2024 Millsaps College High School Mathematics Competition

Date: Saturday, November 2, 2024

Location: Selby & Richard McRae Christian Center, Millsaps College

All rounds will be conducted in the McMullan Lecture Hall, Room 122. T-shirts will be provided to all student participants, and lunch will be catered, probably from Broad Street Bakery. A nearby classroom has been reserved for adult chaperones during the rounds.

Schedule

9:00 – 9:45 am: Check-in, Roster Submission
9:45 – 10:00 am: Welcoming Remarks
10:00 – 10:45 am: Ciphering Round
10:45 – 11:00 am: Break
11:00 am – 12:30 pm: Written Round
12:30 – 2:00 pm: Lunch
2:00 – 3:00 pm: Team Round
3:00 – 3:30 pm: Awards Ceremony

Format and Scoring Information

The range of content and difficulty in the problems will be very broad, from basic arithmetic, algebra, and geometry to problems requiring deep logical insight, distributed fairly evenly. However, while a few of the problems will be exceptionally difficult, none of the problem statements will contain concepts or terminology outside of a standard high school curriculum. In particular, there will be no problems that assume any exposure to calculus or beyond.

Ciphering: The ciphering round consists of 10 problems, which individual participants work on one at a time for 3 minutes apiece. Participants are given a stapled packet at the beginning of the round with the 10 problems each on their own individual sheet of paper, with a blank sheet of paper between each problem. When prompted, participants tear off the next problem and begin working, and their responses are collected by a proctor when the 3-minute period expires. Ciphering questions are free response, and each problem page will have a box where participants should write their answer. Scratch work may be done on the blank pages. Each correct answer to a ciphering problem earns 10 points, for a total of 100 possible points.

Written: The written round consists of 20 problems, which individual participants work on during a single 90-minute period. The problems are multiple choice with five answer choices. A correct answer earns 10 points, an incorrect answer earns 0 points, and a blank answer earns 2 points, (probabilistically, this means that guessing is advantageous if a participant can eliminate at least one answer choice, but is not otherwise), for a total of 200 possible points. An answer sheet numbered 1 through 20 is attached to the back of the written round packet for participants to record their answers. Scratch paper is also provided.

Team: The team round consists of 5 problems, which teams of up to four participants work on together during a single 60-minute period. Each participant is given a single sheet of paper with the 5 problems written on it. Team round problems are free response, and each team is provided with a single answer sheet, numbered 1 through 5, for the team to record its answers. Scratch paper is also provided. Each correct answer to a team round problem is worth 40 points.

No calculators or other electronic devices are allowed during any round.

Awards and Prizes

T-shirts: Every participating student will receive a Millsaps mathematics t-shirt, sizes subject to availability, distributed on a first come first served basis.

Individual: Scores for individual participants are computed based on points earned in the ciphering and written rounds only, out of a possible 300 points. Individual prizes are as follows:

1st Place: $100 cash, award plaque

2nd Place: $80 cash, award plaque

3rd Place: $60 cash, award plaque

4th Place: $40 cash, award plaque

5th Place: $20 cash, award plaque

Team Total: Total team scores are computed based on all points earned by the (up to) four individuals on the ciphering and written rounds, added to the points earned by the team on the team round*. The top three total team scores will be recognized with award plaques.

*Teams competing with exactly three players will have 60% of their lowest team-member individual score added to their team total, as a "ghost player", to make them more competitive in the team competition. This is in response to past dilemmas for schools who had five or six students and had to choose how to distribute them across two teams.

Team Round Only: Recognition and small prizes will also be awarded to the members of the team(s) that score the highest on the team round.