



## American Mathematics Competition 10/12

January 30, 2020

Registration Deadline: January 9, 2020

### ❖ What is the AMC 10/12?

- The AMC 10 and the AMC 12 are both 25-question, 75-minute, multiple choice examinations in high school mathematics designed to promote the development and enhancement of problem-solving skills

### ❖ Who can take the AMC 10/12?

- Students in grade 10 or below and under 17.5 years of age on the day of the contest are eligible to take AMC 10
- Students in grade 12 or below and under 19.5 years of age on the day of the contest are eligible to take AMC 12

### ❖ Sample Problems

- (AMC 10) An integer  $N$  is selected at random in the range 1 to 2020. What is the probability that the remainder when  $N^{16}$  is divided by 5 is 1?

A)  $1/5$

B)  $2/5$

C)  $3/5$

D)  $4/5$

E) 1

- (AMC 12) Alice refuses to sit next to either Bob or Carla. Derek refuses to sit next to Eric. How many ways are there for the five of them to sit in a row of 5 chairs under these conditions?

A) 12

B) 16

C) 28

D) 32

E) 40

### ❖ Are there any preparation materials?

- Yes! At Fresno State, we offer FREE preparation sessions for the AMC 10/12 on 11/21/19, 12/5/19, 12/19/19, 1/9/20, and 1/23/20. To learn more, visit: [www.fresnomathcircle.org/calendar/amc10-12-calendar.html](http://www.fresnomathcircle.org/calendar/amc10-12-calendar.html)

### ❖ Where do I register for the AMC 10/12?

- Registration for the AMC 10/12 offered at Fresno State is FREE and you can register at: [www.fresnomathcircle.org/competitions.html](http://www.fresnomathcircle.org/competitions.html)

**GOT MORE QUESTIONS?**

E-mail [fresnomathcircle@gmail.com](mailto:fresnomathcircle@gmail.com)