

Team Math Quest

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|-----------------------------|--|
| LEVEL: | Senior High School (grades 9-12) |
| TYPE OF EVENT: | Team by category |
| COMPOSITION OF TEAM: | 3 students per school-based team |
| NUMBER OF TEAMS: | 3 teams per category per Center |
| SPONSOR: | Marvin Maldonado, UC Irvine MSP Center |

OVERVIEW: Students work as a team to solve a set of challenging, non-routine problems that 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 A:** For students currently enrolled in Algebra I or Geometry
- **Category B:** For students currently enrolled in, or any combination of, Algebra II, Math Analysis, Trigonometry, or Pre-Calculus
- **Category C:** For students currently enrolled in Calculus

MATERIALS: The Host Center provides the following:

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

The team provides the following:

- Calculators (Acceptable calculators are described in the Rules section.)

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.
- 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, PDAs, organizers, laptops or handheld computers are not allowed.
- 4) Books, mathematical tables or other resource materials cannot be used during the event session.
- 5) The Team Information section of the Score Sheet must be legibly 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.
- 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 briefly reviews event guidelines with student participants, verifies that only non-QWERTY calculators are present, and distributes pencils.
- 2) Each team is given a Score Sheet. Teams are responsible for legibly and thoroughly completing the Team Information section at the top of the sheet.
- 3) Each team is given the appropriate set of 30 problems, at all once, in a manila file folder or large clasp envelope. Scratch paper is not provided.
- 4) Once a problem is solved, team members record their answer on their Score Sheet and continue with problem solving until the end time is called.
- 5) The proctor announces when 5 minutes and 1 minute remain.

SCORING:

- 1) A team earns 4 points for each correct answer and loses 1 point for each incorrect answer. Non-responses, or blanks, are not counted. Hence, the team score is calculated according to the following formula:

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

- 2) In the event of a tie, the procedure provided in the event proctoring and judging guidelines is implemented.
- 3) Awards are not given to teams with zero or negative scores.

AWARDS:

- *Center Preliminaries:* Medals are awarded to each member of 1st, 2nd and 3rd placing teams in each category.

- *Regional Events:* A school trophy is given to the 1st, 2nd and 3rd placing teams in each category; each member of a winning team receives a corresponding medal.

ATTACHMENTS: Score Sheet

TEAM MATH QUEST 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 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |

| # | Team Answer |
|----|-------------|
| 16 | |
| 17 | |
| 18 | |
| 19 | |
| 20 | |
| 21 | |
| 22 | |
| 23 | |
| 24 | |
| 25 | |
| 26 | |
| 27 | |
| 28 | |
| 29 | |
| 30 | |

For Judge's Use Only

| | | |
|--|--------------|--|
| _____ # correct answers | x 4 = | _____ <i>minus</i> |
| _____ # incorrect answers <i>(do not include non-responses)</i> | x 1 = | _____ |
| | | <div style="border: 1px solid black; display: inline-block; width: 100px; height: 20px; vertical-align: middle;"></div> SCORE |