

## Sample Questions

### 2008 AMC 8

3. If February is a month that contains Friday the 13<sup>th</sup>, what day of the week is February 1?

- (A) Sunday (B) Monday  
(C) Wednesday (D) Thursday  
(E) Saturday

10. The average age of the 6 people in Room A is 40. The average age of the 4 people in Room B is 25. If the two groups are combined, what is the average age of all the people?

- (A) 32.5 (B) 33 (C) 33.5 (D) 34  
(E) 35

11. Each of the 39 students in the eighth grade at Lincoln Middle School has one dog or one cat or both a dog and a cat. Twenty students have a dog and 26 students have a cat. How many students have both a dog and a cat?

- (A) 7 (B) 13 (C) 19 (D) 39 (E) 46

17. Ms. Osborne asks each student in her class to draw a rectangle with integer side lengths and a perimeter of 50 units. All of her students calculate the area of the rectangle they draw. What is the difference between the largest and smallest possible areas of the rectangles?

- (A) 76 (B) 120 (C) 128 (D) 132  
(E) 136

22. For how many positive integer values of  $n$  are both  $\frac{n}{3}$  and  $3n$  three-digit whole numbers?

- (A) 12 (B) 21 (C) 27 (D) 33  
(E) 34

Answers  
3. A 10. D 11. A 17. D 22. A

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For 2009-2010 the National Association of Secondary School Principals (NASPP) has again placed the AMC 8, AMC 10, and AMC 12 on the NASPP National Advisory List of Contests and Activities.



MATHEMATICAL ASSOCIATION OF AMERICA  
AMERICAN MATHEMATICS COMPETITIONS

amcinfo@maa.org <http://www.unl.edu/amc/> 800-527-3690





# AMC 8

## DECADES OF EXCELLENCE

### American Mathematics Competitions

## 2009-2010 CONTEST DATES

**AMC 8** - November 17, 2009  
**AMC 10** - February 9 and/or February 24, 2010  
**AMC 12** - February 9 and/or February 24, 2010  
**AIME** - March 16 or March 31, 2010  
**USAMO** - April 27-28, 2010  
**MOSP** - June 2010  
**IMO** - July 2010, Kazakhstan

On Thursday, May 11, 1950 the first Mathematical Contest, sponsored by the New York Metropolitan Section of the Mathematical Association of America (MAA) took place. It was given in 238 schools to 6,000 students in the New York area only. Today the contest has evolved into a series of five contests. The AMC 8 is translated into braille, Spanish and Chinese, and students participate from every U.S. state and around the world.

# 1950-2010 THE AMERICAN MATHEMATICS COMPETITIONS

Help us celebrate over 60 years of the American Mathematics Competitions by registering your school to participate in the 25<sup>th</sup> annual American Mathematics Contest 8! The **AMC 8** is designed for middle school students in eighth grade and below. The 2009 test will be given in each participating school on **TUESDAY, November 17**, during a convenient 40-minute period.

# AMC 8

## PARTICIPATION & ELIGIBILITY

The AMC 8 is for students in the sixth, seventh or eighth grade; accelerated fourth and fifth grade students also take part. The AMC 8 is a 25-question, 40-minute multiple-choice contest with no penalty for guessing. A student's score is the number of problems correctly solved. The material covered is the middle school mathematics curriculum. No problem requires the use of algebra or a calculator. This includes, but is not limited to, such topics as:

- ⇒ Probability
- ⇒ Estimation
- ⇒ Percent
- ⇒ Spatial Visualization
- ⇒ Everyday Applications
- ⇒ Reading/Interpreting Graphs

AMC 8 eligibility extends to any student 14.5 years of age or younger on the day of the contest, and not enrolled in grades 9, 10, 11 or 12 or equivalent.

This contest is for individual recognition.



## ADMINISTRATION

The AMC 8 will be given in each participating school on TUESDAY, November 17, 2009, in a convenient 40-minute period. Administration on a later date (Nov 18-Nov 24) is permitted in cases of academic conflicts or school closings. For other scheduling issues please contact the AMC Office. All answer forms will be scored in the AMC office. Students may not use calculators on the contest.

Home schools must indicate the site of the exam outside the student's home and the name of the non-parental proctor. Attach this information to the registration form. Please call the AMC office for details.

## REGISTRATION AND FEES

Register by returning the enclosed registration form or via the web at [www.unl.edu/amc](http://www.unl.edu/amc).

Standard fees are as follows:

- Registration & Std Shipping (through Oct. 19) . . . \$33
- Registration & 2-day Shipping (Oct. 20-Nov. 2) . . \$43
- Registration & 1-day Shipping (Nov. 3-10) . . . . . \$53
- One bundle of 10 contests . . . . . \$11

Schools using a credit card or purchase order may register at [www.unl.edu/amc](http://www.unl.edu/amc) or by fax at 402-472-6087. We accept Visa and MasterCard. When paying by check, please mail your registration form with payment well in advance of the deadline dates.



## ADDITIONAL OPTIONS

Spanish, braille, and large print editions of the 2009 AMC 8 are available. For details please see the Registration Form. All requests must be made no later than three weeks before the contest.



## SCHOOL RESULTS & STUDENT AWARDS

Each participating school receives a copy of the contest and solutions, individual school results, school awards, an engraved school award plaque, and the National Summary of Results and Awards booklet.

National Awards are given to all official participants who make a perfect score. An elegant award plaque is given to the top scoring student(s) in each state. In addition, a variety of student awards are provided. Please see our website for details.

## MATH CLUB PACKAGE

For an additional \$25.00 you can order a 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 2009, including the AMC 8, 10, and 12, the AIME, and the USAMO.

## PURPOSE

The Mathematical Association of America wants to increase interest in mathematics and to develop problem solving through a friendly, **and fun**, competition. The questions range in difficulty from easy to very difficult in order to appeal to a broad range of students.



## SLIFFE AWARD

The **Edyth May Sliffe Award** is given each year to fifty teachers from high-scoring AMC 8 schools. This award includes a \$100 check, a one-year membership in the Mathematical Association of America and in the National Council of Teachers of Mathematics, a Teacher Recognition Certificate, and an Award pin. Award winners are honored at a reception during the annual NCTM spring meeting.