MBMT 2019 Fun Round

March 30, 2019

"Doubtless we cannot see that other higher Spaceland now, because we have no eye in our stomachs."
—Edwin A. Abbott, *Flatland*

Introduction

There are 32 questions in this Fun Round; each question is worth some number of points. The subject breakdown is listed below:

- 12 math problems
- 3 contest problems
- 5 estimation problems
- 2 memory problems
- 4 game problems
- 2 trivia problems
- 2 scavenger hunt problems
- 2 other problems

Teams start with access to only problem A. Other problems require solving one or more previous problems to access. The back of this page contains a diagram of how to access each problem; to access a problem you must first solve every problem pointing to it.

Each team is also given a sticker sheet with a row for each problem to mark their progress. Getting and submitting problems is done at *problem stations*, where one can

- get a problem upon demonstrating that one has all the prerequisite stickers.
- submit answers to most problems. (Answers should be clearly marked on the problem paper.)
- get a hint for a problem, after which the problem is worth half points.
- skip a problem, which counts as solving the problem but is worth zero points.

Some problems are not submitted at a problem station, but rather require accomplishing a task. In that case, the problem should give you instructions telling you what to do.

The team with the highest score wins. If there are ties, they are broken first by time of finishing and then by the quality of the contest submissions.

You are, unless the problem specifically states otherwise, allowed to use any resource except people outside your team. (Feel free to look things up!)

Problem A

A Form a team of at most eight competitors. We *require* that a team have at least four people, and the fun round is designed so that teams with at least six members and members from both divisions have a significant advantage.

When you have formed a team, go to any problem station to pick up an answer sheet.

B_1

B_5 A B_2

B_4 B_3

C_8 B_1 C_9

C_1

B_5 C_5 C_2 B_2

C_7 C_4 C_3 C_{10}

B_4 B_3

C_6

D_6

C_8 C_9

D_{10} D_3 C_1 D_4 D_7

C_5 C_2

D_2 D_5

C_7 C_4 D_1 C_3 C_{10}

D_9 D_8

C_6

D_6

E_3 E_4

D_{10} D_3 D_4 D_7

E_2 D_2 D_5 E_5

D_1

E_1

D_9 D_8

E_3 E_4

F

E_2 E_5

E_1