

Team Math Quest

LEVEL:	Senior High School (Grades 9-12)
TYPE OF EVENT:	Team by Math Category
COMPOSITION OF TEAM:	3 Students per school-based team
NUMBER OF TEAMS:	Preliminary – Determined by your MESA Center Regional – 3 teams per category per MESA Center
SPONSOR:	Marvin Maldonado, San Diego State University MSP

OVERVIEW: Students work as a team to solve a set of challenging, non-routine problems the require core mathematical knowledge, creative deductive abilities, and collaborative reasoning skills. The event is designed to introduce, develop, and foster the use of various strategies to solve exciting and complex mathematical problems.

CATEGORIES:

CATEGORY	FOR STUDENTS CURRENTLY ENROLLED IN:
A	Algebra 1 or Geometry
B	Algebra 2, Trigonometry, Math Analysis/Pre-Calc, Calculus or any combination of these

MATERIALS: The Host Center provides the following:

- 1 Set of math problems per team
- 1 Score Sheet per team
- Pencils

The team provides the following:

- Calculators (Acceptable calculators are described in Rule #3.)

RULES:

- 1) A team is composed of **3** students from the same school site. All three members must be eligible to participate in the same category.
- 2) Teams are given **50 minutes** to solve as many problems as possible from a **set of 30**. Problems do not need to be solved in numerical order.
- 3) Only non-QWERTY calculators are permissible and must be supplied by the team. Calculators that have typewriter-like keyboards, require an electrical outlet, make noises, or use paper are not permitted. Additionally, devices with embedded calculator functions such as cell phones, iPod/iPad, laptops or tablet computers are strictly prohibited.

- 4) Books, mathematical tables, or other resource materials cannot be used during the test.
- 5) The *Team Information* section of the Score Sheet must be legible and thoroughly completed.
- 6) Scratch paper is not allowed. Each problem is printed on a separate sheet of paper. Team members may use both sides of this sheet to solve the problem. ***Any work done on this sheet will not be used for scoring purposes***
- 7) Only answers clearly written on the Score Sheet are judged. ***Answers must be in reduced form and with appropriate units of measurement.***

EVENT PROCEDURE:

- 1) Before beginning the timed event, a proctor will briefly review the event guidelines with all student participants, verify that only non-QWERTY calculators are present, and distribute pencils.
- 2) Each team will be given a Score Sheet. Per Rule #5, each team is responsible for legibly and thoroughly completing the *Team Information* section at the top of the Score Sheet.
- 3) Each team will be given the appropriate set of 30 problems in a manila file folder or large clasp envelope. Per Rule #6, scratch paper will not be provided.
- 4) Once a problem is solved, the team must record the answer in the corresponding space on the Score Sheet and continue with problem solving until the end of time is called.
- 5) The proctor will announce when 5 minutes and 1 minute remain.

SCORING:

- 1) Each correct answer is worth **4 points**. Each incorrect answer is penalized **1 point**. Non-responses, or blanks, will not be scored. The final team score is calculated as follows:

$$\text{Team Score} = (\# \text{ of correct answers} \times 4) - (\# \text{ incorrect answers})$$

- 2) In the event of a tie, a tie breaking procedure will be implemented to determine placing.
- 3) Awards will not be given to teams with zero or negative scores.

AWARDS:

- *Preliminary event:* Medals will be awarded to each member of the 1st, 2nd, and 3rd place teams in each category.
- *Regional event:* A school trophy will be given to the 1st, 2nd, and 3rd place teams in each category. Additionally, each winning team member will receive a corresponding medal.

ATTACHMENTS:

- Sample Score Sheet

TEAM MATH QUEST SAMPLE SCORE SHEET

Senior High School

TEAM INFORMATION			
School: _____	Center: _____		
Student Names:	Grade:	Current Math Class:	
1 _____	_____	_____	
2 _____	_____	_____	
3 _____	_____	_____	

Note: All answers must be in reduced form and include appropriate units of measurement.

#	Team Answer
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

#	Team Answer
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

#	Team Answer
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

FOR JUDGE'S USE ONLY

_____ x 4 = _____
 # correct answers

_____ x 1 = _____
 # incorrect answers
 (do not include non-responses)

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SCORE