

# **2025 Colorado Mathematics Awards**

*The 30<sup>th</sup> annual awards program to recognize outstanding performance in national and international mathematics competitions and contests by Colorado middle school, high school, and undergraduate college students.* 

# Thursday, May 22, 2025 4:15 – 6:30 p.m. Maglione Hall – University of Denver

# Program

# 4:15 - 5:00pm Refreshments

5:00 - 6:25pm Welcome: Dr. David Carlson, Co-founder and Co-chair

**<u>Remarks</u>: Ms. Rhonda Naylor**, CMA Co-chair and National Board Certified Teacher: Adolescence Mathematics: *Where will you be in 10 years? 20 years? 30 years?* 

## Presentation of Awards

- MATHCOUNTS: presented by Mr. Matt Bixby, 5<sup>th</sup>-8<sup>th</sup> grade math, Challenge School, Denver, and coach of the 2024 Colorado MATHCOUNTS National Team
- American Mathematics Competitions 8: presented by Mr. Bixby
- American Mathematics Competitions 10 and 12: presented by Ms. Christy Marini, 8th Grade Math and Algebra I Teacher, Campus Middle School, and coach of the 2023 Colorado MATHCOUNTS National Team
- MAA AMC Young Women in Mathematics Awards and Certificate Program: presented by Dr. Sheila Davis\*\*, Health Chair, Rocky Mountain NAACP State Conference
- U.S.A. Junior Mathematics Olympiad and U.S.A. Mathematics Olympiad: presented by Mr. Srinivas Arun, freshman, Massachusetts Institute of Technology, and Dick Gibbs Scholarship recipient, CMA 2024
- William Lowell Putnam Mathematical Competition: presented by Dr. John Griesmer, Teaching Assistant Professor, Applied Math and Statistics Dept., Colorado School of Mines
- American Regions Mathematics League--Colorado Teams 1 and 2: presented by Mr. Thomas Davids, Colorado Math Circle Director and ARML Teams coach
- Dick Gibbs CMA Scholarship Awards: presented to Amanda Chen and Ethan Lou, Cherry Creek High School seniors, by Dr. Carlson

<u>Drawings</u> for graphing calculators donated by Texas Instruments: Dr. Ken Jensen\*\*, adjunct faculty, Metropolitan State University, and former STEM Coordinator, Aurora Public Schools

## 6:25pm <u>Closing Remarks</u>: Dr. Carlson

Many thanks to other CMA Steering Committee\*\* members who helped to make this day possible: <u>Sally\*\*</u> <u>and Jim Lambert</u> for providing and engraving medals, <u>Raymond Johnson\*\*</u> for preparing and showing slides and taking photos, and to <u>Michael Zhang\*\*</u>, <u>Rhonda Naylor</u>, and volunteer <u>Sue Wang</u> for preparing certificates. Special thanks also to <u>Sandra Carter-Duff</u> and <u>Leti Ortiz</u> for helping at the registration desk; <u>JT</u> <u>Rustad</u> and <u>Doug Ensley</u>, MAA Competitions, for providing the names and contact information of Colorado's top ten finishers in the AMC 8, 10A&B, and 12A&B contests and related national statistical information; and <u>Shannon Westmoreland</u>, Conference & Events Manager, University of Denver.

# MATHCOUNTS: Middle School Gateway to Math Competitions!

MATHCOUNTS is an afterschool program for 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> graders which leads to a series of three-hour competitions at school, chapter, state, and national levels. Each year, approximately 140,000 students nationwide participate in school MATHCOUNTS competitions, with about 40,000 students participating at chapter competitions. This year, the state competition for individuals and teams was held in-person at the University of Denver campus on March 15<sup>th</sup>. The top four finishers are listed in ranked order and comprised the Colorado National Team, which represented Colorado at the MATHCOUNTS National Competition during May 11-12 in Washington, D.C. The Colorado Team ranked 23<sup>rd</sup> nationally.

#### Colorado First Place Team (and Coach)

Neo Luo, Erika Tang, Joseph Lee, and Angela Wang, Kinard Core Knowledge Middle School, Ft. Collins (Alicia Williams)

## Colorado National Team (and Coaches)

Noah Liu, Campus Middle School, Greenwood Village (Christy Marini); Christopher Zhu, Campus Middle School (Christy Marini, Matt Bixby, and Silva Chang); Neo Luo, Kinard Middle School (Alicia Williams); and Andrew Zhao, D'Evelyn Jr./Sr. High School, Denver (Cory Ryckman and Qingzhong Zhao). <u>Team Coach</u>: Alicia Williams

#### Honorable Mention (and Coaches)

Iris Li, Stargate School, Thornton (Juli Bassman); Alex Wang, Preston Middle School, Ft. Collins (Tyler Cloud); David Dong, (D'Evelyn Jr./Sr. High School (Cory Ryckman and Qingzhong Zhao); and Yihan Jing, Kinard Core Knowledge Middle School (Alicia Williams)

## 5-star system for tracking NATIONAL performance on AMC 8, 10 A&B, and 12 A&B contests!

\*\*\*\*\*A perfect paper! \*\*\*\*Top 0.1% \*\*\*Top 1% \*\*Top 2.5% \* Top 5%

# **American Mathematics Competition 8**

The AMC 8 is a 40-minute 25-question multiple-choice exam in middle school mathematics designed to promote the development of problem-solving skills. All students in 8th grade and below are eligible. The exam was given during January 22-28, 2025. Nationally, 79,511 students from 2,027 schools participated.

#### AMC 8-- Top Colorado Individual Winners (and Coaches)

- (1) Iris Li\*\*\*\*\*, Stargate School, Thornton (Juli Bassman)
- (1) **Ronan Lu**\*\*\*\*\*, Altona Middle School, Longmont (Tim Criger)
- (1) **Christopher Zhu**\*\*\*\*\*, Campus Middle School (Christy Marini, Matt Bixby, and Silva Chang)
- (2) **David Dong**\*\*\*\*, D'Evelyn Jr./Sr. High School (Cory Ryckman and Qingzhong Zhao)
- (2) **Joey Luo\*\*\*\***, Kinard Core Knowledge Middle School (Alicia Williams)
- (2) Michael Luo<sup>\*\*\*\*</sup>, Kinard Core Knowledge Middle School (Alicia Williams)
- (2) Erika Tang\*\*\*\*, Kinard Core Knowledge Middle School (Alicia Williams)
- (3) **Ivan Chang**\*\*\*, Altona Middle School (Tim Criger)
- (3) **Blake Chyou**\*\*\*, Homeschooled, Broomfield (Silva Chang)
- (3) Vincent Pan\*\*\*, Campus Middle School (Christy Marini)
- (3) Andrew Zhao\*\*\*, D'Evelyn Jr./Sr. High School (Cory Ryckman and Qingzhong Zhao)

Top 6<sup>th</sup> grader or below: Ronan Lu\*\*\*\*\*, Altona Middle School (Tim Criger)

# **American Mathematics Competitions 10 and 12**

The AMC 10 and AMC 12 are both 25-question, 75-minute, multiple-choice examinations in high school mathematics with approximately 12 common problems between them. The AMC 10 is for students in 10th grade and below and covers the high school curriculum up to 10th grade. The AMC 12 is for students in 12<sup>th</sup> grade and below and covers the entire high school curriculum, including trigonometry, advanced algebra, and advanced geometry, but excluding calculus. Each contest was given in two different versions on different dates in November 2024. The AMC 10A and 10B exams were taken by 30,545 and 23,364 students respectively; many students took both exams. Similarly, the 12A and 12B exams were taken by 21,222 and 16,522 students, respectively. For students who take both versions of the same test, CMA uses the higher national ranking.

Michael is a 6<sup>th</sup> grader!

Joey is a 5<sup>th</sup> grader!

Vincent is a 6<sup>th</sup> grader!

# American Mathematics Competitions 10 and 12 (continued)

## AMC 10-- Top Colorado Individual Winners (and Coaches)

- (1) Joshua Liu\*\*\*\*\*, Cherry Creek High School, Greenwood Village (Silva Chang and Jim Padavic)
- (1) Amy Zhang\*\*\*\*, Longmont High School (Ana Schultz)
- (3) **Derek Yin\*\*\***, Fairview High School (Dominique Youngren, Silva Chang, Emily Silverman, and Thomas Davids)

Top 8th Grader or below: Christopher Zhu\*\*, Campus Middle School (Christy Marinin, Matt Bixby, and Silva Chang)

## AMC 10-1st Honorable Mention (and Coaches)

Sophie Cox\*\*\*, Colorado Academy, Denver (Tim Hatlee); Rohith Thomas\*\*\* and Christopher Zhu\*\*, Campus Middle School (Christy Marinin, Matt Bixby, and Silva Chang); Michael Zhang\*\*\*, Cherry Creek High School (Jim Padavic and Ming Song); Alex Zhang\*\*\*, Ralston Valley High School, Arvada (Silva Chang and Ming Song); Jonah Wang\*\*, Fairview High School (Dominique Youngren)

## AMC 10-2<sup>nd</sup> Honorable Mention (and Coaches)

Neo Luo\*, Kinard Core Knowledge Middle School (Alicia Williams); Johnlin Feng\*, Kinard Core Knowledge Middle School (Alicia Williams and Ming Song); Eric Chen\*, Cherry Creek High School (Jim Padavic); Iris Li\*, Stargate School (Juli Bassman); and Allison Duan, Peak to Peak Charter School, Lafayette (Silva Chang)

# AMC 12--Top Colorado Individual Winners (and Coaches)

- (1) Ethan Lou\*\*\* Cherry Creek High School (Jim Padavic)
- (2) Shruti Arun\* Cherry Creek High School (Jim Padavic, Thomas Davids, and Silva Chang)
- (3) Abhinav Krishna\*, Cherry Creek High School (Jim Padavic)
- (3) Jacob Greene\*, Stargate School (Silva Chang and Paul Rightmyer)

Top 10th Grader or below: Allison Duan, Peak to Peak Charter School (Dominique Youngren, Fairview High School)

## AMC 12—Honorable Mention (and Coaches)

**Patrick Li, Singh Kushagra,** and **Anirudh Gadepalli**, Cherry Creek High School (Jim Padavic); **Sarah Huo**, Cherry Creek High School (Jim Padavic and Ming Song); **Amanda Chen**, Cherry Creek High School (Jim Padavic, Ming Song, Silva Chang, and Thomas Davids); **Justine Dong**, Fairview High School (Dominique Youngren); **Austin Zhang**, Grandview High School, Aurora (Jocelyn Hatfield); and **Ben Gabrielson**, Cherry Creek High School (Laura Gabrielson)

# MAA AMC Young Women in Mathematics Awards and Certificate Program

This Program provides prizes for the highest-scoring, girl-identifying participants in the AMC 8, 10A, 10B, 12A, and 12B competitions. Additionally, the highest-scoring girls in each MAA Section are recognized with a certificate for each competition. Below are the Certificate winners from the Rocky Mountain Section of the MAA (all but one from Colorado).

<u>AMC 8</u>: Iris Li, Stargate School (Juli Bassman); Erika Tang, Kinard Core Knowledge Middle School (Alicia Williams); Cindy Tian, Snowy Range Academy, Laramie, Wyoming (Yutong ([Gary] Wang, Think Academy Canada); Victoria Yue, Campus Middle School (Christy Marini); and Alexis Pandian, West Middle School, Greenwood Village (Yvette Rodriguez). Cindy is a 5<sup>th</sup> grader, and Victoria and Alexis are 6<sup>th</sup> graders!

Iris, a 7<sup>th</sup> grader, was also recognized nationally as a 2025 Maryam Mirzakhani AMC 8 Award winner!

<u>AMC 10A/10B</u>: **Amy Zhang**, Lakewood High School (Ana Schultz); **Sophie Cox**, Colorado Academy (Tim Hatlee) // **Iris Li**, Stargate School (Juli Bassman); **Allison Duan**, Peak to Peak Charter School (Silva Chang)

<u>AMC 12A/12B</u>: Allison Duan, Peak to Peak Charter School (Dominique Youngren) // Shruti Arun, Cherry Creek High School (Jim Padavic, Thomas Davids, and Silva Chang); Sarah Huo, Cherry Creek High School (Jim Padavic and Ming Song); and Justine Dong, Fairview High School (Dominique Youngren)

# American Invitational Mathematics Examination (AIME) and the USA Math Olympiads

The *American Invitational Mathematics Examination* (AIME) is a 15-question, 3-hour examination, in which each answer is an integer number between 0 to 999. The questions on the AIME are much more difficult than those on the AMC 10 and AMC 12. Invitations were issued to approximately 2.5% of all AMC 10 scorers and 5% of AMC 12 participants. Two versions of the exam were administered on different days in February. This year, 4,690 students nationwide participated in AIME I; an additional 1,518 students took the AIME II exam on the alternate date.

The USA Mathematical Olympiad (USAMO) and the USA Junior Mathematical Olympiad (USAJMO) are six-question, twoday, 9-hour essay/proof examinations given to the top students participating in the AMC 10 and 12 exams and the AIME. Currently, approximately 260-270 students are invited to take the USAMO exam each year, and 230-240 students are invited to take USAJMO exam.

<u>USA Math Olympiad Qualifier</u>: **Shruti Arun**, Cherry Creek High School (Jim Padavic, Thomas Davids, and Silva Chang). Shruti, an 11<sup>th</sup> grader, received a **Bronze Winner** award, which is received by at least 18% of all competitors.

<u>USA Junior Math Olympiad Qualifiers</u>: Joshua Liu, Cherry Creek High School (Silva Chang and Jim Padavic); Derek Yin, Fairview High School (Dominique Youngren, Silva Chang, Emily Silverman, and Thomas Davids); and Amy Zhang, Lakewood High School (Ana Schultz). Joshua and Derek are 9<sup>th</sup> graders; Joshua received an Honorable Mention.

# American Regions Mathematics League – Colorado Teams 1 and 2

Thirty-two Colorado students from 13 different schools competed in the national ARML Competition at the University of Nevada Reno last June. The competition attracted 113 fifteen-member teams and 1621 students from the U.S. and abroad, which competed simultaneously at four sites.

Colorado's Team 1 tied for 22nd nationally out of 53 teams in Division A, and Jackson Dryg from Fossil Ridge High School (now at MIT) placed 19th individually. The members of Colorado's ARML teams are listed below, alphabetically by school. Both teams are coached by **Thomas Davids**, Colorado Math Circle Director.

<u>Team 1</u>: Shruti Arun, Aarush Goradia, Naomi Huang, Joshua Liu, Ethan Lou, and Rohith Thomas, Cherry Creek High School; Hanbei Bao, Jonah Wang, Davin Yin, and Derek Yin, Fairview High School; James Lee, Fossil Ridge High School, Ft. Collins; Sophia Dai, Lakewood High School; Allison Duan, Peak to Peak Charter School; Alex Zhang, Ralston Valley High School, Arvada; and Jacob Greene, Stargate School

<u>Team 2:</u>-Christopher Zhu, Campus Middle School; Amanda Chen, Jasper Huang, Sarah Huo, Om Khurana, Agastya Prabhu, and Michael Zhang, Cherry Creek High School; Kaylor Huang, Kevin Yang, Allan Yu, and Peter Yu, Fairview High School; Aanshi Shah, Legacy High School, Broomfield; Helen Wan, Pine Creek High School, Colorado Springs; and Kyle Zhu, Stargate School

# William Lowell Putnam Mathematical Competition

The *William Lowell Putnam Mathematical Competition* is a collegiate examination sponsored by the Mathematical Association of America. It is a 6-hour 12-question essay examination given on campus on the first Saturday in December. All undergraduates are eligible. In 2024, 3,988 students from 477 institutions in the U.S. and Canada participated.

# Top 500 Individual Winners (and Coaches) from Colorado Institutions

- o Luck Henderson, Colorado State University (Maria Gillespie)
- o Jeremy Huang, University of Colorado Boulder (Siddhant Agrawal)
- Anna Johnston, University of Denver (Ronnie Pavlov)

# Many thanks to these 30 Friends of CMA who have contributed nearly \$12,000 since July 1, 2024!

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