

MATHCOUNTS Expands The National Math Club to Provide More Resources For Educators and Reach More Students



MATHCOUNTS re-launched the Club Program as The National Math Club this year, increasing the features and resources offered to educators and extending eligibility requirements to enable more students to participate.

Registration for this year has been opened to non-school organizations and groups, providing students across the country with new opportunities to join a math club. Multiple teachers from the same school also can register for The National Math Club, ensuring that Club Leaders can tailor activities to the specific needs of their students, and have enough materials to build a successful club.

The National Math Club is a free program that strives to make math engaging for students of all ability and interest levels through fun, hands-on activities done in a social, group setting. The 2013-2014 Club Activity Book has been lengthened and now features 15 activities—10 new activities and five of the most popular activities from 2007-2013.

UPDATES TO THIS YEAR'S PROGRAM:

- All club materials—including all handouts, game cards and solutions to activities—are included both in the Club in a Box materials and online, giving Club Leaders greater flexibility in planning and preparing for club meetings.
- Requirements for earning Silver and Gold Level recognition have been modified to align with the project-based learning goals of The National Math Club.
- The registration process has been streamlined and separated from the Competition Series registration, reducing confusion for Competition Coaches and Club Leaders.

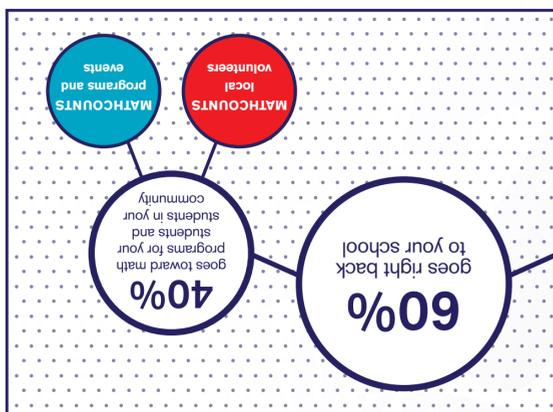
More information is available at www.mathcounts.org/club.

IMPORTANT DATES FOR 2013-2014

- Now** Registration open for The National Math Club at www.mathcounts.org/clubreg.
- Mar. 3 (received)** Silver Level Deadline to be eligible for all awards, as well as entry into the Silver Level Drawing.
- Mar. 28 (received)** Gold Level Deadline to be eligible for all awards, as well as entry into the Gold Level Drawing and Grand Prize Drawing.
- Apr. 11 (received)** Silver & Gold Level Deadline to be eligible for all awards, but not for entry into any drawings.
- May 2 (received)** Final Silver Level Deadline. No Silver Level applications accepted after May 2nd. Awards available while supplies last.
- May 9** Club Leader + 4 students from Grand Prize winning club attend 2014 Raytheon MATHCOUNTS National Competition in Orlando, FL.
- May 16 (received)** Final Gold Level Deadline. No Gold Level applications or projects accepted after May 16th. Awards available while supplies last.

SOLVE-A-THON

MATHCOUNTS



Information and sign up are available at solveathon.mathcounts.org.

MATHCOUNTS competition programs and resources offer their students, and local communities benefit from more enriching teachers receive critical funding to enhance the math opportunities they offer their students. All money raised through Solve-A-Thon goes toward math education that directly impacts the students who fundraise and their local community. Teachers and students create fundraising pages, which are shared with friends and family. Students then complete a set of 20 math problems that cover topics from the Grades 6-8 Standards of the National Council of Teachers of Mathematics, and participants earn donations and pledges based on how many problems they attempt. The Solve-A-Thon brings together students, educators and members of the local community to earn money for math programs in their school and neighborhood. Teachers and students create fundraising pages, which are shared with friends and family. Students then complete a set of 20 math problems that cover topics from the Grades 6-8 Standards of the National Council of Teachers of Mathematics, and participants earn donations and pledges based on how many problems they attempt. The MATHCOUNTS Solve-A-Thon, an innovative fundraising tool developed as an answer to the funding constraints faced by educators and local volunteers, opened this fall to schools nationwide.

MATHCOUNTS Launches Solve-A-Thon—Exciting New Way to Fund School Math Programs



IMPORTANT DATES FOR 2013-2014

Now Registration open for the MATHCOUNTS Competition Series at www.mathcounts.org/compreg.

Nov. 1 2014 School Competition available for download to all registered Competition Coaches.

Nov. 15 (postmarked) Deadline to register for the Competition Series at *reduced rates*.

Dec. 13 (postmarked) Deadline to register for the Competition Series. *Register on time to ensure your students' participation.*

Feb. 1-28 Chapter Competitions

Mar. 1-31 State Competitions

May 9 2014 Raytheon MATHCOUNTS National Competition in Orlando, FL

31st Annual MATHCOUNTS Competition Series Kicks Off



Registration is open for the 2013-2014 MATHCOUNTS Competition Series—MATHCOUNTS' longest running program. Designed for students with a passion and talent for math, the Competition Series has brought together the nation's brightest young minds for more than three decades.

The only program of its kind, the MATHCOUNTS Competition Series consists of four levels of in-person math competitions. Starting with School Competitions with their classmates, motivated students earn the opportunity to advance to Chapter and State Competitions.

The top 224 students from 56 states and U.S. territories then will advance to the national level, where they will compete for the title of MATHCOUNTS National Champion and thousands of dollars in scholarships. The 2014 Raytheon MATHCOUNTS National Competition will be held for a fourth time at the Walt Disney World Swan & Dolphin Hotel in Orlando, FL.

UPDATES TO THIS YEAR'S PROGRAM:

- The 2014 School Competition will be distributed electronically in the fall, allowing Competition Coaches to begin school-level competitions earlier without waiting for mailed materials.
- The registration process has been streamlined and separated from The National Math Club, reducing confusion for Competition Coaches and Club Leaders.

More information can be found at www.mathcounts.org/competition.

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MATHCOUNTS Restructures Semifinalist Selection in Math Video Challenge



Semifinalist videos for the 2013-2014 Math Video Challenge will be determined by both general public voting and judges panel review, a change to the program that was prompted by participant feedback from last year's video contest. The general public will vote during a shortened six-week period and the 100 videos with the most votes will advance to the judging rounds, where the top 20 videos will be selected as semifinalists.

The Math Video Challenge is a unique program that gives students the opportunity to combine their skills in communication, collaboration and technology as they engage in a creative math project. Student teams produce an original video that explains the solution and real-world application of a problem from the 2013-2014 MATHCOUNTS School Handbook.

The twenty semifinalist videos will be reviewed by a panel of expert judges, and then four finalist videos will be selected to advance to the 2014 Math Video Challenge finals, held in Orlando, FL. The four finalist teams will present their videos to the 224 students participating in the National Competition, and then the national competitors will vote for this year's winning video.

More information about is available at videochallenge.mathcounts.org.

IMPORTANT DATES FOR 2013-2014

Now Registration and video submission open for the Math Video Challenge at videochallenge.mathcounts.org.

Feb. 3 Last day to submit videos before voting begins. *Get your video submitted by this day to have the most time to collect votes.*

Feb. 4 Voting opens to the general public.

Mar. 14 Voting closes to the general public. *Last day to get those votes.*

Mar. 15 Top 100 videos advance to first round of Judges Panel review.

Mar. 28 20 Semifinalist videos announced.

Apr. 4 4 Finalist videos announced.

May 10 Finalists present their videos at the 2014 Raytheon MATHCOUNTS National Competition in Orlando, FL.

MATHCOUNTS®
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Look inside for FREE POSTER!

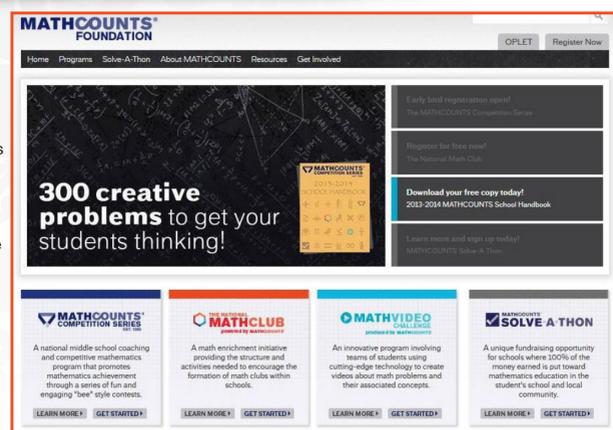


MATHCOUNTS Unveils New Website and New Look

This fall the MATHCOUNTS Foundation launched an update to the organization's look and programs—the most significant change to the MATHCOUNTS brand in its 30-year history. MATHCOUNTS also unveiled a redesigned website, with a focus on ease of use for educators, alumni and students.

Programmatic updates range from minor name changes to major changes to eligibility requirements, rules and structure—all meant to improve the MATHCOUNTS experience for all members of the community.

More information about specific MATHCOUNTS programs, as well as information about free resources for educators, such as the MATHCOUNTS Solve-A-Thon fundraising tool and Problem of the Week, are available at www.mathcounts.org.



New Features Added to the Interactive MATHCOUNTS Platform

The 2013-2014 MATHCOUNTS School Handbook, including 300 problems and solutions, has been added to the Interactive MATHCOUNTS Platform, powered by NextThought. Members of this free online community will also have access to new interactive features that allow cross-platform discussions.

The MATHCOUNTS Interactive Platform is an online resource that allows educators and students to create personalized profiles which allow them to collaborate with teammates, discuss math problems in real time, and access educational videos while working on MATHCOUNTS problems.

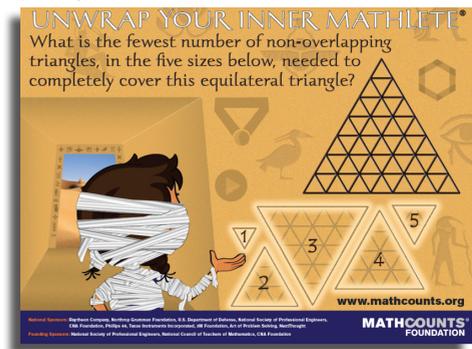
The forums and thoughts features added this year are designed to facilitate community-wide communication and improve user experiences. Forums allow members to participate in platform-wide discussions and challenges, as well as post questions that other members can answer. Members can also post thoughts on their profiles in the same way they would post a status update or new blog entry on a social media platform.

The MATHCOUNTS Interactive Platform can be accessed at mathcounts.nextthought.com.

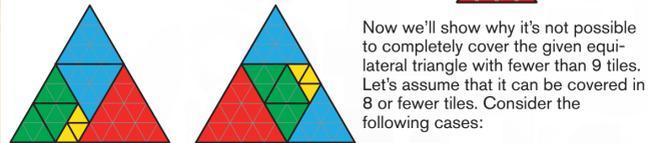


MATHCOUNTS Poster Solution

We're sure you've started to unwrap your inner Mathlete® by now and are already hard at work solving MATHCOUNTS problems. If you missed this poster, you can download it from the MATHCOUNTS website, along with the 2013-2014 MATHCOUNTS School Handbook.



SOLUTION: For simplicity, let's think of the 5 smaller triangles as yellow, green, blue, red and purple triangular tiles, as shown. The equilateral triangle can be completely covered using no fewer than 9 tiles. Below are 2 possible solutions, each using 3 yellow tiles, 2 blue tiles, 1 red tile and 3 green tiles.



- Case 1: Using a purple tile, the remainder of the equilateral triangle can be covered by 24 yellow tiles, or a combination of yellow tiles and green tiles. At most 5 green tiles can be used, leaving the remainder of the equilateral triangle to be covered by 4 yellow tiles. That's a total of 10 tiles. Since any other arrangement that includes a green tile requires a total of more than 10 tiles to cover the equilateral triangle, we can conclude that there is no arrangement using a green tile that works and has 8 or fewer tiles in total.
- Case 2: Since the solutions above show that 9 is the minimum number of tiles that will completely cover the equilateral triangle when using a red tile, the next case we will consider uses blue tiles or smaller. When 4 blue tiles are used, the only way to completely cover the remainder of the equilateral triangle is by using 13 yellow tiles. That's a total of 17 tiles.
- Case 3: When 3 blue tiles are used with 4 green tiles, the remainder of the equilateral triangle can be completely covered with 6 yellow tiles. That's a total of 13 triangles. When 3 blue tiles are used with 3 green tiles, the remainder of the equilateral triangle can be completely covered using 10 yellow tiles. That's a total of 16 tiles.
- Case 4: When 9 green tiles are used, the remainder of the equilateral triangle can be completely covered using 13 yellow tiles.

Clearly, the equilateral triangle cannot be completely covered in fewer than 9 tiles when using only yellow tiles. We can conclude that completely covering the equilateral triangle in 8 or fewer tiles is not possible. Therefore, the equilateral triangle can be completely covered using no fewer than 9 non-overlapping triangles in the 5 sizes shown. You can download the solution to this problem, including diagrams for all 4 cases described here, at www.mathcounts.org/resources/poster-archive.

Mathlete® Wins on Jeopardy Kids Week

Congratulations to Josiah Washington of Columbia, South Carolina!

Standing before Alex Trebek and a packed audience, and knowing that his two competitors were just as eager to win as he was, Josiah Washington had only 30 seconds to come up with his winning question to the Final Jeopardy clue:

Like NM and MN, the postal abbreviations of these two states are the reverse of one another.

With a beaming smile as his question was shown—"What is Alabama & Louisiana?"—13-year old Josiah became the Jeopardy Champion and won over \$22,000.

Although, as Josiah explained, "you can't really study for Jeopardy," his journey to becoming a game show champion did not happen overnight. In fact, Josiah has been working hard to learn "a little bit about everything" since he was just three years old. Whether reading the daily newspaper to keep up on current events, visiting the library every day to stock up on fiction and non-fiction books, or participating in a math circle to boost his math skills, Josiah is *always* learning new things. It's no wonder he's a trivia whiz!

Since winning Jeopardy in August, Josiah has been the recipient of multiple awards and honors. The Richland County Council awarded him a Resolution in honor of his achievements and Josiah also recently became the youngest person ever to receive the key to the City of Columbia.

Josiah, an eighth-grade homeschool student with the Washington Academy of Excellence, competed in the 2013 Columbia Chapter MATHCOUNTS Competition. An exceptionally well-rounded person, Josiah also participates in theater, fencing and robotic programming, and volunteers at his local library.

Josiah's dream is to run his own roller coaster design company one day, and this goal-oriented Mathlete is already working to make his dream a reality. He likes to build and design his own roller coasters with a computer software game. In the future he plans to attend the Massachusetts Institute of Technology and major in mechanical engineering, then go on to Harvard Business School.

In twenty years, if you find yourself on a heart-pounding thrill ride on a theme park roller coaster, you just might be taking a ride on one of Josiah Washington's creations. With all of his talent and motivation, there is no stopping this Jeopardy champ!

If you would like to share a major accomplishment of an amazing Mathlete, coach or MATHCOUNTS alum, please send an email to info@mathcounts.org.



Above: Mayor Steve Benjamin (left) presents Josiah with a key to the City of Columbia. Josiah is pictured with his parents, Renee and Phillip, and his younger sister, Micah. Below: Josiah gets a picture with Jeopardy! Host Alex Trebek after winning his matchup.



Photograph Courtesy of Jeopardy Productions, Inc.

MATHCOUNTS Announces New Scholarship for Alumni

The MATHCOUNTS Foundation is proud to announce the MATHCOUNTS Alumni Scholarship—a \$3,000 scholarship awarded to an outstanding alumnus/a whose experience in MATHCOUNTS helped shape his or her outlook on mathematics and learning.

All alumni who participated in any of the three MATHCOUNTS programs are eligible to apply. This scholarship is open to seniors in high school or students currently pursuing a two-year or four-year degree at an accredited college or university.

The MATHCOUNTS Alumni Scholarship application period will open in the fall. More information and the application are available at www.mathcounts.org/scholarship.

Remember MATHCOUNTS on 12/3/13

Give to MATHCOUNTS and tell people about it! Learn more at www.givingtuesday.org.

#GivingTuesday

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If this letter **M** has an area of **395.6 cm²**, what is the area when its linear dimensions are **reduced** to one-quarter of their current lengths?



Express your answer as a decimal to the nearest hundredth.

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