

**STATE MATHCOUNTS**  
**General Rules, Instructions, and Agenda**

MATHCOUNTS is cosponsored by the North Dakota Society of Professional Engineers and the North Dakota Association of County Superintendents.

At the national level the MATHCOUNTS Program is a cooperative project of: the CNA Insurance Companies, the National Society of Professional Engineers (NSPE), the National Council of Teachers of Mathematics (NCTM), The Dow Chemical Foundation Company, General Motors Foundation, Phillips Petroleum Company, Texas Instruments Incorporated, 3M Foundation, Lockheed-Martin Corporation and the National Aeronautics and Space Administration (NASA).

The top four North Dakota MATHCOUNTS finalists will participate in the National MATHCOUNTS

A. State MATHCOUNTS Agenda	<b>Monday, March 19, 2012</b>
7:00 a.m. - 9:00 a.m.	Registration ( <i>Dakota Ballroom</i> )
9:00 a.m. - 9:55 a.m.	Sprint Round-Contestants Seated by Region ( <i>Pool/Atrium Area</i> )
9:55 a.m. - 10:00 a.m.	Break (5 min)
10:00 a.m. - 10:10 a.m.	Target Round Session #1
10:10 a.m. - 10:20 a.m.	Target Round Session #2
10:20 a.m. - 10:30 a.m.	Target Round Session #3
10:30 a.m. - 10:40 a.m.	Target Round Session #4
10:40 a.m. - 10:55 a.m.	Break (15 min)
10:55 a.m. - 11:40 a.m.	Team Round
11:40 a.m. - 12:00 p.m.	Break (20 min)
<b>*12:00 p.m. - 1:10 p.m.</b>	Luncheon & distribution of certificates ( <i>Dakota Ballroom</i> )
1:10 p.m. - 1:55 p.m.	Group Photo ( <i>Wear your T-shirts</i> )
<b>*1:55 p.m. - 2:40 p.m.</b>	Countdown Round ( <i>Dakota Ballroom</i> )
<b>*2:40 p.m.</b>	Awards Ceremony ( <i>Dakota Ballroom</i> )

**\*Parents can attend the above marked sessions**

Countdown Round

First and Second place trophies will be presented.

Team Winners

Trophies will be presented to participants from the top four school teams with the highest scores and the top two regional teams with the highest scores.

Individual Winners

Trophies will be presented to eight (8) participants receiving the highest individual scores.

Medallions will be presented to the next twenty-two places.

Coaches

First and Second place Team

First place Individual

## B. Procedures for Determining the Participants Competing in the State MATHCOUNTS Competition

Representation in the State Competition will consist of the two highest scoring **School Teams** (four students per team) and the eight highest scoring **Individual** students not on these School Teams from each of the ten regions (Chapters) within the state. The boundaries for these regions are provided on request. This procedure was developed to maximize school and individual participation in accordance with the *national rules* as outlined in the school handbook.

There will be 160 students, consisting of 20 School Teams (80 students) and 20 Regional Teams determined from the top eight individuals in each region (80 individual students), qualifying for the state competition. The qualifying School Teams and Individuals will be determined as follows:

1. Following the school competition(s), the qualifying School Teams will compete at one of the fifty-three county competitions. These competitions will be scheduled by the county superintendent or local county coordinator within the established competition window. In accordance with the *national rules*, each school may be represented by only one School Team at the county competition.
2. The test materials and scores for the two highest scoring School Teams and the eight highest scoring Individuals from each county competition will be forwarded by the county superintendent or local coordinator to their regional coordinator. This information must be accompanied by the enclosed School Team and Individual Registration Form. .
3. The regional coordinators will then tally the results from all entries and submit the names of the qualifying School Teams and Individuals to their respective county superintendent or local county coordinator. The county superintendent or local coordinator is then responsible for informing the school with qualifying School Teams or Individuals. They will then need to obtain the required information from the qualifying students and prepare the registration forms to be submitted to North Dakota MATHCOUNTS by fax or email. Please notify the North Dakota MATHCOUNTS if you anticipate any delays.
4. **It is extremely important that all registration information be complete, accurate, and submitted by the established deadline. Failure to meet these requirements inevitably will create unnecessary problems and possible misrepresentation and/or lack of proper student recognition.**

## C. Eligibility of Participants in the State MATHCOUNTS

1. Participants must be enrolled in the sixth, seventh or eighth grade as outlined in the National School Handbook. The participation of sixth graders should be a joint decision of the student's teacher and local school.
2. Participants must be registered with the state office through the county superintendent's/coordinator's office for the State MATHCOUNTS Competition.

## D. MATHCOUNTS Rules and Procedures

1. The National MATHCOUNTS model will be used. (See INSTRUCTIONS TO PARTICIPANTS sheet.)
2. The North Dakota Society of Professional Engineers MATHCOUNTS State Coordinator, the North Dakota Society of Professional Engineers Chapter III and the North Dakota Association of County Superintendents President will be in complete control of the MATHCOUNTS competition. Their decision shall be final on all questions.
3. Consult the INSTRUCTIONS TO PARTICIPANTS sheets for other details.

## E. General Instructions

1. The Regional School Team and Individual Registration Forms as well as the Individual Participant Data Sheets must be sent to **North Dakota MATHCOUNTS, 1811 E. Thayer Ave, P.O. Box 712, Bismarck, North Dakota, 58502-0712.** Forms are available on our website: [www.NDMATHCOUNTS.org](http://www.NDMATHCOUNTS.org). Enter data directly into forms and email to [MATHCOUNTS@ndspe.org](mailto:MATHCOUNTS@ndspe.org) or print and fax to (701) 222-0103.
2. Participants must register from 7:00 a.m. - 9:00 a.m., March 19, 2012, at the Ramkota Inn in Bismarck – ask for the Dakota Ball Room.
3. The luncheon is scheduled from 12:00 p.m. - 1:10 p.m. at the Ramkota Inn. Please note that the student participants' lunches will cost \$10.00. All other individuals will be charged \$12.00. If paying at the door, the cost will be \$5.00 additional.
4. Participants for each session must be in their assigned seats at the designated time. All participants will be involved in the sprint round beginning at 9:00 a.m.
5. The MATHCOUNTS group photograph will be taken from 1:10 p.m.-1:55 p.m. on the day of the competition. The price for an 8" x 10" photo is noted on the photo order form and includes postage. Forms for obtaining photos are included with the registration forms. Extra forms will be available at the registration desk during the competition. All checks should be made payable to NDSPE-MATHCOUNTS. It is important that checks in the required amount should accompany the registration form. A late fee of \$1.00 will be assessed on all photo orders received after April 15, 2012.

## F. Awards and Prizes

1. Registration--MATHCOUNTS T-shirts will be handed out during registration.
2. Awards Presentation--Trophies will be presented to each of the top eight finalists and medallions for the next twenty-two seventeen places. Team trophies will be presented for the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> place school teams and 1<sup>st</sup> and 2<sup>nd</sup> place regional teams. First and second place trophies will be presented in the Countdown Round. Plaques will also be awarded to the Coach of the first and second place school team and top individual student.

The top four individual winners and the coach of the top team will receive an all expense paid trip to the Raytheon National MATHCOUNTS Competition which will be held May 11, 2012 in Orlando, Florida.

1. Additional information or assistance is required, please contact:

Mona Livdahl or Nancy Buechler  
North Dakota MATHCOUNTS  
1811 East Thayer  
P.O. Box 712  
Bismarck, ND 58502-0712  
Phone (701) 222-3499  
Fax (701) 222-0103  
Email: [MATHCOUNTS@ndspe.org](mailto:MATHCOUNTS@ndspe.org)

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# 2012 STATE MATHCOUNTS

*Cosponsored by*

North Dakota Society of Professional Engineers  
North Dakota Association of County Superintendents

## INSTRUCTIONS TO PARTICIPANTS

### I. MATHCOUNTS General Procedures

- A. MATHCOUNTS Pre-registration -The county superintendent/designee will submit the registration form, registration fees, and a data sheet for each participant to: ND MATHCOUNTS, P.O. Box 712, Bismarck, ND 58502-0712.
- B. MATHCOUNTS Registration will be from 7:00 a.m. - 9:00 a.m. on March 19, 2012, at the Ramkota Inn, 800 South 3<sup>rd</sup> Street, Bismarck. At that time the participants will receive a packet which will contain (1) a nametag, (2) Luncheon tickets (including for their parents/guests), (3) a MATHCOUNTS participants' booklet, and (4) evaluation forms. A T-shirt is provided prior to entering the testing room – the T-shirt must be worn during the group photo. The Registration fee for participants is \$12.00 each.
- C. MATHCOUNTS Luncheon -12:00 p.m. - 1:10 p.m. - Participants will be recognized and will receive State MATHCOUNTS participation certificates. Luncheon tickets at \$12.00 each must be ordered through the county superintendent's/coordinator's office before March 1, 2012. Student Participants will pay a reduced rate of \$10.00 for their lunch.
- D. MATHCOUNTS Sessions -The sprint round will commence at 9:00 a.m. at the Ramkota Inn on March 19, 2012. MATHCOUNTS participants for each session must be in their assigned seats at the designated starting time. NAME TAGS MUST BE WORN DURING EACH SESSION.
- E. A MATHCOUNTS group photo will be taken at 1:10 p.m. The price for an 8" x 10" is noted on the photo order form and includes postage. Forms for obtaining photos will be distributed by the county superintendents/coordinator's and additional forms are available at the registration desk. All checks should be made payable to NDSPE-MATHCOUNTS. It is important checks accompany the registration form. A late fee of \$1.00 will be assessed on all photo orders received after April 15, 2012.
- F. Dress code: Participants are permitted to wear casual clothing (i.e. jeans, khakis, etc. – the T-shirt must be worn during the photo session).

### II. MATHCOUNTS Rules and Procedures

#### A. General Rules

- 1. Students are permitted to use calculators in the Team and Target Rounds at all levels of competition. Students are NOT permitted to use calculators during the Spring and Countdown Rounds. Note: If it is necessary to conduct the Tiebreaker Round or if a State Competition is conducting a Masters Round, calculators are permitted for both the Tiebreaker Round and the Masters Round. **(NOTE: Calculators are not provided; students may use any calculator that does not contain a QWERTY (i.e. typewriter-like) keypad. Calculators that have the ability to enter letters of the alphabet but do not have a keypad in a standard typewriter arrangement are acceptable. Personal Digital Assistants (Palm Pilots®) are not considered to be calculators and may not be used during competitions. Students may not use calculators to exchange information with another person or device during the competition, except for a school's team members during the Team Round. Students may purchase a calculator the day of the competition, see MATHCOUNTS school handbook for regulations. Coordinators**

**shall not be responsible for providing students with calculators or batteries either before or during the MATHCOUNTS Competition. Neither the MATHCOUNTS staff nor coaches will be held responsible for the consequences of a calculator's malfunctioning.** Slide rules instead of calculators are also permitted during the Team and Target Rounds. Other notes and reference material are not permitted. Scratch paper will be provided.

2. Listen carefully to the initial directions. If you need further clarification during the sessions, raise your hand immediately and wait for a proctor to come to your desk.
3. Talking and signals are permitted only during the Team Round. Interaction with coaches is prohibited during all the rounds but is permitted during breaks. All other communication between guests and students is prohibited until completion of the competition. The Countdown Round will be conducted but will not be used to determine the four qualifiers for the National Competition.
4. All supplies are provided for students, **except calculators and batteries**. Students are, however, allowed to bring their own pencils, pens, and erasers if they wish.
5. All answers must be written in the answer blanks on the problem sheets. They must be written clearly. To correct an error, draw a line through the incorrect answer and rewrite on the same line, above the incorrect answer, or below the line.
6. Acceptable forms for answers are as follows:
  - a. All answers are to be reduced to lowest terms. Improper fractions that have been reduced are acceptable.
  - b. Radicals should be simplified.
  - c. Answers should not be approximated unless students are specifically instructed to do so.
  - d. Units of measurement are generally not required in answers.
  - e. Numerical approximations for irrational numbers should not be made unless otherwise specified in the problem.
  - f. When a problem asks for an answer expressed in a specific unit of measure, answers expressed in equivalent units are not acceptable. For example, if a problem asks for the number of ounces and 36 (oz.) is the correct answer, 2 lbs. 4 oz. is incorrect. Similarly, if a problem asks for the number of cents and 25¢ is the correct answer, \$.25 is incorrect.
  - g. The given data in all non-oral competitions are to be regarded as exact.
  - h. Answers which are equivalent to whole numbers should be written in their whole number form, i.e., 25 rather than 25.0.
7. Specific instructions stated in a given problem take precedence over any of these instructions.
8. Any difficulty in the correctness of an answer or in student conduct should be brought to the attention of the appropriate chapter, state, or national official. Protests must be registered with the room supervisor by the team coach within 30 minutes after questions and answers have been posted for each round. Rulings on protests are final and cannot be appealed.

## B. Scoring

1. Scores will be kept for both individuals and teams throughout all MATHCOUNTS competitions. The following chart illustrates the scores resulting from each round of competition:

ROUND	YIELDS SCORES FOR
Sprint Round	Individuals and Teams
Team Round	Team only
Individual Solutions Round	Individuals and Teams

2. Team and individual scores will be computed as follows: (Perfect scores for each item are indicated in parenthesis.)

ROUND	INDIVIDUAL SCORE	TEAM SCORE
Sprint	Number of problems correct (30)	Average number of problems correct (30)
Target	Number of problems correct X 2 (16)	Average number of problems correct X 2 (16)
Team	0	Number of problems correct X 2 (20)
Final score	Sum (46)	Sum (66)

3. In case of tied scores for individuals, individual scores of specific rounds will be used to break ties. Contest scores will be considered in the following order to break ties for individuals:
  - a. Sprint Round score.
  - b. Specific questions from the Written Round competition instructions will include a listing of specific Written Round questions to be used to break ties should individuals still be tied after comparison of Written Round scores.
4. In case of tied scores for teams, team scores of specific rounds will be used to break ties. Contest scores will be considered in the following order to break ties for teams:
  - a. Team Round score.
  - b. Target Round score.
  - c. Sprint Round score.
  - d. Specific questions from the Team Round competition instructions will include a listing of specific Team Round questions to be used to break ties should teams still be tied after comparison of the above rounds.
5. Countdown Round

The Countdown Round will be administered to the eight highest scoring individuals. Participants will be paired to challenge each other in an oral competition. The scores from the Countdown Round will not be used in determining the state winner; however, the Countdown Round will be a mandatory round at the national competition.

C. Protest Procedures

Any protest regarding the competition must be lodged with the protest committee by the county superintendent/coordinator. Protests must be made on-site within 30 minutes of the posting of questions and answers immediately following each round. The beginning of the next round will not be delayed until after the posting period for questions and answers from the previous round. Protests from any individual other than the county superintendent/ coordinator will not be considered. Decisions of the protest committee are final, and cannot be appealed. Decisions will not require, under any circumstances, that a fifth individual be placed on a state team.

D. Release of Exam Materials

Immediately following each round, exam questions and answers for that round should be posted for review by coaches as a courtesy. **(Please do not copy or record Questions and Answers.)** These materials should remain posted for 30 minutes.

Contestants' problem sheets and answers are confidential and may not be viewed or distributed to coaches, parents, or other individuals. Students' problem sheets become the property of NSPE chapters and state societies. Chapters and states should hold these items for 90 days following the competition at which time all materials should be destroyed.

**Single copies of blank examination materials and answer keys may be distributed to coaches upon written request on or after March 19, 2012, for Chapter Competitions and April 15, 2012, for the State Competition.**

E. Selection of State Team

The state team will consist of the top four individuals having the highest individual scores. Should one of the top four individuals not be able to attend the National Competition, the fifth highest individual scorer will be eligible to attend. The state team coach will be the coach of the top *School Team*. Should this individual not be able to attend the national competition, the team coach of the next top School Team will be eligible to attend.

III. Awards will be presented approximately at 2:40 p.m. at the Ramkota Inn.