working as the audience pulsed with silent excitement. He buzzed in*

*and, without any doubt in his voice, gave the correct answer (15 progressions), needing just 17.9 seconds total to complete the problem and answer.*

As the winner of the 2015 Raytheon MATHCOUNTS National Competition Kevin Liu received the \$20,000 Donald G. Weinert Scholarship and a trip to U.S. Space Camp. An eighth-grade student at Carmel Middle School in Carmel, Ind., Liu is the third Mathlete® from Indiana to be crowned a National Champion.

Liu was one of 224 students who participated in the 2015 Raytheon MATHCOUNTS National Competition on Friday May, 8 at the Sheraton Boston Hotel in Boston, Mass. National competitors came from all 50 states, the District of Columbia, Puerto Rico, Guam, the Virgin Islands and from schools worldwide affiliated with the U.S. Department of Defense and State Department.

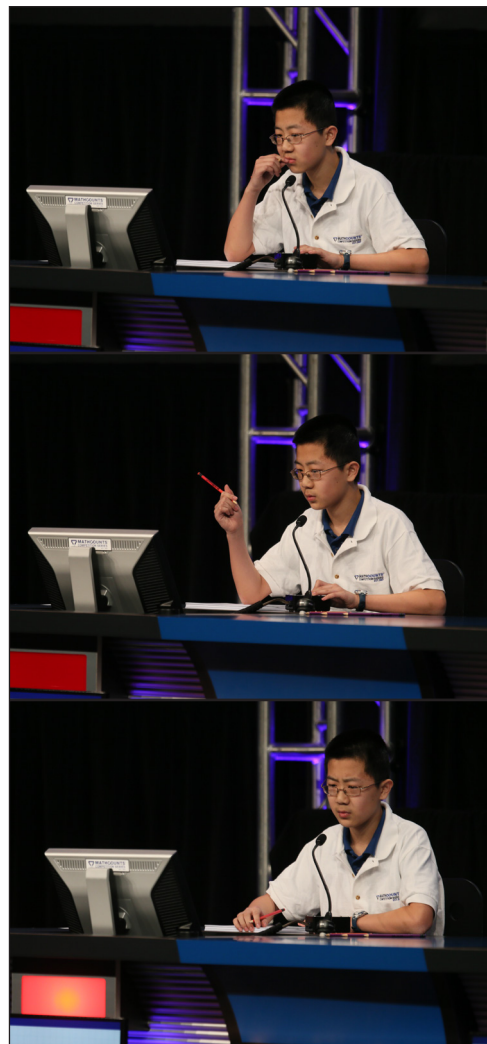
The National Competition is one of the most rigorous math competitions in the country. Middle school mathematicians must complete a series of written exams in the morning, requiring them to work as individuals and as part of their four-person state team. The 12 students with the highest scores on the Written Competition earn the right to compete in the Countdown Round, an intense bee-style contest with fast-paced one-on-one matchups. Students must answer a series of difficult questions, each in no more than 45 seconds.

Rankings for the Countdown Round are determined by the students' scores on the written rounds. The four students with the highest written scores, who received a bye in the first round of this year's Countdown Round, were Andy Xu, an eighth grader from Simpsonville, S.C.; Daniel Zhu, an eighth grader from Potomac, Md.; Alex Gu, an eighth grader from Carmel, Ind.; and Freddie Zhao, an eighth grader from Troy, Mich.

The Countdown Round Runner-Up was Xu, who was also the Written Competition Champion. The two semifinalists were Zhao and Frank Han, an eighth-grade student from Eden Prairie, Minn.

Indiana had a particularly strong showing at this year's National Competition. In addition to Liu's accomplishments, all of the students on the Indiana team finished in the top 14, with three Mathletes qualifying for the Countdown Round. Indiana also won first place in the team competition. Team members Gu, Joey Heerens, Nathan Hu and Liu each won a \$2,000 college scholarship and a trip to U.S. Space Camp. The Maryland team won second place and the Massachusetts team won third place.

After winning the title of 2015 National Champion, Liu went on a media tour that included an appearance on [Live! with Kelly and Michael](#), where he competed against hosts Kelly Ripa and Michael Strahan in an on-air math competition. Liu also was interviewed for [TIME for Kids](#), and he and his coach, Trent Tormoehlen, also both took part in a video segment for [USA Today](#).



*Liu thinks through a problem during a matchup in the Countdown Round.*

The 2015 National Competition took place in Boston for the first time in MATHCOUNTS history, making this year's event unique and especially meaningful for MATHCOUNTS and for our students, coaches and alumni. The Greater Boston Area is the headquarters of Raytheon, the



*During his media tour and appearance on Live! with Kelly and Michael, Liu receives a trophy from Kelly Ripa and Michael Strahan*

Title Sponsor of the National Competition, as well as some of the nation's leading academic institutions for science, technology, engineering and mathematics. Mathletes had the opportunity to attend an exclusive event at the Museum of Science, as well as tour the Massachusetts Institute of Technology Museum during their time in Boston. The 2015 National Competition was featured on [WBZ 4](#), [CBS Boston](#); [90.9 WBUR](#), [Boston's NPR News Station](#); and on the cover of the [Boston Globe](#).

MATHCOUNTS congratulates all 224 of the Mathletes who competed in the 2015 Raytheon MATHCOUNTS National Competition. Earning the right to compete at the national level is an incredible achievement, and each and every national competitor should feel proud. [National Competition results](#) are available on the MATHCOUNTS website.



## 2015 NATIONAL COMPETITION WINNERS

### NATIONAL CHAMPION:

Kevin Liu, IN

- \$20,000 Donald G. Weinert Scholarship
- Trip to U.S. Space Camp

### COUNTDOWN ROUND

RUNNER-UP: Andy Xu, SC

- \$7,500 Scholarship

### COUNTDOWN ROUND

SEMIFINALISTS:

Freddie Zhao, MI

Frank Han, MN

- \$3,000 Scholarship each

### WRITTEN COMPETITION

CHAMPION: Andy Xu, SC

- \$2,500 Scholarship

### 1ST PLACE TEAM: Indiana

Alex Gu, Joey Heerens,

Nathan Hu and Kevin Liu

- \$2,000 Scholarship each
- Trip to U.S. Space Camp

### WRITTEN COMPETITION

RUNNER-UP: Daniel Zhu, MD

### COUNTDOWN ROUND

QUARTERFINALISTS:

Daniel Zhu, MD

Alex Gu, IN

Colin Tang, WA

Ben Qi, NJ

### COUNTDOWN ROUND

PARTICIPANTS:

Jeffrey Chang, MA

Nathan Hu, IN

Nathan Ramesh, MA

Walker Kroubalkian, AZ

2ND PLACE TEAM: Maryland

3RD PLACE TEAM: Massachusetts

## MATHCOUNTS Alumni Studying at MIT and Harvard Attend National Competition

Bringing the 2015 Raytheon MATHCOUNTS National Competition to Boston for the first time was especially exciting because so many successful alumni go on to study and work at the Massachusetts Institute of Technology, Harvard University and other Boston area organizations.

On Friday, May 8, nearly 100 alumni attended the Countdown Round and an exclusive alumni event at the Sheraton Boston Hotel. In addition to meeting and engaging with other MATHCOUNTS alumni, attendees presented state banners to the middle school Mathletes and coaches who were participating in the National Competition.

Among the alumni guests this year were past National Champions Albert Ni, Adam Hesterberg, Kevin Chen and Mark Sellke, all of whom were recognized during the Countdown Round.

We'd like to say  
**thank you**  
to all of the  
awesome alumni  
who attended!



From top: Alumni get ready to present state banners to the 224 state teams. Po-Shen Loh of Expii, Inc. (far right) and other alumni sign the alumni event banner. MATHCOUNTS Executive Director Lou DiGioia welcomes past National Champions Albert Ni (2002), Mark Sellke (2010), Kevin Chen (2007) and Adam Hesterberg (2003) as special guests to the 2015 Countdown Round.





## Celebrating Spirit at the National Competition

Each year the Spirit Award is presented to the team that best exemplifies sportsmanship and camaraderie. So many Mathletes and coaches at the National Competition demonstrate these qualities, and this year's participants were no exception. The Department of Defense Team was the winner of the 2015 Spirit Award.

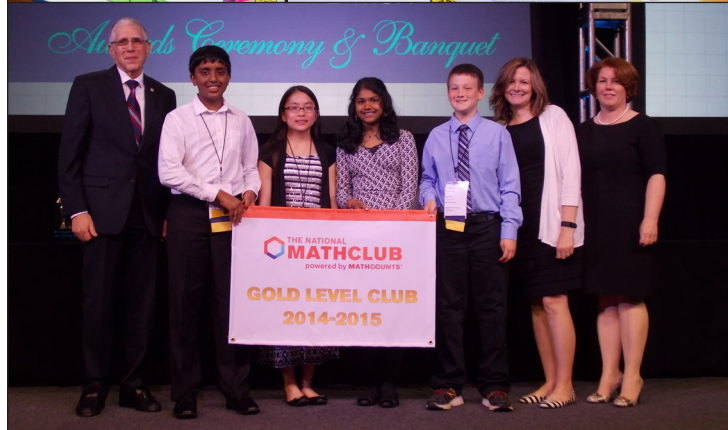


From Top Left: A Mathlete from Georgia uses a MATHCOUNTS hat to collect pins from all of the state teams represented at the National Competition. The Department of Defense Team poses with the Spirit Stick at the Awards Banquet & Ceremony. Team members Annette Belleman, Josh Lovejoy, Lily Butler, Tyler Barber and coach Kara Stolee-Kiefer get ready for the Written Competition.

Overseas teams often face unique challenges preparing for the National Competition—having teammates living in different countries and time zones makes team practices challenging! Department of Defense team members Tyler Barber, Annette Belleman, Lily Butler and Josh Lovejoy did not meet in person until arriving in Boston, but their group quickly stood out as one of the most positive, collaborative and supportive teams at the entire event.

From creating an original song for their state team cheer, to encouraging other Mathletes throughout the weekend, these students and their coach, Kara Stolee-Kiefer, helped make this National Competition truly special.

## Program Highlights in The National Math Club



Clockwise from top left: The club at NOVA Bright Mind in Centerville, Va. created the game "Piece of Pi" as part of the Gold Level Project. The club at St. Catharine's in Columbus, Ohio created the game "Pemos Land" as part of the Gold Level Project. DePonte and Pam Erickson, Vice President of Corporate Affairs at Raytheon (far right) present the Gold Level banner to sixth graders Vamsi Gollapalli, Hannah Shu, Srikruti Vinnakota, Justus Heers and club leader Melanie Formosa of the Grand Prize winning club from East Middle School.

A record number of clubs participated in The National Math Club this year. Dedicated club leaders receive free materials, activity ideas and prizes from MATHCOUNTS so that they can make math more fun and accessible for students of all abilities and interests.

The most active clubs in the program can receive recognition by attaining Silver and Gold Level Status. Over 300 clubs achieved Silver Level this year by having a minimum number of students attend multiple club meetings throughout the year.

In order to achieve Gold Level Status, clubs were required to complete a challenging, multi-step, collaborative project. This year 150 clubs successfully completed the Gold Level Project.

Each year one lucky Gold Level club wins the Grand Prize: a \$500 gift card and an all-expenses-paid trip for four club members and the club leader to attend the National Competition. The club from East Middle School in Plymouth, Mich. won the Grand Prize Drawing this year! The complete list of [Silver and Gold Level drawing winners](#) is posted on the MATHCOUNTS website.

# “The Decision by PBSQ” by Team PBSQ from Georgia Voted Best Video at 2015 Math Video Challenge Finals



Team PBSQ from the Ron Clark Academy in Atlanta, Ga. took top prize at the 2015 Math Video Challenge Finals for their original video, “[The Decision by PBSQ](#).” Team members Peter Warrick Jr., Brandon Benn, Shawl Pryor and Quivion Wynn, all eighth graders, each received a \$1,000 college scholarship. PBSQ—an acronym of the students’ first names—is the second team from the Ron Clark Academy to win the Math Video Challenge. The students’ team advisor was math teacher Dr. Camille Jones.

“The Decision” was one of over 400 videos submitted to the Math Video Challenge contest this year. After a round of general public voting and two rounds of review by an expert judges’ panel, four videos were selected to advance to the finals, which took place on Saturday, May 9 at the Sheraton Boston Hotel in Boston, Mass. The sixteen students who created the four finalist videos presented their work to the 224 students competing at the National Competition. The Mathletes voted to determine the winning video.

“The Decision” tells the story of four scouts from PBSQ University who seek to recruit three of the nation’s top young basketball players. After watching the athletes work together seamlessly on the court, the scouts use algebra to determine the total number of points the players scored individually and as a unit. Will the scouts succeed in getting all three basketball stars to choose PBSQ University? The video solves question #51 from the 2014-2015 MATHCOUNTS School Handbook:

*In a basketball game, Alex and Brock scored 23 points in all; Alex and Cash scored 21 points in all; and Brock and Cash scored 20 points in all. How many points did the three boys score altogether? (Answer: 32 points)*

All four of the 2015 finalist videos were outstanding. This year’s finalist moviemakers tackled challenging math problems, created imaginative real-world applications and let their personalities shine through in their productions. Over 1,000 student-made videos can be viewed in the [Math Video Challenge archive](#).



Above: Lou DiGioia welcomes PBSQ teammates Peter Warrick Jr., Brandon Benn, Shawl Pryor and Quivion Wynn to the stage at the 2015 Math Video Challenge Finals. At right: In “The Decision,” four scouts must use algebra to better understand the performances of three basketball stars they hope to recruit to PBSQ University.

## 2015 MATH VIDEO CHALLENGE FINALISTS

**“ALGEBRA BASKETBALL” BY SARANAC LAKE, NEW YORK**  
James Catania, Bruno Freeman, Noah Pittman, Simon Thill and Team Advisor Tyler Chase

**“HONEY, I MADE ALL THE SHOTS!” BY G.I.T. INTERNATIONAL, STOCKHOLM, SWEDEN**  
Gabby Castle, Jacques Cazayoux, Ryan Clapper, Max Shenk and Team Advisor Denrol Carayol

**“MULTIPLE STEPS” BY MACK DOJO, CALIFORNIA**  
Caitlin Hamilton, Kento Logan, Mai Nguy, Ameen Safi and Team Advisor Belynda Ray



# Shyam Narayanan Wins 2015 MATHCOUNTS Alumni Scholarship



Above: MATHCOUNTS Alumni Scholarship winner Shyam Narayanan, currently a senior in high school. Right: As an 7th grader Narayanan was the Countdown Round Runner-Up and Written Competition Runner-Up at the 2010 Raytheon MATHCOUNTS National Competition.

The [MATHCOUNTS Alumni Scholarship](#) was created last year as a way to recognize and support MATHCOUNTS students beyond their time in middle school. This \$3,000 scholarship award is presented to an alumnus/a whose participation in MATHCOUNTS was influential and had a positive impact on his or her academic and professional endeavors.



Over 250 exceptional students from across the country applied for the scholarship this year. The winner of the 2015 MATHCOUNTS Alumni Scholarship was Shyam Narayanan, a high school senior from Overland Park, Kan. An exceptional mathematician, Narayanan was a three-time MATHCOUNTS national competitor whose awards included Written Competition Champion, Countdown Round Semifinalist, and Countdown Round Runner-Up.

As a high school student, Narayanan searched for new ways to combine his love of math and his desire to give back to his community, which led him to found a Mu Alpha Theta math club, serve as a volunteer MATHCOUNTS coach and tutor students of all ages. Already having won national recognition for his research in biophysics, Narayanan aspires to make a difference in the world through scientific research.

## THANK YOU!

MATHCOUNTS would not be able to make a difference in the lives of hundreds of thousands of students each year without the support of our individual and corporate donors.

Together we can help all students reach their full potential in mathematics.

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## Spotlight on State and Local Donors

We would like to express our appreciation to the generous donors at the state and local level whose support impacted thousands of students attending Chapter and State Competitions this year. They helped make the 2014-15 MATHCOUNTS Competitions Series possible.

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