

UNIVERSITY of
NORTHERN COLORADO



College of Natural and Health Sciences
School of Mathematical Sciences

The School of Mathematical Sciences at the University of Northern Colorado is pleased to announce the 18th Annual UNC Mathematics Contest.

The contest is open to any Colorado student in grades 7-12, enrolled in public or private schools as well as home schooled students.

For more information about the 2009-2010 contest, please visit the contest website at www.mathcontest.unco.edu.

Responding to input from teachers from across the state, we've made a couple of changes to the contest rules and format with the 2008-2009 test and we will continue them this year.

- (1) The length of the first round has been shortened to 90 minutes. This way the contest can more easily fit into your class schedule.
- (2) While the contest questions have always been written so that calculators were not necessary, calculators (and all electronic devices, including iPods) are not allowed during the contest (first and second rounds) this year as well. This is a pencil and paper only contest.

Preregistration is not required for the first round, but you will need a password to obtain the contest materials. If you participated in the contest last year, you'll receive an email with the password automatically this year. If your email address has changed, or you'd like to be added to the list, please contact Avis at avis.werdel@unco.edu or (970)351-2820.

To whet your appetite, here are a couple of questions from the 2008-2009 first round contest:

6. *An army of ants is organizing a peace march across a room. If they form columns of 8 ants there are 4 left over. If they form columns of either 3 or 5 ants there are 2 left over. What is the smallest number of ants that could be in this army?*
7. *Let $S = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$. How many subsets of S consisting of 8 (eight) different elements are such that the sum of the eight elements is a multiple of 5?*

You'll find the remainder of the questions -- along with their solutions on the contest website.

If you have any questions about the contest, please contact Avis at avis.werdel@unco.edu or (970)351-2820