

# MOAA 2019 Statistics

A total of 144 individual competitors representing 28 different teams competed at the 2019 Math Open At Andover on October 12, 2019. Competition statistics are listed below.

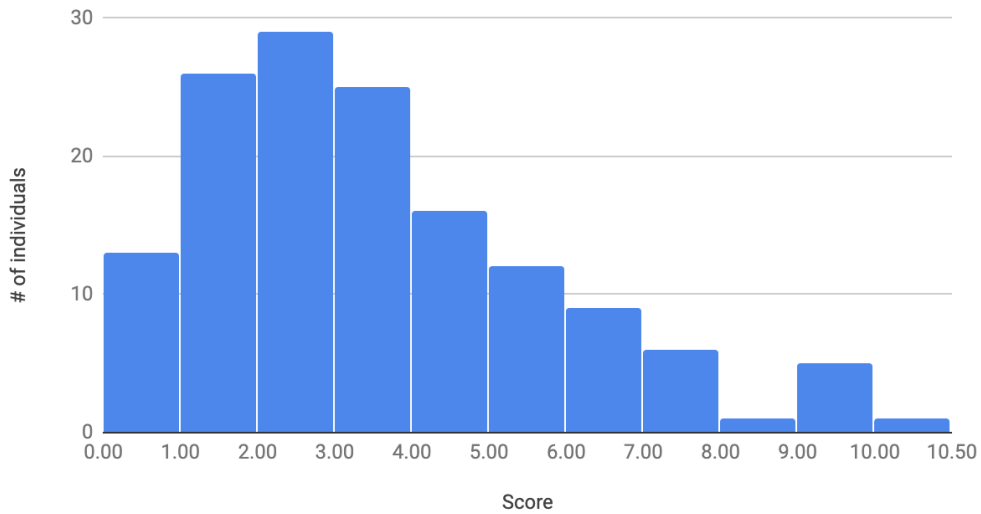
# 1 Speed Round

The Speed Round was a 20-minute, 10-problem test. Each problems was worth one point, for a total of 10 points. Ties were broken lexicographically by most advanced problem solved (in terms of problem placement).

- **Mean:** 3.09
- **Median:** 3
- **Standard Deviation:** 2.29
- **Low:** 0
- **High:** 10
- **25th percentile:** 1
- **75th percentile:** 4
- **Top 10 cutoff:** 7

Problem #	# Individuals Correctly Solving	% Individuals Correctly Solving
1	118	82
2	94	65
3	60	42
4	51	35
5	32	22
6	15	10
7	18	13
8	19	13
9	20	14
10	4	3

Speed Round Scores, MOAA 2019



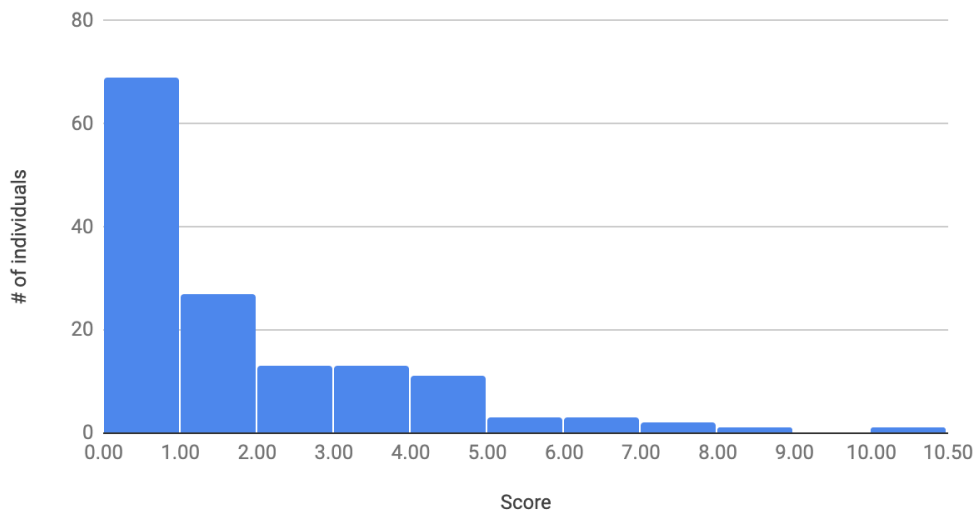
## 2 Accuracy Round

The Accuracy Round was a 60-minute, 10-problem test. Each problem was worth one point, for a total of 10 points. Ties were broken lexicographically by most advanced problem solved (in terms of problem placement).

- **Mean:** 1.40
- **Median:** 1
- **Standard Deviation:** 1.94
- **Low:** 0
- **High:** 10
- **25th percentile:** 0
- **75th percentile:** 2
- **Top 10 cutoff:** 5

Problem #	# Individuals Correctly Solving	% Individuals Correctly Solving
1	40	28
2	38	26
3	22	15
4	35	24
5	20	14
6	19	13
7	6	4
8	9	6
9	2	1
10	5	3

Accuracy Round Scores, MOAA 2019



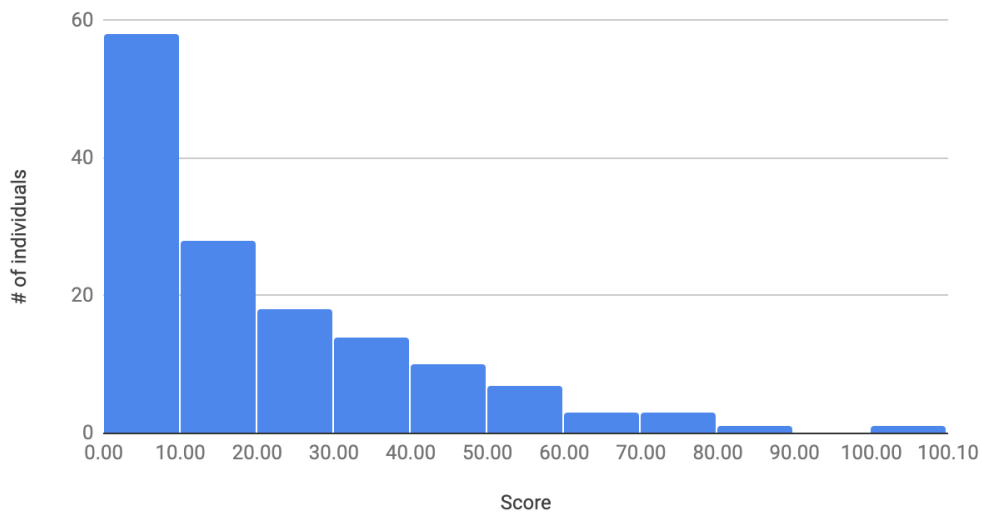
### 3 Individual Total

The individual total of an individual was calculated by adding four times their speed round score to six times their accuracy round score, for a total of 100 points. Ties were broken by higher accuracy round score, and then lexicographically by most advanced problem solved (in terms of problem placement), starting with the speed round and then moving to the accuracy round.

- **Mean:** 20.80
- **Median:** 14
- **Standard Deviation:** 19.83
- **Low:** 0
- **High:** 100
- **25th percentile:** 5
- **75th percentile:** 30
- **Top 10 cutoff:** 54
- **7th grade HM cutoff:** 50
- **6th grade and below HM cutoff:** 30

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Individual Scores, MOAA 2019



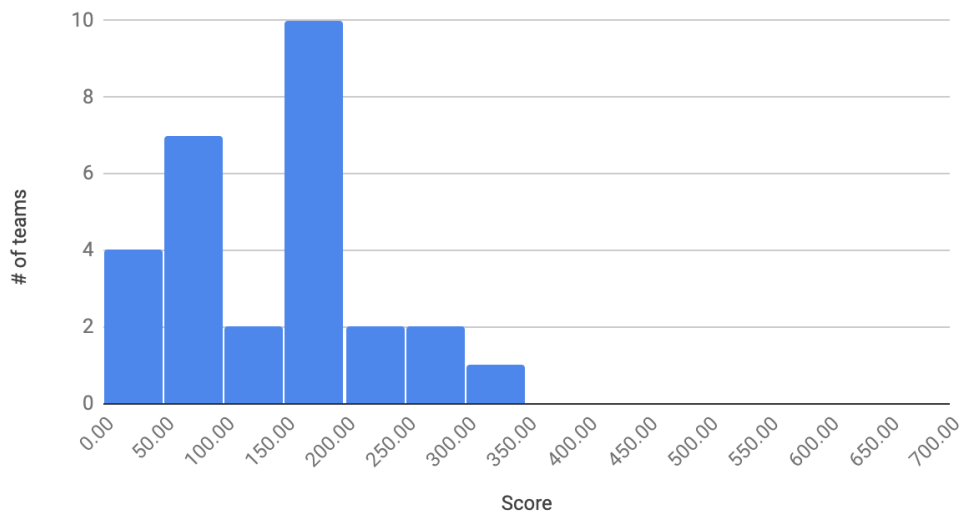
## 4 Team Round

The Team Round was a 60-minute, 10-problem test for teams. Problems 1-10 were worth 45, 50, 55, 60, 65, 70, 75, 80, 85, and 90 points, respectively, for a total of 675 points. Ties were broken lexicographically by most advanced problem solved (in terms of problem placement).

- **Mean:** 130.54
- **Median:** 150
- **Standard Deviation:** 87.59
- **Low:** 0
- **High:** 345
- **25th percentile:** 83.75
- **75th percentile:** 160
- **Top 5 cutoff:** 210

Problem #	# Teams Correctly Solving	% Teams Correctly Solving
1	18	64
2	24	86
3	11	39
4	4	14
5	10	36
6	1	4
7	0	0
8	1	4
9	0	0
10	0	0

Team Round Scores, MOAA 2019



## 5 Gunga Bowl

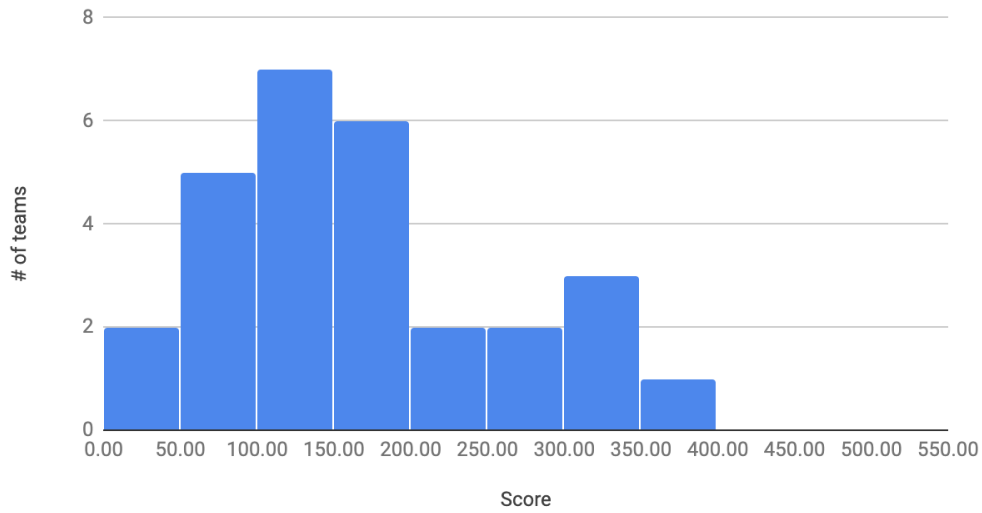
The Gunga Bowl was a 90-minute round consisting of 9 3-problem sets. Each problem in sets 1-9 were worth 11, 13, 15, 17, 19, 21, 23, 26, and 30 points, respectively, for a total of 525 points. Set 9 consisted of 3 estimation problems. Ties were broken lexicographically by most advanced problem solved (in terms of problem placement).

A special shoutout goes to the team Amazing ILLINI for their incredible estimate of 35789417 on problem 25, 4 off of the correct answer of 35789421. Their estimate earned them 29 out of a possible 30 points.

- **Mean:** 171.29
- **Median:** 151.5
- **Standard Deviation:** 96.12
- **Low:** 11
- **High:** 354
- **25th percentile:** 103.75
- **75th percentile:** 228.25
- **Top 5 cutoff:** 298

Problem #	# Teams Correctly Solving	% Teams Correctly Solving
1	27	96
2	26	93
3	19	68
4	25	89
5	17	61
6	23	82
7	3	11
8	21	75
9	10	36
10	20	71
11	4	14
12	14	50
13	6	21
14	12	43
15	5	18
16	17	61
17	5	18
18	12	43
19	10	36
20	7	25
21	7	25
22	7	25
23	1	4
24	0	0
25	-	-
26	-	-
27	-	-

## Gunga Bowl Scores, MOAA 2019



## 6 Team Sweepstakes

Team Sweepstakes was calculated by adding twice the sum of the top four individual scores on a team with the team round score and the Gunga Bowl score, for a total of 2000 points. Ties were broken by highest individual sum, then highest team round score, then lexicographically by most advanced problem solved on the team round (in terms of problem placement).

- **Mean:** 491.39
- **Median:** 433.5
- **Standard Deviation:** 302.92
- **Low:** 27
- **High:** 1155
- **25th percentile:** 291.25
- **75th percentile:** 644
- **Top 4 cutoff:** 997

### Team Sweepstakes Scores

