

Sample questions from the 2009 AMC 8

2. On average, for every 4 sports cars sold at the local car dealership, 7 sedans are sold. The dealership predicts that it will sell 28 sports cars next month. How many sedans does it expect to sell?
(A) 7 (B) 32 (C) 35 (D) 49 (E) 112
6. Steve's empty swimming pool will hold 24,000 gallons of water when full. It will be filled by 4 hoses, each of which supplies 2.5 gallons of water per minute. How many hours will it take to fill Steve's pool?
(A) 40 (B) 42 (C) 44 (D) 46 (E) 48
11. The Amaco Middle School bookstore sells pencils costing a whole number of cents. Some seventh graders each bought a pencil, paying a total of \$1.43. Some of the 30 sixth graders each bought a pencil, and they paid a total of \$1.95. How many more sixth graders than seventh graders bought a pencil?
(A) 1 (B) 2 (C) 3 (D) 4 (E) 5
19. Two angles of an isosceles triangle measure 70° and x° . What is the sum of the three possible values of x ?
(A) 95 (B) 125 (C) 140 (D) 165 (E) 180
22. How many whole numbers between 1 and 1000 do **not** contain the digit 1?
(A) 512 (B) 648 (C) 720 (D) 728 (E) 800

Answers: 2) D 6) A 11) D 19) D 22) D

American Mathematics Competitions

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Contributors

Academy of Applied Sciences, American Mathematical Association of Two-Year Colleges, American Mathematical Society, American Statistical Association, Art of Problem Solving, Awesome Math, Canada/USA Mathcamp, Casualty Actuarial Society, IDEA Math, Institute for Operations Research and the Management Sciences, MathPath, Math Zoom Academy, Mu Alpha Theta, National Council of Teachers of Mathematics, Pi Mu Epsilon, Society of Actuaries, USA Math Talent Search, W. H. Freeman and Company, Wolfram Research Inc.



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26th Annual American Mathematics Competitions 8

November 16, 2010

Register now for the middle school level AMC 8!
Details inside.

What is the American Mathematics Competitions 8?

Thank you for your interest in the middle school level American Mathematics Competitions 8 contest! For over 60 years the AMC math contests have been the most respected school-based competitions in the nation. The AMC works with teachers, mathematicians, and professional organizations to provide high quality, challenging math problems aligned with curriculum standards. Many well-known colleges and universities request scores from our contests at the higher grade levels and use them for recruiting and admissions.

The material covered is the middle school mathematics curriculum. Topics include probability, estimation, percentages, spatial visualization, everyday applications and reading and interpreting graphs. The AMC 8 contest is for students in the sixth through eighth grade, although accelerated fourth and fifth graders can also take part. AMC 8 eligibility extends to any student 14.5 years of age or younger, and not enrolled in grades 9 through 12. It is 25 questions in length, and is multiple choice with no penalty for guessing. The contest takes only 40 minutes. A student's score is the number of problems correctly solved.

What are people saying about the AMC?

"I appreciate everything the AMC has done to set up the AMC 10, the AIME, the USAMO, and so on. All I can say is that it has really made my high school experience infinitely more enjoyable." –*Student, Georgia*

"Our students look forward to competing in up to 20 different math contests each year, and the American Mathematics Competitions are the contests that the students strive to take every year. They generate great discussions and are a joy of the participating students." –*Mathematics Department Head, Michigan*

"We are thankful for the American Mathematics Competitions because it gives our students the opportunity to compete with other students who have the same passion for mathematics that they do." –*Mathematics Department Chair, Virginia*

School and student awards for the AMC 8

Each participating school receives individual school results, school awards, and the National Summary of Results and Awards booklet. An award plaque is given to all the perfect scorers, the top scoring student(s) in each state, and student awards are provided for other achievements. Please visit amc.maa.org for more details.

Edyth May Sliffe Teaching Award

The Sliffe Award is given each year to approximately fifty teachers from high-scoring AMC 8 schools. Winners of this award receive a recognition certificate, an award pin, \$100, a one-year membership to the Mathematical Association of America and the National Council of Teachers of Mathematics. A special reception during the NCTM spring meeting honors the award winners.

Our Purpose

The mission of the MAA Competitions is to increase interest in mathematics and to develop problem solving through a fun competition. Teachers and schools benefit from the chance to challenge students with interesting mathematical questions that are aligned with curriculum standards at all levels of difficulty. In addition, students gain the opportunity to learn and achieve through competition with students in their school and from around the world.

Administration of the AMC 8

Our contests are administered by a school or school-based organization and offer individual and school recognition for high scorers. The AMC 8 will be given in each participating school on Tuesday, November 16, 2010. Administration on a later date (Nov. 17-23) is permitted in cases of academic conflicts or school closings. Students may not use calculators on the contest. All answer forms are scored in the AMC office. For more information about how to involve your school in the competitions, read the FAQs at amc.maa.org. *Spanish, braille and large print editions of the 2010 AMC 8 are also available.*

Registration and fees for the 2010 AMC 8

Register online at amc.maa.org/registration or by returning the enclosed registration form. See below for registration fees and bundle cost:

Registration & standard shipping (through Oct. 9).....	\$33
Registration & express shipping (Oct. 10-Oct. 31).....	\$43
Registration & expedited shipping (Nov. 1-6).....	\$53
One bundle of 10 contests.....	\$11

Schools using a credit card or purchase order may register online or by sending a fax to 402-472-6087. We accept Visa® and Mastercard®. When paying by check, be sure to mail your registration form with payment well in advance of the deadline dates.

Math Club Package

For an additional \$25 you can order an AMC 8 Math Club Package, which includes a Club Advisor's Handbook (with a new set of problem worksheets taken from the AMC archives), plus a CD with all the contests given from 2001 through Spring 2010, including the AMC 8, 10, and 12, the American Invitational Mathematics Examination (AIME), and the United States of America Mathematical Olympiad (USAMO).